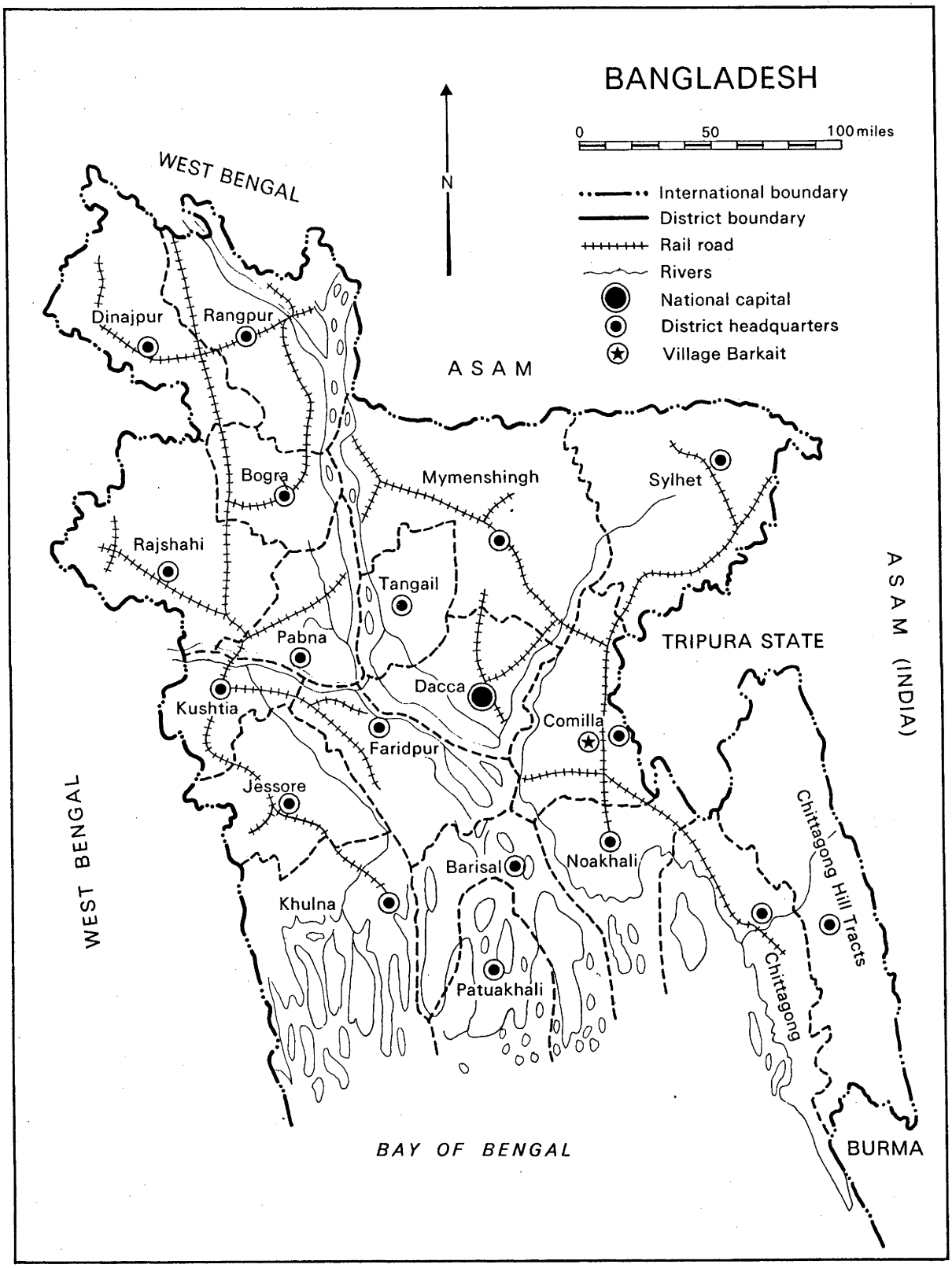
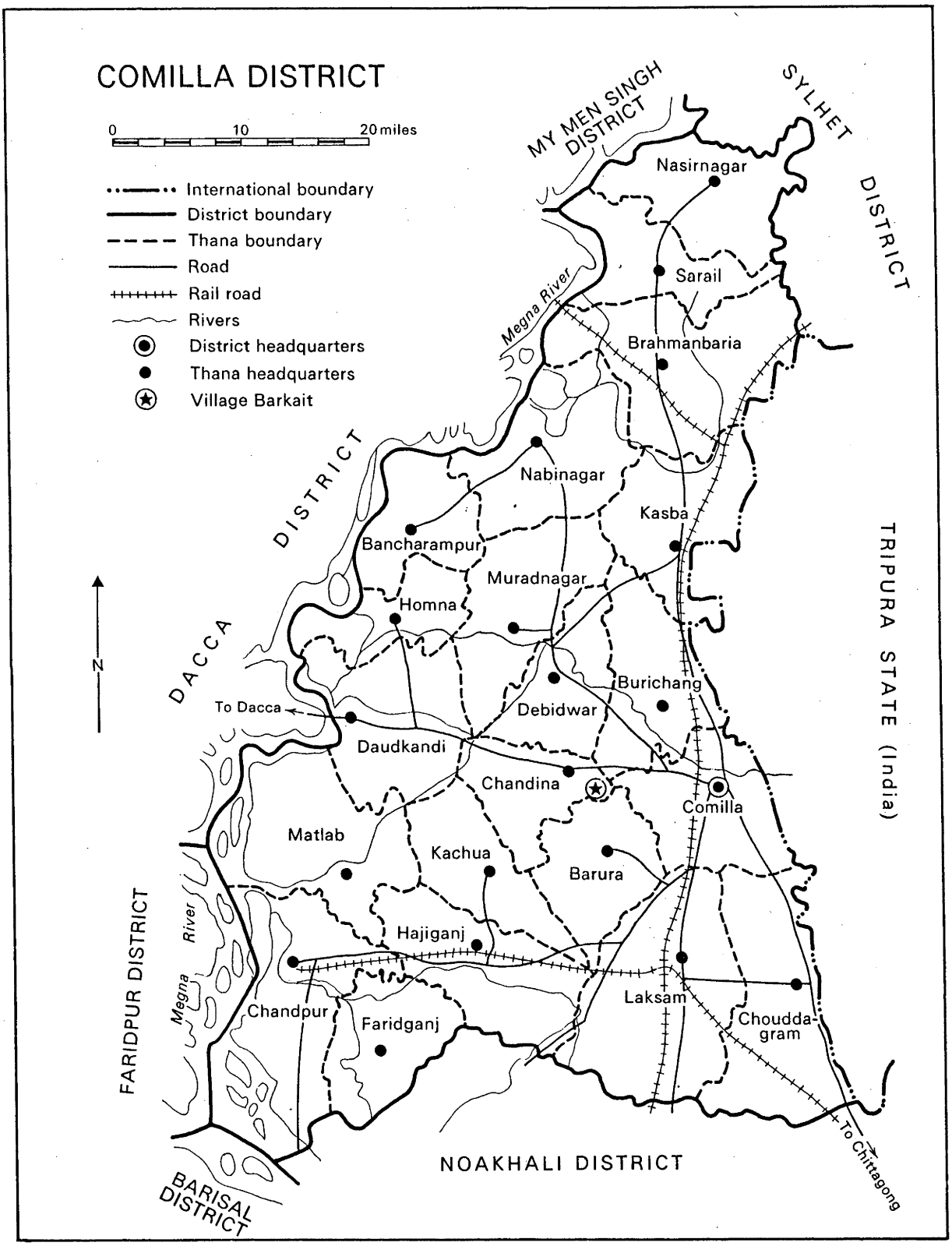
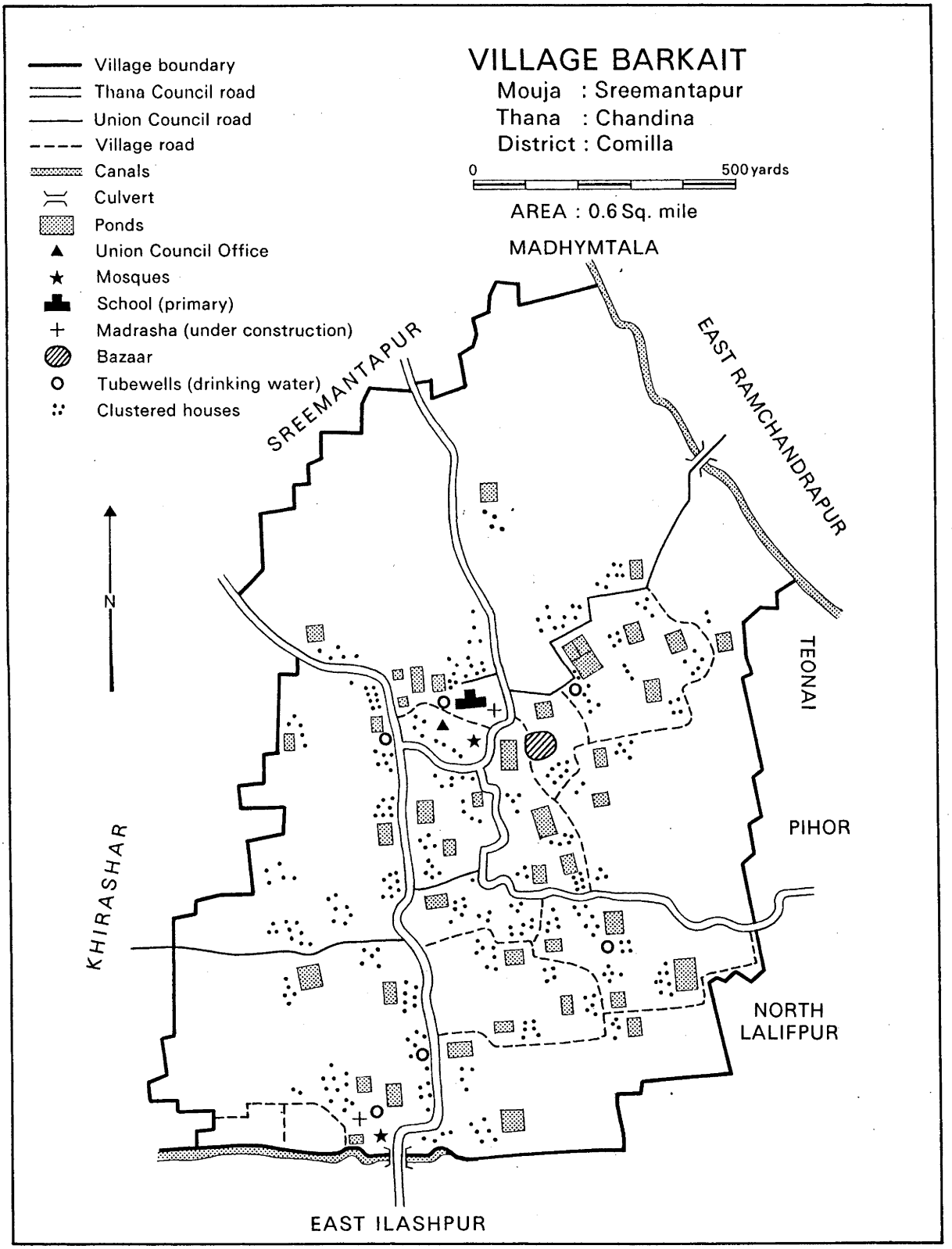

BANGLADESH
0
50
100 miles
N
International boundary
District boundary
Rail road
Rivers
National capital
District headquarters
Village Barkait
WEST BENGAL
ASAM
ASAM (INDIA)
TRIPURA STATE
WEST BENGAL
BAY OF BENGAL
BURMA
Dinajpur
Rangpur
Bogra
Rajshahi
Mymenshingh
Sylhet
Tangail
Pabna
Dacca
Kushtia
Faridpur
Comilla
Jessore
Barisal
Noakhali
Khulna
Patuakhali
Chittagong Hill Tracts
Chittagong


COMILLA DISTRICT
0
10
20 miles
International boundary
District boundary
Thana boundary
Road
Rail road
Rivers
District headquarters
Thana headquarters
Village Barkait
N
MY MEN SINGH DISTRICT
SYLHET DISTRICT
TRIPURA STATE (India)
DACCA DISTRICT
FARIDPUR DISTRICT
BARISAL DISTRICT
NOAKHALI DISTRICT
Megna River
Megna River
To Dacca
To Chittagong
Nasirnagar
Sarail
Brahmanbaria
Nabinagar
Kasba
Bancharampur
Muradnagar
Homna
Burichang
Debidwar
Daudkandi
Chandina
Comilla
Matlab
Kachua
Barura
Hajiganj
Laksam
Choudda-gram
Chandpur
Faridganj


VILLAGE BARKAIT
Mouja : Sreemantapur
Thana : Chandina
District : Comilla
0
500 yards
AREA : 0.6 Sq. mile
Village boundary
Thana Council road
Union Council road
Village road
Canals
Culvert
Ponds
Union Council Office
Mosques
School (primary)
Madrasha (under construction)
Bazaar
Tubewells (drinking water)
Clustered houses
N
MADHYMTALA
SREEMANTAPUR
EAST RAMCHANDRAPUR
TEONAI
PIHOR
NORTH LALIFPUR
EAST ILASHPUR
KHIRASHAR

LABOUR UTILISATION IN A VILLAGE ECONOMY OF BANGLADESH

BY

BARKAT-E-KHUDA

Thesis submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy in the
Australian National University.

October 1978

This thesis is based upon original research conducted by the author as a Research Scholar from 1975 to 1978 in the Department of Demography at the Australian National University.

Barkat-e-Khuda
October 1978

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ABSTRACT

An attempt has been made to examine the usefulness of various conventional approaches to the measurement of labour force and its utilization in a rural agrarian society. The study was carried out in a Bangladesh village, Barkait in Comilla district of Bangladesh. The study points out the limitation of such approaches to the measurement of labour force and its utilization, especially in the case of women and young children and recommends the collection and use of time-budget data based mainly on observation and collected over a period of several months to highlight the nature and pattern of labour utilization in rural agrarian societies.

The study is, perhaps, the first major work so far which examines the contribution of women and children, in addition to adult males, in respect of time devoted to directly productive activities and household maintenance activities over a period of several months. Besides, the study also shows how people utilize other non-work uses of time.

The study emphasizes the need to redefine the concept of "work" in the context of rural agrarian societies. It recommends that household maintenance activities should be considered within the purview of "work". It found that if "work" merely refers to directly productive activities, women work much shorter hours than men. However, if household maintenance activities are considered within the purview of "work", women were found to work longer hours than men.

The study also examines the division of labour by age and sex, household allocation of labour and employment of outside labour by households. Further, the study measures the extent of underemployment in the village under study.

CHAPTER 1. INTRODUCTION

The year 1971 saw the emergence of Bangladesh as an independent country. The people of Bangladesh live in 65,000-odd villages. According to the 1974 Census of Bangladesh the population stands at 71.4 million[1] and the adjusted figure for total population stands at 76.4 million.[2] Rural population accounts for about 91.2 per cent of the total population of the country.[3] Bangladesh is experiencing a population growth of 2.5 per cent per annum.[4] As population increases, so does unemployment and underemployment. According to some estimates up to one-third of the total labour force in the country remains unutilized and more so in the rural areas.[5] This gives some idea of the magnitude of the employment problem as obtaining in Bangladesh today.

The poverty of the rural population is a function of the limited number of days at work and the low productivity of the work obtained. Providing productive employment opportunities to the millions of unemployed and underemployed landless or near landless should be the first item in any strategy for rural development. The bulk of the population lives in the rural areas and, hence, highest priority should be attached to effectively tackling this problem.

The preparation of plans calls for the collection of a much larger body of statistics than is available. The country suffers from the generally inadequate knowledge about many subsistence activities. The 1974

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1. Govt. of Bangladesh, Census Commission - Bangladesh Population Census, Bulletin 2, 1975.
2. Population Bureau, Ministry of Overseas Development, and Census Commission, Statistics Division, Ministry of Planning, Dacca, 1977. Report on the 1974 Bangladesh Retrospective Survey of Fertility and Mortality, 1977.
3. Govt. of Bangladesh, Census Commission - Bangladesh Population Census, Bulletin 2, 1975.
4. Rabbani, D'Souza and Rahman - "1974 Census Estimates of Fertility Levels in Bangladesh", paper presented at Cox's Bazaar Bangladesh Fertility Seminar, December 1976.
5. Govt. of Bangladesh, The First Five Year Plan, 1973-78, Planning Commission, Dacca, November 1973, p.17 and p.187.

Census, which was the first one since Independence, failed to serve the purpose. It restricted itself to collecting much the same type of information on the labour force of the country as was done in the earlier censuses.

As will be discussed below, the census approaches suffer from drawbacks when applied to a rural agricultural society. These approaches cannot effectively deal with the marginal groups such as the unpaid family workers and the self-employed. Information provided by the census questionnaire on the labour force is inadequate and only of limited value.

Given the development strategy and the explicit goal of full employment of a labour force that is rapidly expanding in the wake of accelerated population growth, manpower planning has to be assigned an important role - particularly since the existing level of underemployment is pronounced. Manpower planning may be expected to be futile, unless an assessment of manpower resources, in both its quantitative and qualitative aspects is available. The statistical knowledge about agriculture and its ancillary activities is incomplete and fragmentary.[1]

It may be pointed out here that the development strategy pursued by the govenment places considerable emphasis on the development of the country's agricultural sector and generating more employment opportunities in agriculture. Out of a total of Tk.39520m. provided in the First Five Year Plan of Bangladesh agriculture has been allocated the highest amount. 24 per cent of the total plan outlay has been allocated to the agriculture and water sector.

The basic strategy adopted in the plan is to concentrate on increasing output in those sectors of the economy which use large amounts of labour and to use methods of production which are labour-intensive. The employment objective of the Plan is to bring down the rate of unemployment and

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1. Khan, A.R., The Economy of Bangladesh, 1972, p.36.

underemployment in agriculture from about 37 per cent in 1973 to about 32 per cent at the end of the plan period.[1]

1.1 Review of the Approaches adopted in the Measurement of the Economically Active Population

The economically active population (EAP) comprises all those persons who contribute to the supply of labour in the production process. This includes the employed and those who are unemployed but available for work.[2] Such a definition of the EAP, although simple, is beset with numerous problems. The magnitude of these problems differ between the developed and the less developed countries.

The evolution of the concept of the EAP distinguishable from the total population is closely associated with the process from which the modern industrialized market economy has arisen. In the LDCs, particularly in the rural agricultural sector, the distinction between the EAP and the total population seems to be artificial. In such societies technology still remains at a low level and this requires the participation of virtually the entire population in the production of goods and services. Already some studies exist which show that children around 5-7 years of age in these societies contribute to the production process. The developed countries, on the other hand, possess a more advanced level of technology, which makes it possible for a relatively smaller proportion of the population to provide most of the needs of the economy. This explains why the participation rate among those in the young age groups in the developed countries is small compared to that in the LDCs. The advancement of technology over the long-run introduces several changes, such as the shift of population from agriculture to industry, a shift of production from small-scale to large-scale (i.e. from household to factory units), replacement of self-employment

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1. For further discussion see Govt. of Bangladesh, Planning Commission, The First Five Year Plan 1973-78.
2. U.N. - Demographic Aspects of Manpower: Sex and Age Patterns of Participation in Economic Activities, Report I, p.1.

by wage-employment, etc.[1] These changes make it easier to distinguish the EAP from the rest of the population. The task of identification is, therefore, much easier in the developed countries than in the LDCs, where these changes have only recently begun to take place. The following statement highlights the point:

"In the industrialized countries where the great bulk of the population participates in the market economy and receives money wages or profit for labour, the distinction between economic and non-economic activity is fairly clear-cut. On the other hand, in many countries of Africa, Latin America and Asia the role of market economy is much less prominent. A distinction between household chores and economic activity in such a society is somewhat artificial and the result of attempting such a differentiation depends to a large extent on subjective judgement. In such cases, even when the theoretical definitions and procedural rules adopted are the same the possibilities for variations in their application are tremendous".[2]

Labour necessary for generating income and capital is what is commonly referred to as productive or economic activity and labour necessary for the maintenance and upkeep of the household which is not directly productive in the sense of generating income or contributing to physical capital formation is what is generally known as non-economic or "household maintenance activities".

Most of the methods used in the recent censuses and surveys in most Asian countries to identify the EAP are related to the two broad approaches; the "gainful worker" approach (GWA) and the "labour force" approach (LFA).

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1. It may not be possible to bring about these changes in a country like Bangladesh with a huge population, heavy concentration in the agricultural sector and a relatively small industrial base over the period of, say, ten or fifteen years or, perhaps, even more.

2. U.N. - Demographic Aspects of Manpower, p.2. op.cit.

The GWA is based on the idea that each person has a more or less stable functional role as a bread-winner following a gainful occupation, and that this role is independent of his activity at any given time.[1] The major purpose of this approach is the enumeration of occupations. The analysis of labour force and employment are only of secondary importance.[2] The EAP is enumerated by asking each individual to state his/her occupation, usually without any reference period during which such occupation was exercised.[3] This approach gives information on an individual's gainful occupation without referring to his or her current activity. The only advantage of this approach is that the resulting data are not influenced by any seasonal variation. In fact, the predominance of seasonal activities in the agricultural sector makes it reasonable for some of the LDCs to favour the adoption of this approach. However, it suffers from several disadvantages. The data either do not refer to any specified period or refer to a very long period, such as a year. This makes it unsatisfactory for use as benchmarks. A person might report a particular occupation, although he may have worked at it for only a brief period of time, or if no reference period was used even if he was retired and had not worked at it for years. The approach does not permit the collection of accurate data on unemployment, since the "new workers" looking for their first job, who had no "occupation" to report would be normally excluded from the labour force (unless the definition is so adjusted as to include them), even if they were seeking employment and were, thus, part of the labour supply. Consequently, under this approach a part of the labour force which should have been included, i.e. the "new workers", are normally excluded from the labour supply and part of the labour force working little or no longer

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1. U.N. - Application of International Standards to Census Data on the Economically Active Population, p.5.
2. Durrand, John. - "Development of Labour Force Concepts, 1930-40", Labour Force Definitions and Measurements, Bulletin No.56, prepared by Louis J. Ducoff and Margaret J. Hagood, Appendix A, p.80, 1947.
3. In most censuses and surveys this information is usually obtained from head of household or some other adult male member.

actively employed or seeking work, such as the "retired persons" are included. This, therefore, gives a biased estimate of the size of the labour force.

The labour force approach (LFA) was developed in the U.S.A. during the depression period of the 1930s. Its main objective was the measurement of the extent of unemployment, an objective that had not been well achieved with the GWA.[1] The LFA attempted to remedy some of the deficiencies of the GWA as noted above, by introducing two concepts, namely activity and specific time reference.

"Labour force" is an economic concept that is used to identify all those persons within a specified age group who supply and those who are willing and able to supply their labour for the production of marketable goods and services during the reference period, which is generally a week preceding the survey. As regards the eligible age group it is recommended that the minimum age limit should be set in accordance with the customs and traditions prevailing in the country.[2] It is, therefore, appropriate that in countries where a large proportion of the labour force is engaged in the agricultural sector, the minimum age selected should be lower than in industrialized countries, where young children in most cases are prohibited by law from taking up employment. However, it has been recommended that the minimum age in any country, agricultural or industrialized, should not be higher than 15 years.[3] It may be pointed out here that even if there are accepted age limits the transition of a young person from student to working status, or of an adult from working to retired status, does not always take place in a clear-cut way. It is a gradual process. During a specified period of time (adopted as the reference period) an individual may have dual

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1. Hauser, Philip M., The Measurement of Labor Utilization, Univ. of Chicago, mimeo, 1973, p.1.
2. United Nations, Principles and Recommendations for the 1970 Population Censuses, Statistical Papers Series M, No.44, New York, 1967.
3. Ibid. p.61.

characteristics.[1] That is, a person may be a student as well as participating in economic activities. There is no provision in the recommended definition to cover this group of people.

However, the main weakness of the LFA is due to the fact that the data are likely to be affected by temporary and seasonal conditions at the time when the census is taken. The choice of a specific reference period is, therefore, important, because it affects the size of the labour force and the classification of persons therein, according to whether they are employed or unemployed. The reference period adopted should be neither too long nor too short. If the reference period adopted is too long, e.g. a year, the size of the labour force will be larger and the employment segment will tend to increase. If, on the other hand, the reference period is too short, e.g. a day, the unemployment segment of the labour force will tend to increase. To overcome this problem it is recommended that the week preceding the census should be adopted as the reference period. Moreover the timing of the reference period is also very important, since agriculture is characterized by its seasonality. If the census is conducted during a slack period the numbers reported in the labour force would be lower than if the census is conducted during periods of peak agricultural activities. However, it is possible to get around this problem to some extent (as in the case of the Malaysian Employment Survey of 1964) by having a category "farmers temporarily not working". Such a question was not asked in the Pakistan and Bangladesh censuses.

As noted above, the predominance of seasonal activities, such as agriculture, makes it reasonable for some of the less developed countries to favour the adoption of the gainful worker approach or the year's usual activity status approach, although some of these countries, such as Thailand, the Philippines and South Korea, adopted the labour force approach in their

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1. U.N. - Demographic Aspects of Manpower, p.3. op.cit.

1960 censuses. In the 1961 Census of Pakistan the gainful worker approach was used for the agricultural sector and the labour force approach for the non-agricultural sector. In the 1974 Census of Bangladesh a one-year reference period was adopted for the agricultural labour force and a one-week period for the non-agricultural labour force.

The gainful worker approach gives a slightly higher count of the labour force than the labour force approach.[1] According to the estimates made by the Bureau of Census of the United States the economically active population in 1930 according to the labour force approach could have been less by 1.2 million than the count under the gainful worker approach. Of these 1.2 million, seasonal workers not seeking work at the time of the census accounted for 1.15 million.[2] The Burmese census (1953-54) used simultaneously the "labour force" and the "year's usual activity status" approaches. It reveals that in the urban areas both approaches yield similar size of the labour force but in the rural areas the latter yield a larger count than the former.[3]

Both these measures result in the foregoing of an accurate measurement of underutilization of labour. In a traditional farming community where land can be indefinitely subdivided, there can be, at the level of the family, a problem of underutilization of labour but not of unemployment. Similarly, in any economic system where work can be shared, either by adding to the numbers self-employed in various trades, it is not open unemployment so much as low incomes which is the likely outcome of accelerated labour force growth. Underemployment exists not only in the

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1. Bancroft, Gertrude., The American Labor Force, Its Growth and Changing Composition, 1958, p.26.

2. Durand, John. - "Development of Labour Force Concepts, 1930-40", Labour Force Definitions and Measurements, Bulletin No.56, Appendix A, New York: Social Science Research Council, 1947.

3. Sundram, R.K. - "Census Data on Labour Force and Income Distribution in Burma, 1953-54", quoted in You Poh Seng's "Growth and Structure of Labour Force in the Countries of Asia and the Far East", Asian Population Conference, 1963.

form of curtailed hours of work, but also in the form of meagre earnings in economically marginal activities, such as spinning yarn or subsistence returns from marginal farming or handicraft operations.

The Census Commissioner in Pakistan remarked:

"Only 131,484 agricultural and other workers in the whole of Pakistan reported themselves as having been unemployed during the whole month of January, 1951. These figures are obviously too small and do not represent reality. Cultivators do not regard themselves as unemployed if their families own land and they are maintained by the general activities of the household. Among cultivators, therefore, only landless labourers are likely to regard themselves as unemployed. Among non-agriculturists there was evidence of considerable reluctance to admit unemployment and in the case of independent workers or own account workers, a category which represents a considerable proportion of skilled and unskilled labour, the whole conception of unemployment is indefinite. Moreover, persons seeking work in industry, business or services regard themselves, not as unemployed, but as still engaged in the general work of their family, particularly if their family owns or rents land".[1] Low unemployment rates were recorded in the censuses of the Asean countries as well.[2]

According to an I.L.O. survey estimate the unemployed constituted only 3.5 per cent of the labour force in Bangladesh. The rate was recorded to be the highest in large towns and lowest in villages.[3]

In one of the rounds of the National Samply Survey in India it was observed that "many people living in the villages would not regard themselves as unemployed so long as they were able to remain living on the earnings of other members of the family or were taking part, even to a

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1. Govt. of Pakistan, Census of Pakistan, 1951, Vol.I, Karachi, p.114.
2. see Manderson, L. "Women and Work: Continuities of the Past and Present", - paper presented at the Second Annual Conference of Asian Studies Association of Australia, Sydney, May, 1978, Table I, p.8.
3. International Labour Office. "Unemployment and Underemployment in India, Indonesia, Pakistan and the Philippines", International Labour Review, vol.86, 1962.

nominal extent, in the activities of the household, on the land, or in a family business".[1] In this connection, the remarks of the Second Agricultural Labour Inquiry Committee, 1956-57, are pertinent. It states, "Left to themselves, agricultural labourers are rather immobile, bound as they are by conservatism, tradition and customs not to leave the place to which they belong and the cultivators with whom they are working".[2]

People who are idle, especially in the rural areas, may not seek work for they believe none to be available.[3] This, in turn, is a function of the lack of an effective market and of limited horizons imposed by life in stagnating and largely isolated societies. Moreover, social and religious institutions and attitudes such as the observance of "purdah" have a forceful effect in making some people indisposed to work at all, if work is not available in the household. In the context of the developed countries, the question relating to "looking for work" would appear to be straightforward, but among people in the LDCs, unaccustomed to keeping written records, or in many cases, unable to read, write or count, such a question cannot be expected to elicit accurate information.

The adoption of either the GWA or the LFA does not entirely solve the problems of identification of the labour force of a country such as Bangladesh, let alone make known the extent of labour utilization.

When the enumeration is made, the definition concerning the employed persons of the labour force raises a number of limitations and practical problems. As regards persons serving in government and other well-established institutions, there is no problem, since the enumerator can readily identify them, for in most cases they are employed throughout the year. However, there are seasonal and part-time workers, who form the bulk of the labour

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1. India, National Sample Survey, No.16, p.20.
2. India, Ministry of Labour and Employment. Agricultural Labour in India, Report of the Second Inquiry Committee, Vol. 1. All India, New Delhi, 1960, p.94.
3. Government of India, Directorate of National Sample Survey, National Sample Survey, No.16, p.iv.

force in most LDCs, and cannot be identified easily. In predominantly agrarian societies, the enumeration of seasonal workers is, indeed, a serious problem. Jaffe notes, "Often other work opportunities may not be available so that the individual, in theory, could be classified as inactively seeking work. On the other hand, he could be classified as not in the labour force since he was not working and was making no effort to seek work. Further, if he has a small plot of ground on which he can spend a few hours' work per week, he is classified as employed ..."[1] To be able to measure seasonal variations the I.L.O. recommended that special studies should be conducted more frequently than once in a year.[2] Most LDCs, however, cannot conduct such studies, since these involve huge amounts of money.

In rural agricultural societies there is a system of sharing available work among available people. This means that when there is work available, all those capable of working share the load of the work. The internationally recommended definition of the labour force is not wide enough to cover this kind of special problem.

Difficulties also arise with respect to the unpaid family workers. The unpaid family workers are those who work without pay in an economic enterprise, such as farm and household industry operated by a member of the household. Although they usually receive room and board and sometimes cash allowances, these are not necessarily and in most cases not at all related to their work in the family farm or enterprise.[3]

Since the unpaid family workers are mostly found in agriculture and household industry, they form a relatively large part of the labour force in the LDCs. In Bangladesh the proportion of such self-employed and

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1. Jaffe, A.J. and Stewart, C.D. - Manpower Resources and Utilization, New York, 1951.
2. International Labour Organization - International Standardization of Labour Statistics, Geneva, 1959.
3. United Nations - Application of International Standards to Census Data on the Economically Active Population, New York, U.N., 1951.

unpaid family workers amounted to nearly 70 per cent of the total labour force of the country in 1967-68.[1]

Women and children make up a large part of this group. Over 80 per cent of women and over 80 per cent of females aged 10-14 years were unpaid family workers in Barkait. Over 70 per cent of boys aged 10-14 years were unpaid family workers in Barkait. Their work in family farm or business is usually combined with and not easily distinguishable from such activities as household duties, tending animals, child care, etc. It is very difficult to draw a distinction between women who prepare meals for the farm labourers and do other odd jobs and those who prepare farm products for sale.[2] Such persons are undoubtedly puzzled when asked a question such as "Were you looking for work?". Within their range of vision no alternative to their present status is likely to be understood. Another problem arises from the fact that if unpaid family workers were counted as employed without regard to the amount of work done, the returns would swell the size of the labour force. Moreover, the returns would exaggerate the relative importance of agriculture and household industry. Besides, treating them as employed without consideration to the amount of work done would inflate the employment figure and may lead to an under-estimation of the extent of labour time unutilized. Even if they are available for only short hours, it is likely that there may still exist considerable underutilization of labour time. An ILO resolution recommended that to be counted as employed and economically active, unpaid family workers must work one-third of 'normal hours'.[3] Such a criteria, however, has its own limitations. Such terms as 'normal' raise their own problems. Some countries have effectively treated all female unpaid family workers as

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1. Government of Pakistan, Central Statistical Office, Summary Report on Population and Labour Force, 1967-68.
2. U.N. - Demographic Aspects of Manpower, 1962, p.2. op.cit.
3. International Labour Office, ILO Resolution adopted by the Eighth International Conference of Labour Statisticians, Geneva, Nov.-December, 1954, Section 6(4c).

economically inactive, particularly in the rural areas of Latin American countries and in Moslem countries of the Middle East where cultural factors have apparently contributed to the absurdly low recorded rates of female activity.[1]

In the developed countries, the preponderant proportion of the labour force is "employees", whereas in the less developed countries the majority of the labour force are not "employees" but rather are self-employed persons in agricultural or non-agricultural pursuits. The self-employed cannot conceptually be unemployed, since they are not employees. These people do not consider themselves unemployed if their families have land and they are supported by the general economic activity of the household. Moreover, occupations in rural Bangladesh are not strictly compartmentalized so that if the services of a group of workers are not required, the group will take up some other activities. For example, if the services of a self-employed mason are not required, he will shift to some other activity such as handicraft, or, if his family has land, to farming. Again, for example, in the case of a woman who makes mats but has stopped since there is no demand for mats, she will probably start weaving fishing nets, etc. These people perform various useful activities both for market transaction and for household maintenance and normally do not remain idle for most of the time. "The imperfect specialisation of labour and, perhaps to a lesser extent, the greater occupational fluidity of labour in many under-developed countries, greatly affect the meaning and significance of occupational statistics".[2]

Dissatisfaction with the labour force approach as both a conceptual device and measurement tool has grown in many countries. Its applicability has been questioned by many, including Mydral, Wilbert Moore, Hauser and

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1. El Shafei, A.M.N. - "The Current Labour Force Sample Survey in Egypt", International Labour Review, Vol.LXXXII, No.5, Nov. 1960; pp.432-449.

2. Bauer, Peter T. and Yamey, Basil S. - The Economics of Underdeveloped Countries, Cambridge Economic Handbooks, The University of Chicago Press, 1957, p.34.

others.[1] The labour force approach is deficient, since it assumes the prevalence of the kind of formalized, institutional work situation which is generally found in the developed countries, where there is a clear distinction between work and non-work activity; where home and work places are typically separate; where the notion of a "job", that is employment by another, as the nexus of work, is firmly embedded.

These assumptions fail to recognize the very informal social and economic underpinnings of work in the LDCs. In the LDCs agriculture is practised on a family basis and the participating group is fluid and difficult to define. As already pointed out, a distinction between economic activity and household work in such a society, especially in the rural areas, is somewhat artificial and the result of attempting such a distinction seems to depend largely on subjective judgement. Considering the nature of the economic environment in the LDCs, it is perhaps not difficult to see why the conventional concepts fail to produce worthwhile data on the realities of labour utilization in these countries. In fact, data collected have been moulded in large part by concepts unrelated to social reality. In these countries, much of the population maintains some sort of a connection with family enterprise and most of them are largely detached from an organized wage labour market. Within this framework of organization, household members may make an important, though not necessarily a continuous, contribution to the household economy.

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1. see: Bauer, Peter T. and Yamey, Basil S. - The Economics of Underdeveloped Countries, 1957.

Moore, W.E. - "The Exportability of the 'Labour Force' Concepts", American Sociological Review, Vol. XVIII, No. 1, 1953.

Myrdal, Gunnar. - Asian Drama, An Inquiry into the Poverty of Nations; London: Pelican Books; 1968.

Hauser, Philip M. - The Measurement of Labor Utilization, Univ. of Chicago, mimeo, 1973.

Turnham, David. - The Employment Problem in Less Developed Countries: A Review of the Evidence, O.E.C.D., 1971.

Responses to these criticisms have given rise to new concepts and measurement procedures. One such approach is the so-called "labour utilization framework", first presented in 1971 by Philip Hauser. The approach gives a more detailed breakdown of the labour force - those adequately utilized and those utilized inadequately due to (1) unemployment, (2) inadequate hours of work, (3) inadequate income, and (4) mismatch of occupation and education/training. It attempts to provide for the measurement of both visible and invisible underemployment and of outright unemployment. A principal merit of this approach is its effectiveness in sorting out different categories of underutilized labour for which quite different policies are relevant. However, the approach has certain disadvantages:

1. As regards the number of hours worked, the original formulation of the labour utilization framework of Hauser proposes the use of 40 hours per week as a suitable standard against which to assess utilization standard. Although this standard is reasonable in most industrialized countries, and, perhaps, appropriate even in the modern or non-agricultural sector in the less developed countries, it would be arbitrary if one were to use it for the labour force engaged primarily in agriculture and other household industry in the rural areas of the less developed countries. Work in agriculture and even in the informal sector of the urban economy (such as hawking and peddling) is not organized rigidly around time standards. Therefore, the cut-off seems quite arbitrary, It is also better, perhaps, to have separate cut-off points for males, females and children aged 10-14 years. Unless separate cut-off points exist for males, females and children, the use of a cut-off point to assess utilization status in these societies does not make much sense. Howard noted, "In truth, the practical difficulties of applying anything that can be called an eight-hour day in agriculture are so obvious that it becomes doubtful whether it is worthwhile

embarassing public opinion with a discussion theoretically on the basis of the eight-hour day in agriculture".[1] This is, according to Gadgil, "because the business of a family farm or of domestic industry does not require that punctuality in hours of work or regularity of attention and attendance which is required of a machine operator or attendant".[2] Moreover, standards of working time of a full or a short working week are transitory and are largely socially conditioned. A 40-hour week in industry is now accepted in many countries, where a 48-hour week was the norm a quarter of a century ago and 60 to 70 hours common in the nineteenth century.

2. The income criterion raises serious conceptual problems and difficulties of measurement. Again, the results depend very much on when the income data are collected. Obviously, data on income collected during harvest would show a different picture than if it were collected during other times. Data on income are among the more difficult types of information to collect through a census or a survey. In a family enterprise in which unpaid family workers are involved, it is not possible to probe for the money income to be attributed to each worker. In such a situation the income of the family can only be used to determine income per worker or income per person in the family.

Difficulties associated with collecting income data have been recognized by researchers. Caldwell noted, "Money is a sensitive matter and people are used to giving wrong information about it; many expenditures and some sources of income they find difficult to recall or even embarrassing to mention".[3] Hull mentioned the notorious problems associated with any attempt to achieve an accurate estimate of income in any economy where a large proportion of transactions take place in commodities, and many of the

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1. Howard, L.E., Labour in Agriculture, London, 1935, p.115.
2. Gadgil, D.R. - "Preconditions of Economic Development", in Indian Journal of Economics, February 1952, Vol.I, pp.14-20.
3. Caldwell, J.C. - The Socio-Economic Explanation of High Fertility, Changing African Family Project Series, Monograph No.1, Canberra, 1976.

material influences on a household are determined outside the marketplace altogether. He also pointed out that the people are hesitant to answer a question about their income because of the fear that it might affect their taxes. He also referred to the fact that deliberate under- or over-estimation of income can occur if the household head does not want to appear too high or too low in comparison with his neighbours.[1]

3. As regards the mismatch of occupation and education, this again is not very useful for the rural areas of the LDCs, where most of the people staying in the rural areas take to agriculture as their occupation. The question also arises as to whether in so matching, years of formal schooling or job experience are to be considered.

4. It fails to measure the extent of seasonal unemployment and under-employment.

It may be pointed out here that the Hauser approach has been tried in a number of areas and though leading to an improvement in the usability of data, a lot of shortcomings still exist.[2]

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1. Hull, T.H. - Each Child Brings Its Own Fortune, unpub. Ph.D. thesis, ANU, Canberra, 1975.

2. Smith, P.C. and Domingo, L.H. - Determinants of the Underutilization of Labour in the Philippines, paper presented at the Seminar on Labour Supply held in Rizal, Philippines, June 21-25, 1976.

1.2 Past Studies of Labour Utilization and Use of Time in Bangladesh

Several studies have been carried out in Bangladesh to investigate a few aspects of rural unemployment and underemployment. In 1956 a sample survey was carried out in four different regions of the country: Narayanganj, Rangpur, Rajbari and Feni.[1] The farmers were asked to report man-days actually utilized by active members of their families in farm and non-farm activities. It is not known whether time spent on tending animals and fishing has been accounted for; perhaps not. Since the number of hours constituting a man-day was not stipulated it is possible that a full man-day might have been reported in both cases when much less or much more was actually spent in work. The study concerned itself with active males (though the age-span of active males has not been specified) and females were omitted from the study on the ground that the main occupation of females was found to be predominantly household work. The exclusion of females clearly underestimates the usefulness of the study.

The farmers were asked to supply information for the preceding year (i.e. 1955). Farmers keep no record of their days of work and, hence, considerable error in reporting cannot be ruled out. No information could be obtained on seasonal variations in employment. It was assumed that 250 man-days represented the total annual potential labour supply per active male. Visible unemployment was estimated as the difference between potential man-days and actual utilization of man-days.

A manpower survey was conducted in 1955 under the Expanded Programme of Technical Assistance.[2] The survey covered eight weeks of the year. The survey used a reference period of one week. The interviewing was conducted during the period from mid-September to mid-November. Unpaid family workers, working 15 hours or less during the reference period, were not reckoned in the labour force. This clearly undermines the contribution of the unpaid family workers in the household economy. The effect of seasonality would have introduced an element of bias. If an unpaid family worker was interviewed around mid-September or around mid-November, the

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1. Dacca University Socio-Economic Survey Board: Rural Credit and Unemployment in East Pakistan, 1956.
2. International Labour Office. - "Unemployment and Underemployment in India, Indonesia, Pakistan and the Philippines", International Labour Review, Vol.86.

possibility of his/her inclusion in the labour force would perhaps have been greater, since it is likely that during such a time he/she might have worked more than 15 a hours a week, and the possibility of inclusion in the labour force would be less at other times during which the survey was conducted owing to the fact that during such time there may be less work available. Thus, the criteria of 15 hours and the time period when an unpaid family worker was interviewed could have distorted the findings to some extent. Moreover, as already pointed out, the problems with these types of surveys is that it may be quite useful in the case of the developed countries, where people have a fairly good idea of what they have done during the preceding week, but in the case of the LDCs where people hardly keep any record of their activities it is quite difficult for a person to recollect what he might have done over a week. It is likely to result in the reporting of inflated numbers of hours worked.

In 1963 a survey was carried out in the northern part of Bangladesh.[1] It covered twelve villages. The selected families were interviewed every two weeks and data were collected on the utilization of total labour time in terms of hours of work in various occupations. Again, it may be pointed out that this study was based on interview technique and considerable degree of error in reporting cannot be ruled out.

In 1961-62 a survey was carried out in the village Sabilpur in Noakhali District.[2] In this survey data were collected on the utilization of total labour supply in agricultural and non-agricultural activities by means of weekly interviews of the households, supplemented by observation of the activities of the households throughout the year on the part of the interviewers. A man-day was defined for the purpose of investigation as consisting of eight hours of work. From the methodological point of view it is an improvement over the other surveys mentioned earlier, in that it relied to some extent

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1. Islam, Nurul. Concepts and Measurements of Unemployment and Underemploymer in Developing Economics, International Labour Review, Vol.89, 1964.
2. Habibullah, M. - The Pattern of Agricultural Unemployment: A case study of an East Pakistan village, 1962.

on observation, although it was restricted to only a few selected families in the village and not to all the families on which it collected data. Thus, to a large extent, this survey suffers from the same recall lapse. It considered active adult males only, which clearly limited the value of the study.

These studies were all based on a pre-conceived notion of what constitutes "work". "Work" in these studies refers to directly productive activities. But, in the context of a society such as Bangladesh, the concept of "work" should be broadened so as to include other activities essential to the maintenance of the household. "Work cannot be fully defined without reference to a society".[1] Work is an activity that is governed by some controlling conditions, which the worker himself cannot change or alter. Work should include not only directly productive activities but should also include those related to non-market output, that is, indirectly productive work and household maintenance activities of men, women and children that is not reflected in the income figures. Thus, "work" should be defined in a broader sense to include productive work for cash earning, productive work in self-employed enterprise and household maintenance activities. Manderson observed, "The majority of persons involved in activities not considered work are women. Their activities are not able to be reckoned conventionally, yet they relate directly to national well-being: they include child bearing and rearing (one's own children, grandchildren, and siblings), household cooking, cleaning, laundring, gardening, sewing, and domestic animal husbandry".[2]

According to the "new household economists" households are producers as well as consumers.[3] They produce commodities by combining inputs of goods and time according to the cost-minimization rules of the traditional theory

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1. Yves Simon - Work, Society and Culture, Fordham University Press, 1971.
2. Manderson, L. - "Women and Work: Continuities of the Past and Present" a paper presented at the Second Conference of the Asian Studies Association of Australia, Sydney, May, 1978.
3. Becker, G.S. - "A Theory of the Allocation of Time", The Economic Journal, September 1965. pp. 493-517.

of the firm. Commodities are produced in quantities determined by maximizing a utility function of the commodity set subject to prices and a constraint on resources. Resources are measured by what is called full income. Full income is defined as the sum of money income and that foregone by the use of time and goods to obtain utility, and commodity prices are measured by the sum of the costs of their goods and time inputs.

On the basis of rough estimates, Becker observed that foregone earnings are quantitatively important and therefore that full income is substantially above money income. He noted that since foregone earnings are primarily determined by the use of time, considerably more attention should be paid to its efficiency and allocation. He suggested that agencies which collect information on the expenditure of money income might simultaneously collect information on the "expenditure" of time.

In a study of seven unions of Bangladesh in 1974 information on the use of time was obtained mainly for the head of the family and to some extent for his wife and other members of the family who were above the age of 18 years.[1] "Productive work" as defined in this study includes directly productive activities plus family expenditure-saving work and time spent on study or training. By including study or training the time spent on productive work would tend to be inflated. The study was primarily an attempt to estimate how an individual in Bangladesh spends his 24 hours of the day on average. The respondents were asked to give an account of the time spent on the previous day. Without keeping a record of activities the respondents, especially in the rural areas, could not be expected to have reported every bit of the detail accurately. Rather, information should have been collected on what they did on the day of the interview. This

1. Abdullah, Farouk and Muhamad Ali. - The Hardworking Poor, 1977. (Data were collected for one single day in one week).

would have been possible by cutting short the length of the "day" from 24 hours to, say, about 14 hours,roughly between 5.30 a.m. to 7.30 p.m., which would constitute an effective "day" in which to spend most of the time on various useful activities. The other part of the day is mostly spent in sleeping and other non-work activities at least in the rural areas of the country. Thus, perhaps, better quality of data could have been collected by shortening the length of the day from 24 hours to a working day of about 14 hours or so, supplemented, of course, by the method of observation.

On the whole, it may be pointed out that none of these studies took into consideration the importance of child labour in the context of household economy and that some of these even did not take into account the work done by the women. The surveys failed to recognize the importance of the contribution of young children, and in the case of some, that of women, in terms of their labour input both in respect of directly productive activities as also in respect of activities which could be termed as indirectly productive in the sense that by performing these tasks young children often free older members of the household for more productive work.

Most of the studies of labour utilization in Bangladesh have taken into consideration persons aged 10 years or more only. The 1974 Census of Bangladesh followed the same minimum age requirement for inclusion in the labour force. In many of the LDCs many family members in the rural agricultural societies - persons who might otherwise be regarded as outside the working age-groups - may be drawn into agricultural activities, when the demand for labour is high. Besides, children in most rural agricultural societies render other useful services. The activities they perform may not all be directly productive, but certainly are at least indirectly so in the sense that by doing such tasks as tending animals, child care, household chores, etc., they release other older members of the household for more

productive work. We have no idea of how useful the contribution of young children is to the household economy in rural Bangladesh.

Very few studies have so far been carried out to determine the importance of work done by young children in the household context in the less developed countries. Most of the studies on the economic value of children have been carried out using the interviewing technique. Mention may be made of the very few studies carried out to determine the importance of children's work, using time-budget data.

White carried out a study in Java to determine the importance of work done by children and collected time-budget data.[1] In his study each household was visited every sixth day for a period of one year. The data collected was retrospective, since it referred to the day preceding the visit. Peet carried out a study in Nepal.[2] Work-input data were collected for all children and adults in 45 to 50 Thamic households once a month over a period of 7 to 10 months. For a period of one and a half months these data were collected for the 112 households, representing all castes in the village. The observational technique was mostly employed for collecting the data, although supplemented by interviews. Cain carried out a study in a Bangladesh village, which provides some information on the activities of young children.[3] (Actually, his survey started after the author was already half-way through his work). He collected time-budget data every 15 days and the data referred to the respondents' activities and their duration for the 24-hour period, preceding the interview.

The methodologies adopted in these studies appear less sophisticated than the one used by the author. None of these studies were able to

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1. Nag, Peet and White, "Economic Value of Children in Two Peasant Societies", IUSSP Conference Paper, August 1977.
2. Ibid.
3. Cain, Mead - "The Economic Activities of Children in a Village in Bangladesh", Population and Development Review, vol.3, No.3, September 1977, pp.201-227.

collect data on what young children did daily. Rather, this was collected either once a week, or once a fortnight or month. Nothing is known about the intervening period. The results of these surveys, therefore, fail to bring to light the complete picture of the situation, as obtaining in these societies. Besides, the data presented by Cain are preliminary. These are taken from the first four rounds of time-budgets. Cain observed that during this period the methodology was evolving and, thus, they may be subject to greater error than subsequent rounds. It also appears from the paper that the village he selected does not truly reflect the rural characterisitcs of Bangladesh. Only 39 per cent of all households in his village depended on crop production as the most important source of income, while over 70 per cent of all households in rural Bangladesh depend on it as the major source of income. This, again, limits the value of his study in so far as policy implications for rural Bangladesh are concerned.

Thus, these studies, although providing some picture of the situation, fail to deal with all the groups who participate in productive activities and, hence, are of only limited importance. On the whole, we need more studies which dig into the pattern of labour utilization without too many pre-conceptions. These will help to guide us in the future design of labour force surveys. The purpose will be well served if daily recording of data relating to activities of individuals aged 5 years and above of a sample of households is carried out over a period of several months to highlight the nature and pattern of labour utilization in the rural areas of LDCs.

1.3 Aims of the Thesis

In countries like Bangladesh underemployment is more rampant than unemployment.[1] The census approaches only give us measures of employment and unemployment, although the latter is not a very realistic one, owing to the fact that the concept of "looking for work" is not suitable in rural agricultural societies. The census approaches say nothing really about how much surplus labour there is in the rural areas. Thus, the type of information which is all the more important is missing. This thesis will attempt to provide a better estimate of unemployment as well as to measure the extent of underemployment in a rural area of Bangladesh.

Agriculture, the predominant occupation of about 80 per cent of the population, is affected by seasonality. Seasonal unemployment and underemployment is the problem of manpower utilization in the rural areas of the LDCs. Dantwala notes, "The problem of seasonality is by far the problem of 'inelasticities' of the time pattern of primary production".[2] Viner characterizes seasonal unemployment as a realistic description of agriculture.[3] Though seasonal unemployment is a world-wide phenomenon in agriculture, the problem is of much greater magnitude in the LDCs. This is so, since by far the largest proportion of the population in the LDCs is engaged in agriculture and also because in these economies there is a predominant dependence on rainfed agriculture. The census approaches fail to measure the extent of seasonality. The present study will investigate the extent of seasonal fluctuation in employment.

The work of women in family farm or business is usually combined with and not easily distinguishable from other activities, such as household duties and child care, etc., which are quite indispensable to the maintenance of the household. A woman may report "housewife" as her occupation on the

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1. A review of literature on underemployment is contained in Appendix I.
2. Dantwala, M.L. - "Notes on Some Aspects of Rural Employment", Indian Journal of Agricultural Economics, Vol.VIII, No.2, August 1953, p.19.
3. Viner, Jacob - "Some Reflections on the Concept of Disguised Unemployment' Indian Journal of Economics, July 1957, Vol.38, pp.17-23.

census questionnaire on labour force, yet she may as well be participating in directly productive work. Again, even if a woman may have been reported as "working" on the census questionnaire, her contribution may be small. Thus, while in the first case, we miss out the labour force status of the woman who reported "housewife" as her occupation and totally ignore her contribution to the household economy, in the second case reporting of a woman as "working", but whose contribution may be negligible, swells the size of the labour force. Such a problem can only be tackled if data are collected daily on the number of hours worked over various activities, such as activities which are directly productive and those related to the maintenance of the household, over a period of several months on the basis of observation and recording of data on a daily basis. Data obtained in this way would facilitate an evaluation of the importance of female labour in directly productive activities vis-a-vis home management. Such a study is all the more useful, since very little information exists in this area. Women constitute roughly half the country's total population. Ignoring them or according them only little importance would mean that we know nothing or far too little about such a vast segment of the population. The thesis will deal with the female work force and its utilization in some detail to highlight some of the features of the female labour force of the country.

The present thesis will examine the importance of work done by children aged five years and above. It will examine the contribution of children in terms of directly productive activities and household maintenance activities. Besides, it will examine the attitudes of parents towards the work done by children, etc.

The study is intended to examine how people make use of their time. It is intended to estimate with time-budget data how men, women and

children divide their time between directly productive activities, household maintenance activities and other activities in the context of their age, sex, cultivable holding of the household and the time of the year, etc. This will enable us to show the variation of time thus resulting.

The characteristics and work pattern of individual in the households as well as the households as a whole will be examined. This will help to show what difference the size of net cultivable land area and the size of household make in the division of labour within the household and employment of outside labour.

CHAPTER 2. APPROACH AND METHODOLOGY

Keeping in view the objectives of this study it was decided to carry out the fieldwork in a village, which is generally representative of rural Bangladesh. Prior to the author's arrival in Bangladesh in February 1976 he arranged local sponsorship for the study through the Bangladesh Academy for Rural Development, Comilla. On arrival the author consulted with the Academy officials and later with members of his research team, most of whom came from Comilla, regarding the selection of the village. An average Bangladesh village has a population of around 1,500 persons (having 250 households or so), a great majority of whom are engaged in agricultural activities. Besides, other factors such as topography, soil, cropping pattern and practices and extent of irrigation, etc., were taken into consideration in selecting the study village.

The Academy is situated under Kotwali Police Station.[1] After visiting several villages under Kotwali Police Station and making preliminary investigation into the structure and composition of these villages, it was found that most of these villages could not be accepted as average Bangladesh villages. The closeness to Comilla Town and the establishment of the Academy have changed the character of most of these villages. Most of these villages have some sort of a cooperative society, such as tube-well, credit, etc. Most of these are under the various projects of the Academy. The literacy rate was significantly high, compared with that of rural Bangladesh generally and a significant proportion pursued non-agricultural activities. It was, therefore, not appropriate for the purpose of the study to select a village in this area.

A search was made, therefore, for a suitable village in a different thana. This is Chandina. Chandina is over 12 miles from Comilla Town

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1. A police station, locally known as "thana" is the lowest tier of government bureaucracy. It is also the lowest level for the posting of an agricultural official by the government.

and around 16 miles from the Academy. There, the author consulted with the local government officials and chairmen of different union councils. A union council is the lowest tier of local government system, members and chairman of which are elected directly by the adult population. The author selected four villages under two union councils. All of these are primarily agricultural villages. Keeping in view that a village should consist of around 250-300 households and after having satisfied the other conditions as well, it was decided to finally select village Barkait. Barkait is situated under East Chandina Union and is located over 16 miles from Comilla Town and over 20 miles from the Academy. Chandina has an area of 78 square miles and a population of 181,355 persons. The density of population is 2,325 persons per square mile. Agriculture is the predominant occupation of over 90 per cent of the population.[1]

Now, a few words on the problem of village definition is necessary. The problem of village definition is complicated at the outset by the fact that official lists of "villages" are in reality listings of the revenue units or "mauzas" (as known in Bengali). These are somewhat arbitrary agglomeration of land plots delineated by men interested solely in dividing up the rural parts of the country into taxable units. These listings have been prepared decades ago. These "mauzas" have names, which appear on administrative village lists. Chandina has 127 "mauzas" or revenue units and 224 local villages. East Chandina Union has 9 "mauzas" and 18 local villages.[2] Sreemantopor is one such "mauza", of which Barkait is a local village under East Chandina Union. The homestead cluster, as a geographical entity, constitutes sufficient basis for what is locally known as a village.

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1. These figures have been obtained from the various government offices & in Chandina.
2.

The survey, being quite large and continuing for nine months, it was necessary to engage a few field assistants. To begin with the author had the services of seven, although on a rather continuous basis he had the services of five field assistants. Of these five, three had Masters Degrees in Statistics, one had a Master Degree in Sociology and the other was a science graduate. Besides, the author had the services of two local village assistants.

The author spent eight days of formal training with them. This dealt mainly with explaining the objectives of the fieldwork and discussion of the manual and different sets of questionnaire. This was followed by pre-tests for several days in different villages to try to give them a clear idea of how to go about conducting interviews, etc., as well as to test the different sets of questionnaires. The fact that we worked together and lived together made things easier. In this way it was possible to correct difficulties as they arose. There was also a system of mutual consultation and cooperation. All of these interviewers came from a rural background and were well-suited to the job.

2.1 Data Collection

A basic methodological commitment was made to the combination of the tools of social surveys with the technique of observation. The familiarity of the author with the language and the local dialect (which he picked up soon) was a tremendous help.

The fieldwork comprised the following stages:

(1) Census of Household; (March 1976 - April 1976).

(2) Labour Force Survey using the census approaches; (March 1976 - April 1976).

(3) Labour Utilization Survey; (April 1976 - May 1976).

(4) Attitudinal Survey on the Value of Children ; (June 1976 - Nov.19

(5) Time-budget Study ; (May 1976 - December 1976).

2.1.1 Census of Household: The basic social unit in a Bengali society is the household. A household is defined as a group of people who share a common kitchen. A household is an economic unit, the members of which contribute to the fund from which they all eat. In Bengali it is referred to as a "chula", which is also the name of the earthen stove constructed in the floor of the house.[1] Servants and relatives living in the household for more than six months were also included as household members.

The census was designed to collect information on each household in the village and in the process obtain a wide variety of data on each individual member. This included socio-economic and demographic characteristics of the population.

The census served as a master frame for all the stages of the survey which followed. Information provided by the census was used throughout the study. It provided the necessary data from which to draw the sample for the Attitudinal Survey on the Value of Children as well as for the Time-budget study.

The census served to identify each household and each individual member within the household with a unique number. In all stages of the survey which followed, these numbers were used, as a ready means of identifying individuals for comparisons of the results of one stage with the other. The census was, thus, a file of basic information of each

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1. Though in common parlance this unit in Bangladesh is described as a family, it was considered necessary to differentiate a household from a family because of their wide-conceptual difference. A family represents a unit of social organization of a people and is essentially determined by an analysis of the lineage structure and kin-grouping. But a household describes an economic unit and may not, therefore, conform entirely to such a structural concept in sociology. Theoretically speaking, completely unrelated individuals may group together to function as an economic unit and, thus, form a household. But such a grouping of unrelated individuals cannot constitute a family.

household and household member in the village.

The census collected data on age of every person in the village. The problem of age reporting has been one of the major difficulties in socio-demographic surveys in most less developed countries, due primarily to the fact that people in these countries, especially in the rural areas, do not know the exact date of birth or even the year in which they were born.

With a view to reducing the problem of age reporting, a historical calendar was constructed and used to help record the ages of people who could not state their ages accurately. The age calendar is a series of historical events arranged in chronological order. These events are those which were within the experience of the people of Barkait. The historical calendar consisted of events of national and local importance to the villagers. The local events included such events as the building of the two mosques, opening of the primary school, building of the Union Council Office, etc.

Sometimes the age of the person was ascertained with reference to the age of another person of a known age who was in the same household or in the neighbouring household or a well-known person of the village. A person can say more easily whether he was older or younger than such a person and by how many years. Villagers often remember events more accurately in terms of the Bengali Calendar Year and therefore, use was made of this calendar throughout to record ages. However, most of the errors in the reporting of age are eliminated by the classification of the age data into five-year age-groups. In any case, the age shifts were, on average, perhaps, no more than two to three years.

2.1.2 Labour Force Surveys using Census Approaches: According to the 1974 Census of Bangladesh, a one-year reference period was adopted in cases of persons having agricultural occupations and one week in cases of persons having non-agricultural occupations. In the present survey both the reference periods were adopted, i.e. for each person aged 10 years and above labour force data were collected using first, a one-year reference period and secondly, a one-week reference period.

The question asked was "Were you (if the respondent was answering for himself) or he/she (in case of others on whose behalf the respondent was giving particulars) working for profit or earning a wage or salary, or looking for work?". Working also includes those who help without any remuneration any member of the family who earns a wage or profit. In other words, the unpaid family workers were included among those "working". The answer to the question could be one of the following:

(1) working,

(2) not working but looking for work,

(3) neither working nor looking for work, or,

(4) household work only.

If the answer was (1), i.e. working, the interviewer would ask: "What is his/her main occupation, i.e. what kind of work does he/she do?" If his/her reply was that he/she was a cultivator, he/she was marked "cultivator". A cultivator is one who himself/herself works on the land or has it cultivated under his/her direct personal supervision.

The same question was also asked in cases where a person had been marked (2), i.e. not working but looking for work. Under the reference period of one year such a question was asked unless the person was looking for work for the first time. If the person was previously in employment but at the time of the survey was out of work but looking for

work then his/her main occupation was to be shown, namely the one which he/she was doing before retrenchment. However, under the reference period of one week such a question was asked, irrespective of whether the person was looking for work for the first time.

In cases of persons recorded as "cultivators" by this question, information was sought as to their status, that is, whether they cultivate their own land exclusively, etc. The status of a person could be one of the following:

(1) owner-cultivator,

(2) owner-cultivator-cum-sharecropper,

(3) share-cropper,

(4) agricultural wage labour,

(5) family help,

(6) owner-cultivator-cum-agricultural labour,

(7) family help-cum-agricultural labour.

It may be pointed out here that the Census of Bangladesh, 1974, considered only the first five categories of status of cultivators. However, on the basis of our observation in the village it was found useful to include the last two categories. A person working on his own land would be marked "owner-cultivator", but if such a person also works as agricultural wage labour, especially in the case of persons having little land, classifying him as "owner-cultivator" would not describe his status adequately, since such a person also depends, for his source of likelihood, on selling his labour to others. Similarly, a person marked "family help" to describe his status could also work as agricultural wage labour and hence his status would not be adequately described by referring to "family help".

In cases of persons other than cultivators, the exact name of the occupation was written down. Information on "status" was sought for these persons also. Status of such a person could be one of the following: (1) employer, (2) employee, (3) self-employed or independent workers and

(4) family help.

Finally, a question relating to subsidiary occupation was asked for all those marked "working".

As regards those marked "neither working nor looking for work", their classification was shown as one of the five categories:

(1) Student - this refers to those whose main activity was returned as student. Even if such persons participated in some work as unpaid family help, but not to the extent of full-time worker, they were treated primarily as students.

(2) Pensioner, rent-receivers, etc.

(3) Insane persons.

(4) Beggars.

(5) Dependants.

The procedures followed under my survey were the same as under the Census of Bangladesh, 1974, except for the changes introduced regarding the status of cultivators.

2.1.3 Labour Utilization Survey: A labour utilization survey questionnaire was prepared in Canberra, but on the basis of several pre-tests it underwent substantial changes. The survey covered all persons aged 10 years and above in the village. The reference period referred to the week preceding the inquiry. The timing of the survey coincided with a rather busy period. Men were busy in the field harvesting or if they had finished harvesting they were preparing land for the Aus crop. Women were busy with the post-harvest operations, such as threshing, husking, etc. Children were also found to be busy either working independently on various productive activities or helping their parents.

Productive activities also included such activities as scaring birds and tending animals. These activities are directly productive and are essential to the maintenance of the household economy. Moreover, these activities, if performed by others, would have to be paid for.

The questionnaire was divided into two parts - the first part related to those who were treated as WORKERS and the second to those who were treated as NON-WORKERS during the reference period. A person was defined as a worker, if he/she had worked for wage or profit or without any remuneration on the farm or business operated by the household for at least seven hours during the reference period. The cut-off point was kept low in order to obtain information on as many persons as possible who had performed some work during the reference period. Had the cut-off point been fixed at a higher level we would have missed information on some persons, particularly some women and children.

WORKERS: Information has been obtained on the number of hours worke over the preceding week inside family farm and business and those expended outside. Persons were asked, first of all, to list the various productive activities they were engaged in family farm or business and then asked to report on the number of hours devoted to each activity. Similar information v

also obtained for those having worked outside as well. Farmers do not keep a record of their activities and as a result recall lapses are likely to occur when such a question is being asked. In fact, one of the objectives of the study was to test the adequacy and usefulness of such an enquiry. These persons were also asked to say whether they wanted more work during the reference period, and if so were asked to say if more work was available. A question relating to "looking for work", was not asked. Such a question hardly makes any sense in a society where there is no organized labour market. The author became more convinced of the inapplicability of this question due to poor response to such a question on the census questionnaire on labour force.

Data were collected on weekly income of the household. In a family enterprise in which unpaid family workers are involved it is not possible, except in the cases of those who earn money income and some such as those engaged in handicrafts, etc., for the money income to be attributed to each worker. In such a situation it was deemed appropriate to obtain information on household income. The data on household income is the sum of the contribution of all its members who had worked. Income consists of income in cash and kind. The cash component of the income refers to the cash proceeds from the sale of agricultural and other commodities. Income in kind refers to the value of agricultural and other goods which the household received during the reference period. The value of these goods has been calculated at the prevailing market price. Data on weekly income of those household members, who worked for others, have been collected. This also includes income in cash and kind. The cash component of the income refers to the portion of wages received in cash. Income in kind usually included two meals or some agricultural produce. The value of these were calculated at the prevailing market price. On the

basis of discussion with the villagers and on the basis of our own assessment the cost of each meal was fixed at TK.2 (about 12 to 15 U.S. cents).

Data on income for the household as well as the individual refer to data during the busy period in the agricultural season. The farmers often sell a part of their produce immediately after harvest. Moreover, the amount of goods held in kind is likely to be higher during harvest than at other times. In other words, income of the household would tend to be higher during harvest than, perhaps, at other times. It also affects the individual income. During busy periods there is more demand for labour than at other times. This means that income, thus, earned from outside employment would be higher. However, data on income for a period of one week was collected to overcome other problems. Farmers rarely keep account of their annual production or amount sold or wages earned from other sources. Had the reference period been longer such as a month or a year, it is possible that considerable error in reporting could not have been avoided due to recall lapse. Keeping this in mind it was, therefore, decided to collect income data over a week to minimize the problem of recall lapse.

The relationship between household income and net cultivable area will be established to indicate the existence of the kind of relationship between these variables. This will help to show whether income data can be used to categorize the population in the village into different groups.

NON-WORKERS: Persons aged 10 years and above, who had not worked at least 7 hours during the reference period were classified as "NON-WORKERS". Some useful information has been collected on these persons. They were asked to say whether they had worked during the last cropping season, because although a person might not have worked the required number of hours during

the preceding week, he/she might have worked even more than the required number of hours during the last cropping season. Such a question would help to establish the work force status of the "non-working" population. In cases of persons having worked during the last cropping season, they were asked to report on the number of hours worked during planting and harvesting seasons. Furthermore, they were asked whether they had worked inside the family farm or business or outside or both during these periods. To find out whether they were interested in work, they were asked whether if work was available they would accept it. They were also asked to list the types of activities they would prefer to engage themselves in and also the income level at which they were prepared to work.

Labour force, under this survey, refers to population aged 10 years, and above, who were classified as "Workers" and those classified as "Non-Workers" but a) who worked during the last cropping season and b) who would accept work, if it were available. Thus, we have two sets of categories to work with. This will show whether the first criterion or the second gives a reasonable estimate of the unemployment segment of the labour force. Moreover, both these criteria are more helpful in the identification of the unemployed segment of the labour force than that obtained on the basis of the census approaches. The last cropping season is, perhaps, a better reference period in agriculture than either a week or a year. The question on "looking for work" has limitations in the rural agricultural sector where the labour market is not formally organized. To ask, therefore, whether one would accept work, if available, is more appropriate in such a society. While the first criteria refers to the experienced unemployed only, the latter may refer to both the experienced and the inexperienced unemployed.

2.1.4 Attitudinal Survey on the Value of Children: All the households were classified into the following groups: (1) landless, (2) 0.01-1.0 acre, (3) 1.01-2.0 acres and (4) greater than two acres. A further criteria introduced was that the respondents must be currently married and living with spouse. On the basis of these two criteria 146 males and 146 females were selected by a stratified random sampling with proportional allocation to the size of the stratum.

Respondents were asked to answer a great number of questions relating to family size, fertility ideals and attitudes, work done by their children and their attitudes towards the work done by their children, etc.

2.1.5 Time-Budget Study: All the households were enumerated in the census, which ascertained the composition of the households and the net cultivable land area. In selecting the sample all households were first classified into the four groups, as shown above, according to the net cultivable land area of these households. A total of thirty-four households were selected on the basis of stratified random sampling. These thirty-four households were divided into two sets of seventeen households each. Each week data were collected daily on the activities of members aged 5 years and above of seventeen households, i.e. for each alternate set of households. The data collected refer to the use of time during fourteen hours of the day from 5:30 a.m. to 7:30 p.m. by the household members. The technique adopted was based on observation supplemented by interviewing.

The age limit was lowered to 5 years in order to examine the contribution of young children to various activities in the household economy. The number of boys aged 5-14 years in these 34 households was 25 and the number of girls was 22, or, roughly, 10 per cent of boys and girls in the age-group were being selected for the purpose. The size of the sample itself is a little over 10 per cent of the total number of households in the village.

The size of the sample was decided by a number of considerations: firstly, it was felt that a sample of the size selected would be big enough to reveal the relevant characteristics of the village, and, secondly, considerations of economy were important, such as the amount of funds, the length of time and the number of interviewers available for the fieldwork.

The study is concerned with the proportions in which 14 hours of the day (i.e. between 5.30 a.m. and 7.30 p.m.) are allocated to various activities by persons belonging to different landholding groups, sex and age. For the purpose of my study a working day was defined as the time period between 5.30 a.m. and 7.30 p.m. Generally, people in villages

sleep by 7.30 p.m. or so or engage in non-work activities. Besides, those who remain awake beyond this time rarely perform any productive activity, except during the very busy period. However, had the task of observation and interviewing been extended by an hour or so, the job of completing the work with limited staff would have been made extremely difficult. Bearing these points in mind, an effective working day was so defined as to include the number of hours constituting the most active part of the day. This is well-suited to the purpose of the study. It is not time itself as a physical or a subjectively perceived entity that serves the purpose of the study, but rather the use people make of their time.

The time-budget data were collected daily over a period of approximately seven months, from May, 1976 to December, 1976. During this period two of the main rice crops - Aus and Aman are grown in Bangladesh. The period represents the most active part of the year and was, therefore, considered more suitable for the study. The period between January and April is devoted in most areas to the cultivation of minor crops due to lack of irrigation facilities. Assuming that participation in non-farming activities remains more or less the same throughout the year, the extent of underemployment would tend to be higher during the period between January and April compared to the period between May and December.

The villagers had a fairly good awareness of time. They depend on the timing of sunrise and sunset, the time set aside five times a day for prayers, the time classes start at the village primary school, and such things, to tell the time. Besides a few of the villagers had watches.

Considerations in the Choice of Methodology for Time-budget Study:

Here, a review of some of the different techniques for collection of time-budget data is presented and then the methodology adopted for the present time-budget study is discussed.

1) Direct Observation: This is indeed the most expensive and most time-consuming, though it, perhaps, provides the most reliable estimates of the use of time. This method presents problems when the subject of the study is an entire household, since the attention of the observer has to be focussed on many individuals at the same time, unless there is one observer for each individual, which makes it all the more expensive. Different household members will be drifting in and out of sight of the observer several times in a day and this creates further problem in respect of continuous observation. In a society such as Bangladesh, where it is difficult to get female investigators and where it is not possible generally on the part of male investigators to observe females this method cannot be tried. The method of direct observation was used in the collection of time-budget data in Laguna, rural Philippines.[1] The sample selected for the study was, however, not observed continuously throughout the year, but visited at only three different times in a year.

2) Random Visits: This method involves the collection of time-budget data at randomly selected points of time. Allen Johnson, an anthropologist, in his study of a community of Amazon Indians developed this method.[2] He studied only 13 households. He collected data by visiting a household at randomly selected points of time and recorded the activity of household members "the instant before they became aware of the anthrographer's presence".[3] Such a method of collecting time-budget

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1. An overall description of this Study is available in R.E. Evenson, "Notes on the Laguna Household Study in the Philippines", unpublished paper.

2. Johnson, Allen. - "Time Allocations in a Machiguenga Community", Ethnology, 14(3), 1975, 301-310.

3. Ibid., p.303.

data does not give reliable estimates. A large number of individual observations is necessary to arrive at statistically reliable estimates.

3) Recall Method: Under such a method respondents estimate the number of hours spent in specific activities during some reference period such as a day, week or month. This technique has been used in time-budget studies in developed[1] and less developed countries. While this may be feasible in developed countries, it is not a very useful way of collecting time-budget data in less developed countries, where people do not keep a record of their activities and hence are not likely to report accurately the number of hours spent in various activities. In developed countries work is organized around time standards and respondents can recall, more or less, accurately the number of hours worked. The advantage of the method is its low cost relative to direct observation. However, the disadvantage of the method is that the reliability of the estimates presented is questionable. Comparisons of the two methods used in the Laguna study show that for broad categories of activities such as market production time, the estimates for adults are quite close.[2] However, in the case of children this is not so. The recall method estimate for the market and home production time of children was twice that of direct observation.

A study of the use of time cannot be carried out by depending on the technique of interviewing alone. The technique of providing questionnaires to be completed by the respondents is not possible in an underdeveloped, rural, agricultural society, since most of the people are illiterate and cannot be expected to fill in the questionnaire. Observation

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1. Sirageldin, Ismail. - "Non-Market Components of National Income", Institute of Social Research, University of Michigan, 1973.

2. King, Elizabeth. - "Time Allocation in Philippine Rural Households", Discussion Paper No.76-20, Institute of Economic Development and Research, School of Economics, University of Philippines, August, 1976, Table 6.

on the part of the interviewers is essential to ensure accuracy of data. Though such a technique is undoubtedly highly desirable to ensure quality data, it limits the size of the sample because of the limited numbers of interviewers available. It is sometimes pointed out that the observational technique introduces an element of bias in the data in that it is likely to influence the behaviour of the respondents. While this may be true if the period of observation were a day or a week or within intervals over a month, this is not true if this is to continue daily over a period of several months. Thus, a balanced combination of observational and interview techniques was adopted in this study. Such a combination helps to ensure both accuracy and detail, both of which could not have been ensured had only a single technique been used.

For the present study the unit of time chosen was half an hour. A half-an-hour unit dividing the working day (comprising 14 hours as mentioned earlier) into 28 units was used and thought to be adequate to serve the purpose. Within the time-unit several activities could be performed. For example, within such a unit a person could be working on the farm during the first fifteen or twenty minutes and then take a break for the next fifteen or ten minutes. In such a case both these activities were recorded in that unit of time, showing approximately the time spent on each of the activities.

The recording of the activities was made by preparing a list of activities, directly productive, those related to household maintenance and other uses of time. The list was quite exhaustive and contained no significant overlapping categories. The list was prepared on the basis of activities recorded for the labour utilization survey and in consultation with the villagers on all possible activities that could be included.

Moreover, new activities were added to the list, as soon as these were observed.

A weakness of time-budget studies arises from the fact that individuals may perform more than one activity at the same time during a time unit.[1] In producing time-budgets one usually chooses the one activity to be counted whenever a person carried out several activities simultaneously. This process of elimination of secondary or accompanying activities from the circle of observation tends to distort in a rather arbitrary fashion the account of what people did throughout the period of observation. Any time-budget data which does not grapple in some way with the problem of recording secondary activities is essentially unable to give a balanced account of the great variety of activities which fill up everyday life. This is indeed difficult. In this study whenever necessary an attempt was made to allocate among various activities the time spent doing these activities concurrently. This depended on our assessment of the importance of the various activities. Assessment was done by consulting the persons concerned as to the degree of importance they attached to the various tasks performed at the same time as well as our own judgement. To accomplish this, one activity had to be designated as the primary or main activity and the other as the secondary or accompanying activity. For example, let us take the case of a woman who was cooking and at the same time looking after her child. Cooking was usually treated as a primary activity and child care as a secondary activity. If she had spent three hours in cooking and child care at the same time, we showed two hours against cooking and one hour against child care. Let us suppose a child was looking after its younger sibling and at the same time scaring birds. Time spent on child care was primary and scaring birds secondary and we usually distributed the time spent in such a way that the time spent

[1] A further problem arises out of the fact that various operations can be performed with varying degrees of intensity. Hours actually worked may not be necessarily hours of work needed at the given level of technique

on primary activities was twice that of the time spent on secondary activities. In other words, the ratio of time spent on primary activities was 2 to 1 for time spent on secondary activities. In cases where two activites were performed together but the second one took little time only, we ignored the second one. For example, when a farmer worked on the field he might have spoken a few words here and there to the others. Time spent on the secondary activity, if negligible, was ignored. However, if he took a break for a few minutes, say ten or fifteen minutes, this was definitely recorded. When, however, both activities appeared to be equally important, such as child looking after its younger sibling and fishing, we distributed the time on a 50/50 basis. There was no other satisfactory way to decide on this, except to accept the respondent's description of his behaviour and then to evaluate the importance of these activities. Our evaluation was particularly necessary in the case of younger children, who could not describe their behaviour accurately and so on the basis of our own observation we had to decide on the importance of the activities performed. This procedure seemed the best in view of the need to make a decision and in the absence of evidence of better approaches. Most of the more important activities, such as those connected with the farmer on the field, were usually not performed simultaneously with other activities. The problem of drawing a distinction between a primary and a secondary activity concerned itself usually with the less economically productive activities and the household maintenance activities.

2.2 "Work" redefined: In economic literature, "work" generally refers to directly productive activities. Such a definition as noted in Chapter 1 is, perhaps, appropriate in the context of the DCs, where work is regulated by standard norms. In such societies the majority of the workers are "employees" who are usually engaged to do directly productive activities, for which they are paid at standard wage rates. But, in the context of a society, such as Bangladesh, especially in the rural areas, such a definition of work appears to be inappropriate. In such a society the concept of "work" should be broadened to include other useful activities as well, which are essential to the maintenance of the household. Such activities as fishing, tending animals, maintenance and repair at home, marketing (including buying and selling raw materials and finished products as well as for pure household consumption), collecting firewood, carrying water, cooking, washing clothes and utensils and child care should be included within the concept of "work". Unless the term is so defined, assessment of the contribution of household members, particularly that of women and children, to the household economy cannot be made.[1] All agricultural activities, related to the production of paddy are considered as economic activities or "work", but the preparation of food is not considered as such. But processing and preparation of food, in which women and young girls participate significantly in rural agricultural societies, may compete for time with the directly productive activities, such as threshing, husking, etc. Work cannot be fully defined without reference to a society.[2]

The question may be raised as to why activities such as those listed above should be included in the category of "work" in the context of rural agricultural societies, when most of these activities are carried out in the DCs and are not included in the category of "work". This is

[1] It may be pointed out that the time allotted by women to household maintenance activites can change in response to a rise in the available work opportunities and/or the wage rate, particularly over time.

[2] Work, Society and Culture - Yves Simon, Fordham University Press, 1971, Ch.1.

because the presence of certain facilities makes it possible to carry out most of these tasks in the DCs taking only little time, while these involve considerable amount of time in rural agricultural societies. Caldwell notes, "Vacuum cleaners pick up the dust; mowers keep down the grass; washing-up machines clean the dishes and washing machines the clothes; hot water systems provide hot water; electricity, gas and water reticulation systems carry fuel and water to the house; telephones and telegraph services get messages to people; cars can be used for bringing home goods or for getting rid of rubbish; refrigerators and freezers make it possible to bring perishable goods into the household less frequently. In a society where all these consumer durables are vastly expensive and difficult or impossible to maintain, the services are largely provided by either cheap labour or more frequently by family subsistence labour".[1] The concept of "work" thus, should be defined in a broader sense to include productive work for cash-earning, productive work in self-employed enterprise and household maintenance activities, all of which involve the expenditure of time and energy.

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1. Caldwell, J.C. - The Socio-Economic Explanation of High Fertility, Changing African Family Project Series, Monograph No.1, p.32, A.N.U., Canberra, 1976.

2.3 Meaning of the Various Categories of the Use of Time[1]

a) Directly Productive Activities: Any time used for work that entitles a person to a cash earning, either in the form of wage paid daily or weekly or on the basis of piece-rate, employed by someone else, time contributed to one's own or family farm or business as well as time contributed on an exchange basis (i.e. exchange labour). Within the definition of directly productive activities is included tending animals, milking cows, fishing, scaring birds and taking food to the field.

b) Household Maintenance Activities: Besides time spent on directly productive activities a person has to devote a certain amount of time to household maintenance activities. These include such activities as cooking, washing and cleaning, child care, bringing water, marketing for household consumption, collecting firewood, running errands, tending sick relations or neighbours, sewing and knitting and maintenance and repair at home. Some of these activities also release members of the household for productive activities.

c) Personal Care and Needs: Activities that are essential to keep one fit in order to undertake other kinds of activities as well as those devoted to religious purposes are included in this category. Time used for eating, bathing and toilet, and mid-day rest and praying are included here. Time spent on religious duties includes time spent in daily prayer, recitation of Holy Koran, missionary work, etc. that one feels obliged to carry out due to one's religious beliefs and practices. Villagers often spend some time both before and after mid-day meal in rest (treated as necessary leisure) and this is considered as time spent on personal care and needs.

d) Studying: Study and training do not yield immediate income,

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1. Appendix II gives a detailed breakdown of all these major categories of the use of time.

although they develop human skill and productivity for the future. In other words, this is investment in human capital. Time spent by children at school and at home with books has been included in this category.

e) Playing: Children often spend a part of their time in playing games and sports. The number of hours spent playing have been included here.

f) Social Needs: A person spends some of his/her time to meet social needs. Such activities include visiting relations, friends and neighbours as well as attending funerals, marriages and other functions. One cannot normally avoid these activities. In the event of marriage and death it is not that one may or may not be present, but often one's presence is almost obligatory. Besides, in a village setting there are some persons who are members of various village committees and councils. Members of such committees and councils often spend time attending various meetings, settling local disputes, etc. Time spent on all these activities has been included here.

g) Idleness: This amounts to time spent sleeping and rest during the day other than mid-day rest, gossiping and in doing nothing.

2.4 Employment and Underemployment: The extent of employment and underemployment is calculated on the basis of the labour utilization approach. This follows closely the concept of visible underemployment discussed in Appendix I. In measuring underemployment, the procedure followed is that on the one hand are the hours available per adult male, female and child and on the other hand, the number of hours worked. The volume of employment for the period of observation is defined as the number of hours of work performed during that period .[1] The difference between hours available and hours employed is taken as the measure of underemployment in this study. Such a measure have been used in other studies carried out to measure the extent of underemployment.[2] The analysis will, firstly, concern itself with only directly productive activities, and, secondly, to measure the extent of labour utilization in line with the concept of "work" redefined to include household maintenance activities as well. The key problem in this analysis is the meaning to be put on the term potentially "available" and this will be discussed below.

2.5 Measuring Potential Available Labour Time for Directly Productive Activities and for Total Work

In order to estimate the extent of employment and underemployment the active population is defined as those aged ten years and above. Among boys aged 10-14 years there were four who were categorized as "working" under the census approach and nine were students. Among girls in the same age group five were reported as "working" and four were students.[3] We see that among boys aged 10-14 years those who were students worked 2.5 hours a day compared to 3.1 hours in the case of those reported as "working", while among girls in the same age group the students worked 2.3 hours a day

1. Pigou, A.C. - Employment and Equilibrium, London, 1949, p.9.
2. see for example John Purcal - The Rice Economy of Four Villages in Province Wellesley, Ph.D. Thesis, A.N.U., December, 1964.
3. Here, we are referring to our sample for the time-budget study.

compared to 2.2 hours in the case of those "working" (see Table 7.13, Chapter 7). Among females aged fifteen years and above thirty-five women were reported as "working" and seventeen as engaged in household work only (GWA). Table 6.22 (see Chapter 6) shows that those reported "working" spent 2.5 hours daily on directly productive activities compared to 2.1 hours in the case of those reported to be engaged in purely household work only. This shows that the conventional definition of the labour force does not make much sense in the case of children and women. Hence, for the purpose of the present study, it has been decided to include all persons aged ten years and above as comprising the active population.

The usual income-leisure analysis oversimplifies the relationship between labour supply and the wage rate. The basic weakness in the analysis is the implicit assumption of a strictly dichotomous relationship between time spent in gainful employment (directly productive activities) and leisure. In other words, it means that all time not spent on directly productive activities yields leisure and that all time not spent in leisure is time spent on directly productive activities. The point worth stressing is that the only alternative uses of time are just not for directly productive activities or leisure. Rather, there also exists a range of activities constituting neither directly productive activities nor leisure and the failure to recognize this leads to an overstatement of the possibility of a negatively sloped supply-curve of labour.

In the following analysis, it is assumed that such range of activities represents other uses of time that reduce the amount of time potentially available for directly productive activities and for total work (i.e. directly productive activities and household maintenance activities). The number of hours potentially available for directly productive activities is estimated by deducting the number of hours spent on item 2 during the busy period and

that spent on item 3 from the total number of hours available, comprising an "effective working day", i.e. 14 hours of the day - from 5:30 am to 7:30 pm. The number of hours spent on item 2 during the busy period represents the minimum number of hours persons belonging to different age groups and sex have to spend on such activities. In other words, this gives us the maximum amount of time that may be potentially available for directly productive activities. During the slack season people spend more time on activities listed under item 2 than during the busy season. Males aged 10-14 years, 15-54 years and 55 years and above spent, on average, 2.4 hours, 0.7 hours and 0.3 hours more per day respectively during the slack season than during the busy season on these activities. Females aged 10-14 years, 15-54 years and 55 years and above spent, on average, 4.0 hours, 0.9 hours and 2.5 hours more per day respectively during slack season than during busy season on these activities. However, it is difficult to establish whether people always spend more time during the slack season on activities listed under item 2 out of necessity, or whether because they spend less time on directly productive activities during the slack season, they tend to spend somewhat more time on activities listed under item 2. Hence, it was decided that for the purpose of the present study the number of hours spent on such activities during the busy season will be deducted from the number of hours constituting an "effective working day".

It was observed that the villagers did not participate in directly productive activities on only two days during the entire period of observation - Eid-ul-Fitr and Eid-ul-Azha. These are Muslim festival days of great importance. In estimating the number of hours available for directly productive activities, one has to take into consideration the amount of time lost on account of heavy

rainfall and bad weather. It is not that the persons are incapable of carrying out the work because, for example, of physical weakness, but that climatic conditions prevent them from working. Therefore, labour not used in inclement weather should not be overlooked in estimating the number of hours available.[1] Among boys aged 10-14 years the number of hours lost on account of heavy rainfall and stormy weather was 72.6 hours during the entire period of observation. This was 108.9 hours in the case of males aged 15-54 years and those aged 55 years and above. Among females this amounted to 72.6 hours. Time lost on account of sickness over the entire period of observation amounted to 108.9 hours, 145.2 hours and 217.8 hours in the case of males aged 10-14 years, 15-54 years and 55 years and above respectively. Among females aged 10-14 years, 15-54 years and 55 years and above it amounted to 72.6 hours, 108.9 hours and 217.8 hours respectively. Old men and women suffered more loss of time due to illness than those in the younger age groups. We have deducted the average number of hours lost daily on account of bad weather and illness from the total number of hours available although it should be pointed out that it affects the potential supply of labour not only on a weekly basis but also on a daily basis. However, for the present study, we have calculated a standard number of

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1. We have data only on the number of hours lost in respect of directly productive activities on account of bad weather and illness. We have no such information in respect of household maintenance activities. We assume that, on the whole, bad weather and illness do not affect time spent on household maintenance activities.

hours potentially available for DPA for the entire period of observation, though at a later stage the author will take into account the varying effect of bad weather and illness on the potential supply of labour.

The number of hours potentially available by age and sex for directly productive activities and total work is presented in Table 2.1. This is the amount of labour input that could be sustained if the incentive to work full-time were present. Besides the various factors discussed above that limit the potential supply of labour in a human society, there is another important factor, i.e. the level of nutrition which determines the physical condition of the worker. Below a certain level of nutrition one cannot work and the potential supply of labour is zero. Fisk calls it the level of 'grinding' poverty.[1] Above that level, the potential supply of labour increases as the supply of food increases, till a point is reached at which the level of nutrition is adequate to maintain the full physical capacity of a person, that is socially or otherwise acceptable. We have no data on the caloric intake of our population, although we found that only 2.85 per cent of all households in the village had two rice meals a day throughout the year preceding the survey. This, perhaps, indicates that most people are below the level of nutrition that is adequate to maintain their full physical capacity. In measuring the number of hours potentially available by age and sex we, however, assume that most people live at the level of nutrition adequate enough to maintain their full physical capacity. Thus, the number of hours potentially available by age and sex (presented in Table 2.1) is likely to be biased upwards.

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1. E.K. Fisk, "Planning in a Primitive Economy: Special Problems of Papua New Guinea", Economic Record, vol.38, 1962, pp.462-478.
E.K. Fisk, "Labour Absorption Capacity of Subsistence Agriculture", Economic Record, vol.47, 1971, pp.366-378.

Some studies have attempted to estimate the coefficients of labour available to convert the labour of different age groups and sex into a standard man-equivalent. The basic criteria adopted to calculate the value of the coefficient has been the relative wage rate of men and women.

Different types of activities are involved in agriculture and these require different skills and capabilities and, hence, the respective wage rate must vary accordingly. For example, ploughing involves expenditure of more energy on the part of males than weeding, fertilizing and even transplanting and harvesting. The wage rates vary according to the types of activities performed. Similarly, among females husking involves greater expenditure of energy than boiling and drying grain and even threshing and, likewise, the wage rates differ according to the type of work done.

It may be pointed out that since only a small proportion of male and female work force worked in wage employment in Barkait and because of the problems inherent in using wage rate as the criterion of calculating the value of the coefficient, no attempt has been made in the present study to calculate the value of the coefficient and to convert the hour or day into standard man-equivalent. Rather, the number of hours and days available for work have been treated separately for each age and sex group.

Table 2.1

Number of Hours Potentially Available for Directly Productive Activities and Total Work by Broad Age Groups and Sex

(The figures in brackets are percentages of total time available, i.e. 14 hours a day)

		Males			Females		
		10-14 yrs.	15-54 yrs.	55 yrs. & above	10-14 yrs.	15-54 yrs.	55 yrs. & above
1) Total Number of Hours Constituting an Effective Working Day		14.0	14.0	14.0	14.0	14.0	14.0
2) Time Spent on the Following Activities during Busy Period:							
a) Household Maintenance Activities		0.9	0.8	1.0	2.8	5.9	5.3
b) Personal Care and Needs		2.4	4.0	4.1	2.5	3.0	2.4
c) Social Needs		0.4	1.1	0.9	0.3	1.1	2.4
d) Studying		4.4	-	-	2.6	-	-
e) Playing		1.6	-	-	1.5	-	-
	Total	9.7	5.9	6.0	9.7	10.0	10.1
3) Time Lost Daily Through:							
a) Sickness		0.3(2.1)	0.4(2.9)	0.6(4.3)	0.2(1.8)	0.3(2.1)	0.6(4.3)
b) Rain		0.2(1.8)	0.3(2.1)	0.3(2.1)	0.2(1.8)	0.2(1.8)	0.2(1.8)
	Total	0.5	0.7	0.9	0.4	0.5	0.8
Items 2 + 3		10.2	6.6	6.9	10.1	10.5	10.9
4) Number of Hours Potentially Available for Directly Productive Activities:							
Daily		3.8	7.4	7.1	3.9	3.5	3.1
Weekly		26.6	51.8	49.7	27.3	24.5	21.7
Monthly		114.0	222.0	213.0	117.0	105.0	93.0
Annually		1379.0	2686.0	2577.0	1416.7	1270.0	1125.0
5) Number of Hours Potentially Available for Total Work:							
Daily		4.7	8.2	8.1	6.7	9.4	8.4
Weekly		32.9	57.4	56.7	46.9	65.8	58.8
Monthly		141.0	246.0	243.0	201.0	282.0	252.0
Annually		1716.0	2993.0	2956.0	2445.0	3431.0	3066.0

CHAPTER 3. ECONOMIC BACKGROUND OF BARKAIT

This chapter analyses some of the economic features of the village under study and draws comparison with Bangladesh as a whole. The nature and pattern of labour utilization in a society is influenced and affected by a variety of economic factors. The intensity and duration of work and work opportunities themselves depend on such factors as size of cultivable land, land tenure arrangement, cropping pattern and practices, economic organization, livestock, etc. An account of some of these variables is of crucial importance in trying to understand the nature and pattern of labour utilization.

Bangladesh is almost entirely flat-surfaced, with some hilly areas in the east and south-east. It is a land of scores of rivers meandering over a vast plain. Bangladesh stretches over 55,126 square miles and has a population of 76.39 million.[1] It lies roughly between 20°36' and 26°45' N. Latitude and between 88° and 92°56' E. Longitude.[2]

The major rivers, the Ganges and the Brahmaputra, flow in from the north and merge. They then fan out across the flat, alluvial country to form a delta with a network of branches emptying into the Bay of Bengal. The Bay of Bengal marks the southern border of the country. In the south-east lies the Union of Burma and on all sides she is flanked by India. The Sylhet and Chittagong Districts of Bangladesh are covered with forests and make up a tenth of the land area of the country. The rest of the country is an unbroken plain.

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1. Rabbani, A.K.M., D'Souza, S., and Rahman, S. - "1974 Census Estimates of Fertility Levels in Bangladesh", paper presented at Cox's Bazaar B.F.S. Seminar, Dec. 1976.

2. For detailed information see Johnson, B. - Bangladesh, 1975; Ahmed, N. - Economic Geography of East Pakistan, 2nd ed., 1968.

The locus of the study is a village called Barkait in the district of Comilla. It is situated 16 miles south-west of Comilla Town and 52 miles south-east of Dacca city. It lies under the East Chandina Union of Chandina Police Station under Comilla North Sub-division. The village has an area of 0.6 square miles and a population of 1,700. The density of population is 2,833 persons per square mile, compared to 2,245 persons and 1,375 persons per square mile in Comilla District and Bangladesh respectively.[1]

Barkait is one of the 65,000-odd villages of Bangladesh. In many ways it is a typical Bangladesh village. Like most villages of Bangladesh, Barkait depends largely on its agriculture, and its inhabitants share a common language, culture, history, topography, cropping pattern and practices and system of social organization with the population of most other areas of the country. It is true, of course, that there is no village which is typical of the entire country in all respects, but certainly we found Barkait typical in many ways.

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1. Bangladesh Population Census, 1974, Bulletin No. 2.

3.1 Land Holding

Land is the foundation of the economic structure in Bangladesh. It is the principle source of income and living of most of the villagers. The importance of land in the village economy can hardly be over-emphasized. Land possession is the sign of solvency and security. Land is the pivot around which the whole thinking of the village farming community revolves. Land is regarded as the safest and highest-yielding investment, and the prestige of land ownership is high.

The relation of people to land has a vital bearing on an economy based on agriculture. The unit of cultivation in the village is based on individual possession of holdings. According to the laws of inheritance in Islam land is shared by children of both sexes when the father dies. A part of the land goes to the widow. Although in some cases the girls may give up their claim on the inheritance, the practice is not widespread. Among the Hindus the land is inherited in the male line. Thus, the laws of inheritance lead to sub-division and fragmentation of holdings. On average, a person owning one acre of cultivable land would have it in three or four plots. Both among the Muslims and the Hindus land belongs to the family and the head of the family is considered as owning the land.

The table below gives an account of the net cultivable area of the village. Net cultivable area (N.C.A.) is defined as the total area of land a household cultivates. It is an household's own land, plus land rented in minus land rented out.

Table 3.1 shows the pattern of distribution of net cultivable area in the village under study.

The small size of holdings is to a large extent a reflection of the demographic and economic situation in the village. Just under one-fifth of the households were completely landless. This is consistent with the findings of a survey report of five villages of Comilla. Over 17 per cent

of the households were reported landless in that survey.[1] Twenty per cent of the households in Bangladesh were reported to be landless,[2] compared to eighteen per cent of the households in Comilla District.[3]

About three-fourths of the households in Barkait held cultivable land between 0.01 to 2.0 acres. Solaiman reported over 66 per cent in the same category in his study. Fortythree per cent of the total farmers in Comilla District owned a meagre landholding less than one acre.[4] Eight per cent of the households in Barkait had cultivable areas larger than two acres. These households, together, accounted for 35 per cent of the total cultivable land area in the village. These households can, in fact, be termed relatively "rich" households in an extremely impoverished environment. In Bangladesh about 64 per cent of the farmers cultivated 28 per cent of the total cultivable areas and only 9 per cent of the farmers cultivated about 31 per cent of the total cultivated area.[5]

Table 3.2 indicates that the larger the size of household, the larger is the amount of NCA per household as well as per person and the differential was more pronounced in the case of households than in the case of individuals.

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1. Solaiman, M. - Land-holding and Cooperatives in Five Comilla Villages, Bangladesh Academy for Rural Development, Comilla, Bangladesh, May, 1974.
2. Government of Bangladesh, Planning Commission, The First Five Year Plan, 1973-78, p.84.
3. Raper, Arthur - Rural Development in Action, the comprehensive experiment at Comilla, East Pakistan, Cornell University Press, 1970, p.9
4. Inukai, I. - Technological Changes and Labour Utilization in Agriculture, A Case Study in Comilla, East Pakistan, Oct. 1971.
5. Ahmed, I. - "Employment Strategy in the First Five Year Plan of Bangladesh" paper presented at the First Annual Bangladesh Economic Association Conference, March, 1974.

Since net cultivable area takes account of land rented in by a household it is, perhaps, worthwhile to show the relationship between size of one's own cultivated area and the size of household. It is interesting to see from Table 3.3, that as expected, the relationship between size of household and size of one's own cultivable land area is positive. It is only in the case of households having between four and six members, that we see the per capita landholding available is a bit smaller, compared to households having between one and three members, although in terms of land per household, households with members up to six have considerably more land area compared to households with up to three members.

Such a relationship between size of household and size of net cultivated area has been established in several other studies before. Regarding the composition of families in Bangladesh as a whole it has been found that family size varies directly with the size of paddy holding.[1]

Cho, in his study of South Korean agriculture, reports the same sort of a finding.[2] Such a relationship between the size of household and size of land have been reported by Tawney in a study of peasant farming in China between the two World Wars.[3] In a study of Polish peasants, Stys found the existence of a similar relationship,[4] as did the German demographer Burgdorfer demonstrate the same among the agricultural population of the Third Reich.[5] We have evidence from a survey in the Punjab which showed that higher economic status and higher social status went along with higher

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1. Rabbani, Ghulam A.K.M. - "Measurement of Underemployment in Rural Households: A Case Study of Rice Cultivation in East Pakistan", CENTO Symposium on Household Surveys, Dacca, 1966, Table 1, p.227.
2. Cho, Y.S. - "Disguised Unemployment" in Underdeveloped Area with Special Reference to South Korean Agriculture, University of California Press, 1963, p.56.
3. Tawney, R.H.-Land & Labour in China, London, 1932, p.72.
4. Stys, W. - "The Influence of Economic Conditions on the Fertility of Peasant Women", Population Studies 11 (2) 1957, pp.136-48.
5. Ibid.

fertility.[1] In an Indonesian study, Hull observed a similar relationship.[2] In Chad, Reyna observed that large households tend to be wealthier, whether formed by reproduction or just by the agglomeration of relations of varying degrees, since they can more easily take advantage of economic windfalls.[3] Such a positive relationship between income and size of household was found by Jaysuria in a study of three rubber-growing districts in the 'wet zone' of Sri Lanka in 1975 (personal communication). In another study in Bangladesh Hossain found a positive relationship between family size and the size of farm.[4]

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1. Jain, S.P. - The Relationship between Fertility and Economic and Social Status, Publication No.64, Lahore, The Board of Economic Inquiry, 1939.
2. Hull, T. - Each Child Brings Its Own Fortune - unpublished Ph.D. thesis, A.N.U., Canberra, 1975.
3. Caldwell, J.C. - Measuring Wealth Flows and the Rationality of Fertility, Thoughts and Plans Based in the First Plans on African Work, A.N.U., Canberra, 1976.
4. Hossain, M. - Farm Size and Productivity in Bangladesh Agriculture: A Case Study of Phulpur Farms, The Bangladesh Economic Review, Vol.II, January 1974, No.1, pp.469-500.

Table 3.1

Distribution of Households by Size of Net Cultivable Area [NCA].

Size of NCA (in acres)	Number of Households	Percentage of Total Number of Households	Total Population		Average number of household members	Total Area		Average landholding per household	Average landholding per person
			Number	% of total		Acres	% of total		
1) Landless	56	18.0	230	13.5	4.10	0	0	0	0
2) 0.01-1.0 acre	181	58.0	945	55.6	5.22	85.98	36.0	0.48	0.09
3) 1.01-2.0 acres	50	16.0	303	17.8	6.06	70.41	29.0	1.41	0.23
4) > 2.0 acres	25	8.0	222	13.1	8.89	84.56	35.0	3.38	0.38
TOTAL	312	100.0	1700	100.0	5.45	240.95	100.0	0.77	0.14

Table 3.2

Distribution of Net Cultivable Area by Size of Household

Size of Household (in persons)	Number of Households	No.of Landless Households	Total Population	Total Landholding (in acres)	Average Landholding per Household (in acres)	Average Landholding per Person (in acres)
1-3	63	24	154	17.59	0.28	0.11
4-6	156	24	779	96.77	0.62	0.12
7-9	81	8	633	96.01	1.11	0.14
10 or more	12	0	134	36.58	3.04	0.27
TOTAL	312	56	1,700	240.95	0.77	0.14

Table 3.3

Distribution of Households' Own Cultivable Land Area by Size of Household

Size of Household (in persons)	Number of Households	No.of HHs. with no land	Total Population	Total Landholding (in acres)	Average Landholding per Household (in acres)	Average Landholding per person (in acres)
1-3	63	24	154	19.83	0.31	0.13
4-6	156	24	779	96.05	0.61	0.12
7-9	81	8	633	88.40	1.09	0.14
10 or more	12	0	134	36.21	3.02	0.27
TOTAL	312	56	1,700	240.49	0.77	0.14

3.1.1 Land Tenure

An aspect of the land tenure system is that an overwhelming proportion of farms are either owner-operated or owner-cum-tenant operated.

Table 3.4

Aspects of Land Tenure

Types of Tenure	Proportion of Farms		
	Bangladesh[1]	Comilla[2]	Barkait
1. Owner-operated	61	80	76.2
2. Owner-cum-tenant operated	37	20	23.8
3. Tenant-operated	2	-	-

The land tenure and ownership pattern may be summarized as follows: there is a massive proportion of landless or 'near-landless' farmers in the country as well as in Barkait and the proportion of purely tenant operated farms is much too insiginficant in Bangladesh.

1. Govt. of East Pakistan, Agricultural Census of East Pakistan, 1960.
2. Ibid.

3.1.2 Subdivision and Fragmentation of Holdings

Distribution of ownership is, however, no index of the size distribution of the consolidated operating units. This is on account of the excessive fragmentation of holdings. Only about 10 per cent of the farms in the country and 6 per cent in the village were unfragmented. Table 3.5 shows fragmentation of farms in Bangladesh and in Barkait. It may be pointed out that knowledge of the distribution of land in different size groups of cultivation is not sufficient. The fragmentation of cultivated land is yet another aspect which would further help us to understand the nature of actual cultivation.

Table 3.5

Fragmentation of Farms in Bangladesh and in Barkait

Number of Fragments per Farm	Percentage of Total Number of Farms	
	Bangladesh[1]	Barkait
1. Non-fragmented	10	6
2. 2-3 fragments	21	25
3. 4-5 "	17	27
4. 6-9 "	23	17
5. 10 or more "	29	25

The right of inheritance of land among children of both sexes is Islam and among sons in Hinduism and the feeling that the possession of scattered plots is an insurance against total destruction of one's crops by pests or natural disasters, mainly account for this fragmentation.

Owing to the subdivision of holdings by inheritance, the number of holdings too small to support a family has tended to swell. The

1. Agricultural Census of East Pakistan, 1960.

population increase, which contributes to the fragmentation and subdivision of holdings, produces impoverishment of the peasantry. As the economic circumstances of small-holders of land worsen, they become more vulnerable to complete loss of their lands. The trend towards landlessness is, of course, expressed through growth in the number of completely dispossessed persons, who must resort to wage earning. Whatever its manifestations, it has acted to intensify economic inequalities and to promote a more rigid social and economic stratification in rural areas.

3.2 Agriculture[1]

Bangladesh is predominantly an agricultural area, with some cottage and modern industries. Agriculture is of basic importance to Bangladesh. It contributes 55 to 58 per cent of the G.D.P. of the country.[2] It not only provides most of the food requirements but also provides employment to a vast segment of the population. With a rate of population growth around 3 per cent per annum, high un- and underemployment and limited non-agricultural employment opportunities, it is likely that for decades agriculture will have to provide the bulk of productive work opportunities to the population. This is particularly so since employment-capital ratio is low in the non-agricultural sectors. The importance of agriculture is also realized by the fact that it furnishes certain raw materials which constitute the backbone of the economy. The bulk of foreign exchange earnings of the country comes from jute.

The basis of the economy is rice agriculture, which takes place against the background of the almost whimsical variability of a monsoon climate. Two factors are of prime importance for the success of an economy based on agriculture, namely the soil and the climate.

Soil: In Bangladesh soils differ in their chemical composition. The village under study has a loamy soil or "doash", as it is known in Bengali. These are the most extensive soils of Bangladesh and cover large areas in the north, south and east. On "doash" tracts, jute, aus, vegetables and aman are grown.

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1. For further discussion see: Ahmed, Nafis - An Economic Geography of East Pakistan, 2nd edition, 1968. Also Johnson, C.L.B. - Bangladesh 1975 and Barkat-e-Khuda - "Rural Bangladesh - A Demographic and Economic Overview" in Recent Changes in Asia: Australian Responses, Conference Papers, Centre for Continuing Education, A.N.U., Canberra, November, 1977.

2. Government of Bangladesh, Planning Commission, The First Five Year Plan, 1973-78, Nov. 1973, p.83.

Climate: The climate of Bangladesh is characterized by moderately high temperatures for about eight to nine months of the year. Humidity is very high and the country receives heavy rainfall in summer. In broad terms, the climate may be described as moderately warm and humid.

Over most of Bangladesh the maximum temperatures are attained in April and May. The temperature during the summer months ranges between 91^{o} and 96^{o} Farenheit, while the minimum rarely goes below 70^{o} F. Intense heat in April and May is followed by a slight decrease in June-July and then there is another rise in August which persists normally till October. The coldest months are December and January, when the temperature may go down to a minimum of 54^{o} F.

Bangladesh is a land of the monsoon. Very few areas in Bangladesh receive less than 70 inches of rainfall a year. A very large area in the south and south-east, including Comilla, receives rainfall varying between 80 to 100 inches. The maximum rainfall is concentrated during the main monsoon periods. About one-fifth of the total rainfall comes down in the season of the Norwester (March to May). The winter rainfall is negligible. For most parts of the country the heaviest rainfall occurs in July, with slightly low figures for June and August. During the period of the fieldwork it was also felt that the heaviest rainfall occurred in July. The months of November through March are almost dry; then, a little rain sets in by the end of March and the cycle is repeated.

The distribution of rainfall is suitable for the growing of paddy. There are two main varieties of rice which are grown in the village, namely the 'Aus' and the 'Aman'. Aus is generally sown after the Norwester and harvested in July-August/September. The period during which Aman is grown is August to December. The duration of monsoon up to September with slight rainfall till October is peculiarly suited to the cultivation of Aman paddy. The period between November and mid-March is almost dry and

in the absence of any modern irrigation system (such as power-pump, tube-wells, etc.), the cultivation of 'Boro' or the winter crop does not take place in Barkait. Instead, during this period the farmers grow 'dhondha' (a native crop akin to rice but much inferior in quality and quantity), sweet potato, potato, water-melon, vegetables, etc. The distribution of rainfall, thus, controls the agricultural economy of the country and that of Barkait.

Besides the total amount of and the distribution of rainfall, the cultivation of paddy is also dependent on the frequency of rainfall. Showers in late March and early April facilitate the preparation of land and sowing in seed-beds. Heavy showers at the end of July and early August facilitate the transplantation of Aman.

For the normal output of paddy it should rain frequently and sufficiently during the period of May to August. From September to mid-October, it should rain in such frequency and quantity that the water-level on the paddy fields should be around 4 to 5 inches above the ground. If the water-level falls below this level, rice will not grow properly. Again, if the water-level rises very high, plants will suffer and output will be reduced accordingly.

Monsoon agriculture subjects the cultivators to four basic hazards. First, if the rains do not fall early enough, the chances of two full crops Aus and Aman - are diminished for lack of time. Secondly, if the downpour is very heavy, there is a danger of crop damage due to flooding. Thirdly, if the rainfall is too meagre, there will be a loss of crops due to dryness. And, fourthly, if the monsoon ends quite early, the standing crops will suffer, since they will not receive sufficient rainfall towards the end of the maturation period, with adverse effects on yield.

3.2.1 Crops

This section is devoted to a discussion of some of the important crops in the country and the village under study. It discusses the cropping pattern and practices, the methods of cultivation and the nature of post-harvest operations.

Table 3.6 gives the area under the important crops in the country and in Barkait.

Table 3.6

Proportion of Cultivable Area under Different Crops in Bangladesh and in Barkait

Crops	Percentage of Total Cultivable Area under Each of These Crops:	
	Bangladesh[1]	Barkait
1. Rice	81.8%	67%
2. Jute	4.8%	3.3%
3. Sugarcane	1.2%	2.5%
4. Others	12.2%	27.2%
Total cultivable land area under Aman, Aus and Boro seasons	100.0%	100.0%

The table shows that while over 80 per cent of the total cultivable area in Bangladesh is devoted to rice, less than 70 per cent is devoted to rice in Barkait. The low proportion of land devoted to rice in Barkait as compared to Bangladesh is due to the fact that Boro is not grown in Barkait. Instead, "dhondha" is grown in Barkait and this is why the proportion of land under other crops is higher in Barkait than in Bangladesh.

1. Government of Bangladesh, Statistical Yearbook of Bangladesh, 1975. Bangladesh Bureau of Statistics.

Rice

Of the various agricultural products raised in Bangladesh, by far the most important is rice. Of all the cereals, rice alone is a crop supremely well-suited to the natural and economic conditions of the moister parts of Monsoon Asia. A hot moist climate and wide stretches of land naturally flooded at certain seasons are natural conditions favourable to rice cultivation. The cultivation of paddy is encouraged by the physical conditions of the country and because of the direct dependence of most of the population on it for the satisfaction of the most urgent and important of their economic wants. From time immemorial the Bengalis have been accustomed to consume rice as their principal daily food.

Each of the different varieties of rice has its own characteristics and its suitability to the conditions of the land on which it is grown. Though the varieties differ one from the other, in general, the rice plant must have high temperatures and an abundant supply of water for germination and growth. This means that the temperate zones of the world are less favourable to rice cultivation than are the tropical and sub-tropical areas. Rice culture tends to concentrate on level or gently sloping land with soils characteristically heavy in type. As a result, the relatively flat lowlands, river basins and deltas of the world's moist tropical and sub-tropical areas are best adapted to the rice plant and its cultivation. For germination rice requires higher temperatures than the other crops. The minimum temperature of germination varies with the variety. Too low a temperature delays germination and interferes with formation of crown roots.

There is an almost endless variety of rice grown in Bangladesh. These different varieties have been divided into three broad classes, according to the period of the year in which they are harvested - (1)

Aus (March/April to July/August), (2) Aman (July/August to November/December) and (3) Boro (December/January to April/May). Of these, Aman is by far the most important.

Table 3.7

Proportion of Area under Different Varieties of Rice in Bangladesh and in Barkait

Variety of Rice	Bangladesh[1]	Barkait
1. Aman	55.7%	52.4%
2. Aus	32.5%	47.6%
3. Boro	11.8%	0

The table shows the relative importance of Aman crop. It occupies over 50 per cent of the cultivable land area in Bangladesh and in Barkait. The table shows that Boro, as compared to the other two varieties, is of small significance in Bangladesh and is of no significance in the village under study. Here, Boro is not grown due to lack of irrigational facilities.

Aus is generally sown broadcast. The reason why it is not transplanted in the same way as Aman is that its maximum height ranges between four and five feet and it cannot tolerate deep flooding owing to its inability to keep pace with rising water. Though Aus cultivation usually involves no transplantation, more labour is required in thinning out and weeding than is used for either Aman or Boro. While Boro is always transplanted, Aman paddy may again be divided into two classes - transplanted and broadcast. About 30 per cent of Aman is sown broadcast and 70 per cent transplanted in Bangladesh.[2] The outstanding feature of Aman paddy is its ability to withstand the floods of the rainy season.

1. Statistical Yearbook of Bangladesh, 1975.

&

2.

All the varieties of Aman have the capacity to grow in water and the farmer has to level and bund the paddy fields where Aman is grown to hold the rainfall or the river flood waters in the fields.

There is a difference in the out-turn yielded by the different varieties. Boro is more rewarding than Aus or Aman and Aman gives a better return than Aus. Again, of the two varieties of Aman, the yield of the transplanted one is better both in quality and in quantity than that of broadcast Aman. On an acre of land Aus (broadcast) yields 15-20 mds of paddy, Aus (transplanted) - 20-30 mds., Aman (broadcast) 15-25 mds., Aman (transplanted) 25-35 mds., and Boro about 35-45 mds. of paddy.

The main consideration determining the cultivation of transplanted Aman on any particular land is the presence of a certain depth of water at the time of transplantation. There must be a few inches of water on the land when transplantation takes place, since unless the seedlings are partly submerged, they will not survive. However, if the depth of water is more than 9 to 10 inches the land becomes unsuitable for transplantation This is because in such a situation the seedlings would be too much under water. Aman paddy is generally transplanted in Ashar-Srabon (July-August). During this time adequate depth of water is usually available, which facilitates the growth of transplanted Aman. Aman is generally harvested during Aughrayon-Poush (November to December). Aus is generally sown during Chaitra-Baisakh (mid-March - mid-May) and harvested during Srabon-Bhadro (mid-July to August/September). Since the length of the Aus stalk does not exceed four or five feet, it cannot be grown on land where there is more than three feet of water during the period of its harvest. Land on which Aus is grown generally yields a second crop in the year. It is succeeded by transplanted Aman.

The typical Asiatic method of growing rice is a distinctive form

of agriculture. Rice-growing in most of the Asiatic countries is one of the most labour-intensive types of agriculture known. The operations involved in the cultivation of paddy are comparatively simple. Generally, four to five ploughings at intervals are given to the land before sowing or transplanting. Each ploughing is usually followed by a harrowing. When the soil of the seedbed has been worked up to the consistency of a fine, soft mud by ploughing, harrowing and trampling, and is free from weeds, it is ready for sowing. Usually the seed to be planted is first soaked in water and then broadcast by hand on the seedbed from which the water has been drained. Sometimes the seed is allowed to sprout before sowing to obtain a better foothold against heavy rains, which may fall soon thereafter. After a few days when the seeds have germinated, one to two inches of water are reintroduced and allowed to cover the surface of the nursery. As the seedlings grow the water-level is raised and after about a month or so, they are long enough to be uprooted and transplanted. The plants are usually one to two feet high when uprooted. With a few inches of water standing on the field, seedlings are planted by hand in rows, usually two to six inches apart. Once the tasks of sowing and transplanting are completed, the crop requires relatively little attention until harvest, when weeding has to be done at intervals.

The harvest usually begins three to six months after transplanting. This depends on whether the varieties planted mature early or late. On average, it takes about four months. The interval between flowering and maturing is, on average, about a month or so. The method of reaping is primitive. It is done with hand sickles. After it is reaped, the yield is arranged into bundles and carried to the farmer's house.

Bundles of harvested paddy are spread out on the threshing floor, which may be the courtyard of the farmer's house, the paddy field or any

other suitable open space. Usually the courtyard of the farmer's house is small and therefore only small quantities of harvested paddy can be dried at a time. It also depends on the intensity of the sunlight and the duration of day. After being dried, it is ready for threshing. Usually the bullocks tread out the grain and sometimes men perform the same operation or sometimes the grains are beaten by long sticks at the end of which are attached stout reeds. These swing freely as the operator alternatively raises his pole and then brings it down hard on the threshing floor. There are four well-known threshing methods: (1) bullock, (2) pedal thresher, (3) barrel, and (4) feet. Bullock threshing is the most common one. It is sometimes used in combination with the barrel. When the bullock-threshed paddy is not fully separated from the straw, the operation is completed using the barrel. The pedal thresher is used by relatively big farmers, who may either own this or borrow it. There are four pedal threshers owned by the farmers of Barkait. The price of a pedal thresher ranges between Tk.800-Tk.1,000 (US$50-65). Threshing by feet is never done as the only threshing method, except by the very poor farmers. Usually, it is used to re-thresh paddy which has already been threshed once by the pedal thresher. Threshing is followed by the separation of straw and kernel using a riddle, after which it is winnowed using a 'kula' by allowing the material to fall gently from the 'kula' while the wind carries away the chaff, dust, short pieces of straw and the lighter kernels.

In many areas of Bangladesh it is customary to steam the paddy before it is being husked. This makes it easier for the paddy to be husked. It gives a bigger quantity of rice after husking. This is since the proportion of cracked rice is lower and it is easier to separate the beards from the grain. The time required to steam differs with varieties, since this is correlated with the thickness of the beards and the size of the container in which it is steamed. IRRI-5 requires more time than

other high-yielding varieties (HYV), as also compared to the local varieties.

The steamed paddy is then dried. The drying usually takes place in the courtyard of the house. This process is not a difficult one but requires attention. Somebody usually has to be there to keep a watch in case the paddy is being eaten away by birds and fowls. Children often do this job. The time required in drying depends on several factors, such as the amount of the yield, the variety of rice, the size of the drying place and the season. The yield of the transplanted variety is higher than the broadcast one, and so more time input is needed. The HYV husk is thicker and the kernel is larger than the local variety kernel, with the exception of 'latashail'. The husk being thicker, it involves more time. The drying place is most important. It is twice as fast on a metalled road, as compared to a muddy road. The time of the year is important. The drying time in the Boro and Aus seasons is less than in the Aman season.

After it has been dried well, it may be winnowed to get rid of unwanted materials. It is then ready for husking. Husking is commonly done by means of 'dhekhi'. A very small proportion of the yield is sent to the mills. After the husking is over, the grains are separated from the chaff by winnowing fans.

Table 3.8 presents labour requirement per acre of Aus and Aman rice crops. Items 1 to 4 constitute pre-harvest operations and items 6-10 post-harvest operations. Item 5 represents time spent on cutting, arranging the harvested yield into bundles and carrying them to the farmer's house, More time is required for pre-harvest operations in case of Aus than Aman, while less time is required in harvest and post-harvest operations in the case of Aus compared to Aman. Aus requires more time in pre-harvest operations, since more time is spent on ploughing and weeding. Harvest and post-harvest operations take more time in the case of Aman because the yield of Aman is higher than that of Aus. On the whole, Aman requires about 80 hours more per acre in comparison to Aus.

Table 3.8

Labour Requirement per Acre of Land under Aus and Aman Rice (man-hours)[1]

Operation	Aus	Aman
1. Land preparation[2]	126	108
2. Manuring and fertilizing	8	10
3. Sowing/transplanting[3]	8	100
4. Weeding[4]	148	20
5. Harvesting[5]	108	150
6. Threshing[6]	45	62.5
7. Cleaning and winnowing after threshing[7]	18	25
8. Boiling of grain[7]	36	50
9. Drying[7]	27	37.5
10. Husking and winnowing[7]	108	150
TOTAL	632.0	713.0
Assuming an 8-hour day	79.0 man days	89.0 man days

1. Calculated on the basis of our observation in the village and discussion with the villages. One woman-hour is considered equal to a man-hour.
2. This includes time spent on ploughing and harrowing. More time is spent on land preparation for Aus than Aman, since this is done during the months of March-April and usually starts before any rainfall when the land is dry. On average, Aus needs 5 ploughing and 2 harrowing and Aman 4 ploughing and 2 harrowing.
3. Generally, Aus is sown and Aman transplanted and sowing involves much less time than transplanting.
4. Little time is spent on weeding for Aman, because it is transplanted in lines and, therefore, very few weeds grow. However, the time spent on weeding for Aus is considerable, since it is sown broadcast and as a result weeds, shrubs and grass grow in plenty. Normally two to three weedings are required and this estimate is based on the assumption that three weedings are done.
5. This includes the time spent on cutting, arranging the harvested yield into bundles and carrying them to the farmer's house. Generally, a person is employed to carry out all these operations together, rather than just being employed to cut the crops. Generally, more time is spent on Aman harvest than that of Aus, since the yield of Aman is higher than Aus.
6. In Barkait there are only four pedal threshers. Otherwise, the farmers use animals to thresh paddy. This estimate is based on the assumption that paddy is threshed with the help of draught animals. Generally, more time is spent for Aman than Aus, because the yield of Aman is higher than that of Aus.
7. Activities, such as cleaning and winnowing after threshing and husking, boiling, drying and husking are carried out by women. More time is spent for Aman, because its yield is higher than Aus.

It is, perhaps, interesting to compare these estimates with those made by others. Stern estimated that an average acre of cropped area required 650 man-hours, 728 man-hours and 775 man-hours in 1960-61, 1964-65 and 1969-70 respectively.[1] He did not present estimates separately for the various crops. Rather, he lumped them together. Jute and sugarcane involve more labour time and, therefore, this may have pushed his estimates upwards for 1964-65 and 1969-70. His 1960-61 estimate is a bit higher than the estimates reached for Aus in Barkait and lower for Aman.

Rabbani presented estimates for Aus and Aman respectively. He estimated an acre of land under Aus required 41, 50 and 55 man-days in 1960-61, 1964-65 and 1960-70 respectively.[2] According to him an acre of land under Aman required 52, 58 and 60 man-days in 1960-61, 1964-65 and 1960-70 respectively. His estimates seem to have been based on labour requirements on the farm only, i.e. from land preparation to harvesting. His estimate of 1964-65 for Aus is the same as the estimates reached for Barkait. For Aman, his estimate of 1960-61 is closer to the estimate for Barkait, although it is a big higher.

Mead Cain presented estimates of labour requirement per one-tenth of an acre in village Char Gopalpur.[3] He seems to have overestimated the labour input required for an acre of land under Aus. This is mainly due to the fact that he assumed 280 man-hours for land preparation and 224 man-hours for weeding. The estimates reached for Barkait show 126 man-hours for land preparation and just under 150 man-hours spent on weeding. For Aman, his estimate appears a bit lower. He underestimated

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1. Cited in Ahmed, I. "Unemployment and Underemployment in Bangladesh Agriculture", The Dacca University Studies Vol.XXII (Part A): 1974, p.84.

2. Rabbani, Ghulam, A.K.M. "Measurement of Underemployment in Rural Households - A Case Study of Rice Cultivation in East Pakistan", in CENTO Symposium on Household Surveys, Dacca, April-May, 1966.

3. Mead T. Cain, "The Economic Activities of Children in a Village in Bangladesh" Population Development Review 3, 3 Sept. 1977.

the amount of time spent on threshing. In fact, he estimated that one-fourth of time is spent on threshing Aman, compared to Aus. This does not appear to be the case, because the yield of Aman is higher than that of Aus and, consequently, more time is required in threshing Aman paddy than Aus. Besides, he assumed that no time is spent on weeding Aman paddy. This is not the case, since some time is usually spent on weeding Aman paddy as well.

Purcal's estimate of man-hours required per acre of land (excluding post-harvest operations) in an area of West Malaysia comes to 477 man-hours, or 53.4 man-days.[1] Although his estimate is not strictly comparable with the estimates reached for Barkait (due to differences in cropping patterns and practices and yield between Malaysia and Bangladesh), it does show that it is not very far from the estimates reached for Barkait.

Furthermore, it may be pointed out that differences in labour requirement per acre between different estimates may also arise due to the fact that labour requirements per acre of land even for a given amount of output depend on a number of factors such as the cropping pattern and practices, quality of soil, and the extent of fragmentation of land.

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1. Purcal, J.T. Rice Economy - A Case Study of Four Villages in West Malaysia, unpub. Ph.D. Thesis, A.N.U., Canberra, 1964.

Table 3.9 gives an account of the costs and returns for Aus and Aman rice crops per acre of land respectively. The statement is prepared on the assumption that a household member working on a farm owned by the household will receive the same wage rate as that paid to outside labour. Such as assumption is made, because if a household member works for others, he/she would receive the same wages. It is further assumed that the land belongs to the cultivator.

The table shows that Aman yields a higher net return than Aus. In fact, the net return from Aman is about 64 per cent higher than Aus. The net return of Aus falls below 40 per cent of the total return and that of Aman falls just under 50 per cent of the total return. The rate of return to human labour is higher for Aman than for Aus. The ratio of human labour to output is 1:2.76 for Aman and 1:2.38 for Aus in Barkait.

Table 3.9

Statement showing Costs and Returns for Aus and Aman (per acre) (Man-day=8 hrs.)

A) COSTS	Daily Wage Rate	Number of Days Required Aus	Total wages paid	Number of Days Required Aman	Total wages paid
Human Labour:					
1. Land preparation	Tk.10.00 per day	16 days	Tk.160.00	13.5 days	Tk.135.00
2. Manuring and fertilizing	8.00	1 day	8.00	1 day	8.00
3. Sowing/transplanting	10.00	1 day	10.00	12.5 days	125.00
4. Weeding	8.00	18.5 days	148.00	2.5 days	20.00
5. Harvesting	10.00	13.5 days	135.00	19 days	190.00
6. Threshing	10.00	Approx. 6 days	60.00	Approx. 8 days	80.00
7. Cleaning and winnowing after threshing (done by females)	4.00	Approx. 2 days	8.00	Approx. 3 days	12.00
8. Boiling of grain	3.00	4.5 days	13.50	Approx. 6 days	18.00
9. Drying of grain	3.00	3.5 days	10.50	Approx. 4.5 days	13.50
10. Husking and winnowing	6.00	13.5 days	81.00	19 days	114.00
Total cost of human labour			Tk.634.00		Tk.715.50
Animal Labour (for land preparation and threshing):	Tk.10.00 per pair	Approx. 22 animal pair days	Tk.220.00	Approx. 21.5 animal pair days	Tk.215.00
Total labour costs (human and animal)			Tk.854.00		Tk.930.50
Other Costs (including costs of seeds, fertilizer, pesticides, etc.)			Tk. 80.00		Tk.100.00
Total costs			Tk.934.00		Tk.1030.50
B) RETURNS	**Price**	**Yield Aus**	**Value of Yield**	**Yield Aman**	**Value of Yield**
1. Paddy grain	Tk.75.0 per maund of Aus and Tk.70.0 per maund of Aman	18 maunds	Tk.1350.00	25 maunds	Tk.1750.00
2. Paddy straw	Tk. 6.0 per maund	27 maunds	Tk. 162.00	37.5 maunds	Tk. 225.00
Total value of return			Tk.1512.00		Tk.1975.00
Balance (Total return minus total costs			Tk. 578.00		Tk. 944.50

Jute:

After rice, jute is the most important crop in Bangladesh. It will be seen from Table 3.6 that from the viewpoint of the area sown, its importance is very little compared to rice. The latter crop is produced all over the country, and in every individual district it occupies by far the largest proportion of the area under cultivation. In some districts of Bangladesh, such as Chittagong, Chittagong Hill Tracts, Noakhali, Sylhet, Bakerganj and Patuakhali very little or no land is devoted to the cultivation of jute. Jute is mainly grown in Mymensingh, Dacca and Rangpur, while Comilla occupied about six per cent of the total area devoted to jute, and contributed to a little over six per cent of the production in the country in 1974-75.[1]

Jute is normally sown in April-May and harvested in August-September The farmer's decision whether to grow jute in his cropping programme is strongly influenced by his estimate of the economic profitability of jute set against his perception of the short-term subsistence needs of his family for rice. Jute and Aus are grown during the same season and jute is more tolerant than Aus of some degree of flooding but demands more nutrient from the soil.

Although in terms of share of acreage jute is dwarfed by rice, its importance in a different context has been recognized for a long time. In raw or manufactured form it has earned nearly 90 per cent of the foreign exchange earnings of the country. It is the main cash crop for the country.

The cultivation of jute involves a greater stress on the farmer than that of rice. The ploughing and harrowing has to be done much more thoroughly than in the case of rice and the clods of earth have to be broken in such a way that the surface becomes almost a smooth one. The

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1. Statistical Yearbook of Bangladesh, 1975 (p.99).

time of sowing varies. Usually it is done in April and May. When the plants grow to a height of about 4 inches, thinning, weeding and loosening of the earth becomes necessary. From this time for about two months these operations are repeated about once in every fortnight. The farmers use a small implement, called Nirani, to carry out these operations of thinning, weeding and loosening of the earth. The work of thinning requires considerable attention, since if the plants are too close to one another, they cannot sufficiently develop and the yield is unsatisfactory. Again, if there is too much space between them, they open out branches with the result that the quality of the fibre becomes inferior. In the period of their rapid growth the young jute plants require rain at short intervals. They thrive most when each shower is followed by a period of strong sun.

Cutting of jute takes place in August and continues up to September and early October. There are two main considerations which are important in determining the time when the cutting should be done. Firstly at the time of cutting the plants should have attained a certain stage in their maturity. If cutting is too early, the fibre becomes weak and short and the yield is unsatisfactory. Again, if it is too late, the fibre becomes too coarse and the bark persistently adheres to it, especially in the lower part. The other important consideration is that at the time of cutting, there must be sufficient water for the retting process (to be described below). August is the ideal month for the cutting of jute, since retting can be done in the pools which are formed here and there by heavy rainfall. On cutting the plant, leaves are left on the ground to serve as manure.

After the cutting is over, the jute plants are tied up in bundles. These bundles are then arranged like rafts and steeped in water for about a week or two. This process is known as retting. Retting is

necessary for the decomposition of the bark. Unless this is done properly, the fibre contained in it cannot be extracted. The quality of the fibre and its colour depend greatly on the process of retting. In case there is insufficient retting, the bark will partly adhere to the fibres which will stick together. Again, if the plants are kept under water for a longer period than is necessary, the fibres will break and lose their natural fine lustre. Plants cut at a premature condition need a shorter period of retting than the plants cut at a more mature stage. The water in which the retting is done has its influence on the colour of the fibre. Muddy water has an injurious effect insofar as it tends to impart a dull colour to the fibre.

After the process of retting is over, the bundles are brought out of the water and the bark is stripped out of the stick by hand. This must be done within three to four days after the completion of retting. The fibre is then extracted from the bark by beating it on the surface of the water and by washing it thoroughly. Unless this final process of washing is done in clear water, the fibre will not attain its bright colour. The jute is then dried in the sun, after which it is made into bundles for marketing. However, in some cases, as observed in the village, jute is sold out immediately after cutting.

The yield of jute varies between 14 to 20 maunds, depending on the use of improved seeds, etc.[1] The gross income from the cultivation of jute is higher than that of rice. But, the price of jute, unlike that of rice, is subject to frequent and violent fluctuations. This introduces an element of uncertainty and risk into the production of jute. This is one of the reasons why cultivators usually devote only a limited proportion of their cropped area to the cultivation of jute.

An important by-product is the jute stalks (patkhori) which are

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1. Government of Bangladesh, Planning Commission, The First Five Year Plan, 1973-78, November 1973; figure calculated from p.97.

left after the fibre has been peeled off. About 40-50 maunds per acre of these stalks are obtained. These are mostly used as fuel and fencing materials.

Sugarcane:

The other major crop grown in Bangladesh is sugarcane. In terms of its share of acreage it occupies less than two per cent of the total cropped area in the country.[1] Sugarcane is a transplanted crop. This requires that seedlings have to be prepared in a nursery. The tops of the canes, containing little sugar, are used for the purpose. The tops are cut into smaller pieces, each with two knots and are then placed on the seedbed very close to one another. When the nursery is prepared, a good deal of cow-dung and ashes is applied. The nursery is kept well-watered after the cuttings are placed. In some areas, farmers do not prepare seedlings in a separate nursery. Rather, they plant out the cuttings of sugarcane directly in the field. Transplantation takes place during the months of December to February. The land has to be prepared very thoroughly with the application of large quantities of manure. Cow-dung is usually applied in large quantities, supplemented by urea, TSP and potash. The seedlings are usually transplanted in parallel trenches, ordinarily six inches deep and about 18 inches apart, with intervening ridges between them. After transplantation, seedlings need water. During this part of the year rainfall is nil or too little and, therefore, artificial ways of irrigating the land become necessary. In the absence of modern irrigational facilities, this is done manually in Barkait by pulling water from the ponds and tanks by bucket-swinging, and allowing it to reach the field. When the plants are three to four feet high, earth is drawn to them from the ridges on the side of the trenches. This process is repeated again when the plants have made further progress in their growth.

The crop matures for cutting in about ten months' time after transplantation i.e. around October to December. The appearance of the

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1. Statistical Yearbook of Bangladesh, 1975.

flower is the sign that the crop is ready for harvesting. It is this long time before the crop matures which deters farmers from devoting their cultivable area wholly to sugarcane, even though it is a cash crop. Most of the small farmers cannot afford to wait for such a long time and therefore prefer to grow paddy on their land. The average yield of sugarcane is around 400 maunds of cane per acre, or around 40 maunds of 'gur'. The ratio between cane and 'gur' is about 1:10.[1]

Rabi Crops:

During the dry season, cropping depends on moisture remaining in the soil or upon irrigation facilities. In 1974-75 only about 6% of land under cultivation in Bangladesh had irrigation facilities.[2] This explains why the main dry season crop, i.e. Boro crop, is not grown extensively. In fact, in Barkait, Boro was not grown at all. It is at this time that farmers grow 'dhondha'. The average yield of 'dhondha' is around 6-8 maunds per acre. The other dry season crops are a variety of pulses, potatoes, sweet potatoes, chillies, vegetables, oil-seeds, onion, garlic, chillies and seasonal fruits, such as water-melon and vegetables. The importance of the dry season crops in the diet of the people is much more than the acreage data might suggest. Pulses are a source of protein, while fat in the diet mainly comes from oil-seeds, such as mustard.

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1. Ahmed, N. - An Economic Geography of East Pakistan, 2nd edition, 1968, p.148.

2. Statistical Yearbook of Bangladesh, op.cit.

3.3 Marketed Surplus

Though in Bangladesh villages farm production is mostly for family consumption, yet at least some of the farmers must sell a part of their produce, however small these may be, so that they can buy necessities of life, such as cloth, which they cannot obtain from their farms. Besides, they often require money to buy raw materials and to pay revenue and rent.

Generally it is seen that the larger the volume of farm produce, the larger is likely to be the volume of marketable surplus. The propensity to sell would, however, increase for a farmer having enough surplus of his product over consumption needs, provided he develops a higher propensity to buy things not obtainable from his farm, such as fertilizers, and consumer goods for a higher standard of living. It seems probable that the actual flow of marketable surplus of farm products into the market might be slow in the absence of a higher propensity to buy goods for consumption and investment. The proportion of farm produce sold indicates the extent of commercialization for the village. Table 3.10 below gives an account of this.

Table 3.10

Proportion of Landed Households Reported to have Sold at Least Part of Their Crops by Size of Landholding

Size of Landholding	Proportion of Households having Sold
1. 0.01 to 1.0 acre (N=181)	21.5
2. 1.01 to 2.0 acres (N=50)	60.0
3. Greater than 2 acres (N=25)	76.0

Out of 256 landed households in the village 34.4 per cent reported to have sold at least a part of their farm yield. The proportion increases as the size of cultivable land area increases.

The table clearly shows that the larger the size of cultivable

land area, the larger the proportion of households having sold at least a part of their yield. The households with more land are likely to have more surplus and a greater desire to buy other things and, therefore, are likely to sell more compared to the households having a small amount of cultivable area. Over 90 per cent of these households reported selling either paddy or husked rice.

3.4 Livestock

To a significant extent agriculture in rural Bangladesh, as also in Barkait, depends on the use of draught animals to draw the plough for the preparation of land. Besides, animals are of considerable importance for threshing the paddy plants to separate the grains from the straw after harvest. Since animals are of such importance, a short account of livestock in the village is given here.

The working cattle comprise bullocks and cows. The village has 160 bullocks and 125 cows. Besides, the village has 124 goats. Cows, besides being used to plough the land, are kept for two other purposes - (1) to provide milk, mainly for sale, and (2) to produce calves. The rearing of goats appears to be a profitable concern. The goats usually survive on grass alone and the grown-up ones are sold at a clear profit.

In Barkait there is no organized attempt at poultry farming. Many Muslim households keep fowls and ducks, but the Hindu households rear ducks only. The villagers have 808 chickens and 202 ducks. The eggs are either consumed or sold. The ducks and fowls are sometimes consumed by the households and sometimes sold.

While the number of cattle per rural household in 1970 was 2.45 in Bangladesh and 1.68 in Comilla it was 0.91 in Barkait in 1976. The number of goats in 1970 was 0.86 per rural household in Bangladesh and 0.39 in Comilla, as compared to 0.40 per household in Barkait in 1976.[1]

The cows and bulls differ in their working capacity. On the basis of our observation and discussion with the villagers it is assumed that the bull and cow-drawn ploughs can prepare about four and two acres of land, respectively, in every agricultural season. That is, the working capacity of ploughing of one pair of bullocks is equivalent

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1. Statistical Yearbook of Bangladesh, 1975, p.110.

to that of two pairs of cows. On the basis of this assumption, the number of standardized working cattle in the village may be regarded as 222.5. Considering the fact that the total cultivable area in the village is 240.95 acres and that there are 222.5 standardized working cattle, it can be said that there is a pair of standardized working cattle per cultivated holding of 2.16 acres.

The working capacity of most of the working cattle is low. This is due to several factors, one of which is that cultivators cannot afford to buy cattle of superior quality. Cattle are mostly small and of a stunted variety. The village has no satisfactory breeding arrangement. The calves are, therefore, not of good quality. The villagers can only use the bulls available in the village, most of which are not of good stock for breeding purposes. The condition under which most of them live is also not satisfactory. The fodder problem brings to light the wretched condition of the cattle. There is practically no arrangement for public pasturage. Under the pressure of many mouths to feed the villagers are forced to bring every bit of their land under cultivation. This is quite understandable. The cattle are allowed to graze freely only after the harvest, when the animals consume the remaining straw on the paddy fields. At other times, the cattle are taken out to eat grass, which grows during the rainy and autumn seasons on the sides of the embankments of the cultivable plots. During this time the cattle are not allowed to graze freely and depend greatly on the fodder supplied at home; however, every attempt is made by the farmers to search for grass growing to feed the cattle, rather than buy it.

The fodder of the cattle mainly consists of paddy straw, grass and some oil-cake. Gruel is added to it during the peak periods when they are used for ploughing and threshing. A working bull requires

about 40-50 maunds of paddy straw, 4 maunds of oil-cake and about 6 to 8 maunds of gruel yearly. A working cow, on average, requires about three-quarters of what a working bull requires. The milk cow consumes the same amount as a ploughing cow and the young ones usually need half the amount required by a bull. Although grass is an important item of fodder, it does not grow in plenty in the area and most of the farmers cannot afford to buy it in bundles to feed the cattle. Most of the farmers in the village cannot provide the amount of fodder required by the cattle.

Paddy straw is the chief item of fodder. The acute financial position of the poor farmers does not allow them to purchase paddy straw for these cattle. In fact, a lot of them sell paddy straw for money. This means that usually a poor farmer cannot supply the required quantity of fodder to the cattle. The working cattle are fed properly only during the periods of ploughing the fields and when paddy is being threshed. As regards milch cows, they are fed adequately only during the milking periods. Due to the acute financial condition of the poor farmers, oil-cake is usually supplied to the working cattle only during periods when their labour is required, and is given to the milch cows during the milking seasons. The inadequate supply of fodder makes the cattle look feeble, with their bones sticking out of their skins. This condition is more marked during the agricultural off-seasons. The poor quality and inadequate quantity of foodstuffs account for the poor working capacity of the working cattle and the poor milk-giving capacity of the milch cows. This also affects the longevity and total working period of the animals. On average, the cattle live for about nine to ten years and are fit to work for only five to six years, after which they are sold. The working cattle remain busy for only about eight months in a year - April/May/early June - for ploughing of Aus

and jute; late June and July to August/September - for threshing Aus crops and ploughing the fields for Aman, particularly the end of July and the whole of August; and November, December, and January for threshing Aman paddy and preparing the land for Rabi crops. Most of the other months they are usually idle and become a burden on the farmers.

A considerable amount of time is usually spent in looking after animals. The time spent on animal care includes the time spent on collecting fodder and feeding these animals, taking them out in search of grass, bathing them, milking them, looking after the newly-born, putting them away at night, etc. According to Macfarlane, 0.5 man-day per day or 182.5 man-days per year are spent in looking after one female buffalo and a calf in the village of Thak in Nepal.[1] Mead Cain also recognized the fact and says that this is mainly because of the scarcity of feed, more so for small owners because they have small stocks of straw.[2]

1. Macfarlane, Alan - Resources and Population: A Study of the Gurungs of Nepal. Cambridge University Press, Cambridge, 1976.

2. Cain, T. Mead - "The Economic Activities of Children in a Village in Bangladesh", Population Development Review 3, 3 Sept. 1977.

3.5 Implements and Accessories

A brief description of the implements and accessories used by the farmers in Barkait is essential to an understanding of the functioning of the economy. The implements and accessories used by the farmers of this village are the age-old types and well-known in the locality for generations. The farmers in this village in particular and Bangladesh in general do not use any sophisticated implement, nor can they afford to purchase the improved varieties, due to their poor economic condition. Moreover, there are several other reasons for the adoption of primitive implements. The people are familiar with their use. In many cases, more complicated implements cannot be used on account of the nature of the land and labour is abundant and comparatively cheap, so that there is less incentive to adopt Western machinery.

Of all the implements used, the plough is by far the most important. The plough (naghol) used is the wooden plough, which is furnished with the point iron share. The beam and yoke of the plough are made of bamboo, and, normally last for three to four years. The body, handle, shoe and share of the plough are renewed after every one or two years. The total number of ploughs in the village is 174. For levelling the field just before and after sowing, a leveller (moi) is used. The leveller or moi consists of a few pieces of bamboo tied to one another to form a narrow and small platform. It has a beam of bamboo attached to it. This beam is tied to the yoke placed on the working cattle. It lasts around two to three years. Weeding is done by a spade (khurpi). Most of the households with some land have their own khurpi. To reap paddy iron sickles are used and iron scythes are used to reap jute. To do the husking, 'dhekhi' is used. 'Dhekhi' is a wooden lever with a fulcrum near the middle. At one end of the lever is fixed a wooden pestle. This pestle is dropped by lever action

into the hole on the ground just below the pestle. Grains are poured in the hole and are husked. On the other end of the lever, a person stands to operate the huller. A woman sits near the hole to continuously check whether the paddy has been husked and goes on putting fresh paddy into the hole as paddy is being husked. The 'dhekhi' usually lasts for seven to 10 years. While the richer households have a separate 'dhekhi' each, the poor households have one for every two to three households. After the husking is over, the grains are separated from the chaff by winnowing fans. Until now the usage of the 'dhekhi' has been the most widespread, but the comparatively better-off farmers also use the rice-mill to some extent.

3.6 Irrigation

As already mentioned there is a dry season in Bangladesh, extending over three to four months of the year. It is especially during this period that the need for irrigation is felt seriously by the farmers. However, a very small proportion of the total cultivable area in the country is covered by irrigation by means of power-pumps and tube-wells. In 1974-75, 5.6 per cent of the total cultivated area was under such irrigation facility.[1] The other forms of irrigation are doons, canals and swinging baskets. Of the total area irrigated in 1974-75, 52.9 per cent was covered by the indigenous methods of irrigating land.[2] Barkait is conspicuous by the absence of any modern irrigation facility. Whenever the need for irrigation arises, this is done manually by the farmers. The form of irrigation prevalent in Barkait is swinging baskets. For this purpose, the farmers use a vessel made of mat or old galvanized iron sheet. Two ropes are attached on each side of the vessel. Two persons are required, at a time, to operate the water-scoop. They stand facing each other near the bank of the reservoir of water, which is a tank in the village, each with a rope in his hand. The vessel is dipped into the tank and taken up carrying water in it, which is then poured into the channel dug to carry the water to the fields.[3] This is a time-consuming and strenuous job.

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1. Calculated from Statistical Yearbook of Bangladesh, 1975.

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2.

3. See Johnson, Bangladesh, 1975, p.37.

3.7 Seed and Manure

The seeds are generally stored from the agricultural produce of the previous year and sown in the next year. The peasants also exchange seeds among themselves. The farmers also purchase seeds from the market. The potatoes stored as seed sometimes get damaged because of bad storing and insects. Farmers, especially those having a smaller area of land, devote most of their cultivable land area to crops and hence do not grow seedlings, which they then buy from the market. The amount of seeds per acre of different crops is given below.

Table 3.11

Amount of Seeds per Acre of Different Crops[1]

Crops	Amount
1. Aus paddy (broadcast)	60-80 lbs.
2. Aus paddy (transplanted)	24-30 lbs.
3. Aman paddy (broadcast)	50-70 lbs.
4. Aman paddy (transplanted)	24-30 lbs.
5. Jute	6-10 lbs.

For the proper output of a crop fertilizing is very important. Although subsidized by the government, this is not always within the reach of the average farmer. The average dose has been no more than 10 lbs. of nutrient per acre. This is no more than one-third of the desired dose.[2] Of the various chemical fertilizers used, the proportion of urea by far outweighs the use of the others. The intensity of fertilizer use in relation to arable land in Bangladesh in 1970-71 was 15 nutrient lbs. per acre.[3] Most of the farmers, on account of their poor economic

1. Derived from Krishi Panjiga, East Pakistan Agricultural Development Corporation (published in Bengali).
2. A.R. Khan - The Economy of Bangladesh, p.49.
3. FAO - Production Yearbook, 1970 and 1971.

condition, use cow-dung, to which is added black clay from the beds of ponds, and some wood-ash. Cow-dung is the main item of manure for a good number of farmers. An average farmer cannot afford to buy cow-dung (the home supply may not be sufficient) and has to be content with insufficient amounts of the same, provided by his cattle. The point which needs mention here is that not only is the cow-dung used as manure in short supply, but also that it is not always of good quality, because it is not preserved properly. The cow-dung deteriorates in quality on account of exposure and evaporation since the manure pits are kept uncovered.

3.8 Pests and Diseases

Bangladesh has a hot and humid climate. This fosters crop pests and diseases. The loss of output on account of this is estimated to be between 10 and 15 per cent.[1] Less than 32 per cent of the total cropped area in Bangladesh in 1971-72 received ground and aerial plant protection, and for Comilla District the proportion was only 21 per cent. Moreover, the protection, even where it is available, is often too thin and not always disease-specific. The poor economic condition of the farmers, coupled with untimely and inadequate supply of pesticides account for a very limited use of pesticides in Barkait.

To sum up, the available technology in most Bangladesh villages, including Barkait, does not suffice to control successfully the environmental conditions of agriculture, given the minimum production needs of so large a population. The low yield per acre in agriculture is due mainly to the backward technology used. Throughout the generations there has been little change in technical means of cultivation and the technology today is only marginally different from that at the beginning of the present century. The use of household compost cannot rival the yield possibilities of chemical fertilizers. Manual irrigation, similarly cannot compete with the scientific methods of irrigation. It is the lack of advance in the adoption of the 'biological-chemical' technology and irrigation which is believed to have been the limiting factor to increased production in the situation of extreme land scarcity. The plough cannot compete with the speed and efficiency of the tractor. Ploughs in Bangladesh are lighter than the ploughs pulled by water-buffaloes in much of South East Asia and, therefore, do not cultivate as deeply. The point worth mentioning is that given the poverty of the villagers, [illegible] chemical fertilizers and scientific methods

1. A.R. Khan - The Economy of Bangladesh, 1972, p.52.

of irrigation do not seem possible in the near future.

All this results in low production of crops. Average yield of rice ranges between 15 to 25 maunds per acre. Low production affects the level of the quantitative and qualitative food consumption of the people.

3.9 Agricultural Wealth of the Village

The value of agricultural produce depends broadly on (1) the amount of land under cultivation, (2) the crops cultivated and the modes of cultivation, and (3) the output and market price of the produce. As regards the amount of land under cultivation, due to economic pressures and many mouths to feed, the farmers can hardly keep any cultivable land fallow. The dwelling areas are quite small in proportion to the cultivable land area. The areas allotted for gardens and bamboo-groves are quite small as well. The farmers, thus, bring under cultivation practically all the land at their disposal. Thus, the agricultural wealth of the village cannot be increased any further by extending the area under cultivation, unless farmers buy new plots of land or more land is brought under modern irrigation facilities. Since the district of Comilla has a very high density of population, a very high percentage of cultivated land is attained here. There is no forest area and the cultivable waste is negligible.

In the section dealing with crops the proportion of land area devoted to different crops is examined. Here, we would only stress that a very large proportion is devoted to paddy and that only a very small proportion is devoted to the cultivation of cash-crops, such as jute and sugarcane. It also needs to be pointed out that due to lack of irrigation facilities, in the dry season Boro paddy cannot be grown and is substituted for other less important crops. This constitutes clearly a great loss, both in terms of rice production and agricultural wealth of the country.

Agricultural wealth depends not only on the crops grown but also on the mode of cultivation. Here, we would attempt a short description as to how cultivation is organized. Usually, the farmers divide their working hours into two shifts - one in the morning before

the midday meal and the other in the afternoon, after the midday meal, followed by a rest of about an hour. They leave the field around or just after sunset for the evening prayer. During the relatively less busy periods (some parts of June and September and February-March), they usually work on the fields in the morning shift. The afternoon is spent in rest and in looking after household chores. And, during some days of the busy months (July to early September, November-December and late March-April), farmers remain on the field for a longer period. During July-August, the Aus crop is harvested and then they have to prepare the land almost simultaneously for the transplantation of the Aman crop. During the period November-December, Aman paddy is harvested. This has to be done at the right time to avoid loss of a considerable quantity of grain through over-ripening. During these busy months, farmers often go to the field immediately after sunrise, have an hour or two to eat and rest in the afternoon, after which they resume working which normally continues till sunset and sometimes it has been observed that they work even an hour or so after sunset, depending on the demand for labour on the field. On some such days farmers may even work up to 10 hours a day. However, if a household has many adult males available for work on the fields, each one would then share the available work, although for some days of the busy seasons each one might work between eight and ten hours a day.

Table 3.12 gives the annual cycle of a farmer cultivating say, around two acres of land. Farmers, owning very little land, and if they are not working for others, will not fit into the table. For example, if he has little land, it is possible that all harvesting of Aus paddy and transplanting of Aman paddy would be over by mid-August, in which case if he does not work for others, he would practically be having no work for a month or so.

A strong division of labour exists between the two sexes in Barkait and in rural Bangladesh in general. Women are mainly engaged in activities which keep them within or close to the homestead and men are engaged in work on the farm and other activities requiring physical mobility. This high degree of sexual division of labour arises out of the institution of 'purdah'. The traditional custom of 'purdah' is observed by both the Hindus and the Muslims. Following this custom, the villagers do not allow their women to go out of their huts or work with other men. As a result, women do not come out to work, except in some cases when women belonging to poorer households work for the richer households, of course, as far as possible within the restriction of 'purdah'. As such, a major consequence of the sexual segregation of work roles is that in such a society, men are usually the primary producers of income. It is to females that post-harvest operations and household maintenance activities mainly fall.

Generally, the type of work done by women depends on the occupation pursued by the male members of the household. Most households are agricultural and women help in post-harvest operations, such as threshing, boiling, drying, husking and winnowing.

Besides agricultural activities, both men and women engage themselves in various non-agricultural activities, such as handicraft, weaving fishing nets, spinning yarn, etc. The amount of time spent

Table 3.12

Annual Agricultural Cycle of a Farmer in Barkait

Month	Male	Female
1. Baishak (April-May)	Harvesting of 'dhondha', potato and sweet potato. Land preparation and sowing of Aus paddy and jute. Manuring and fertilizing.	Plant vegetables such as cucumber, 'shorshinda', 'jingha', and 'datta' in kitchen garden. Husk 'dhondha',
2. Jaishta (May-June)	In the early part of the period, sowing of jute continues. Weeding of Aus and jute already sown.	Husk 'dhondha'.
3. Ashar (June-July)	Weeding of Aus and jute. Towards the end of the period, harvesting of Aus begins. Land preparation of Aman. Threshing of Aus.	Threshing, boiling, drying, husking and winnowing of Aus begin. Drying and heaping of paddy straw.
4. Srabon (July-August)	Harvesting of Aus continues. Harvesting of jute begins. Land preparation and transplantation of Aman crops. Washing and cleaning jute and separating fibres.	Same as in 'Ashar'; plus washing and cleaning of jute and separating fibre.
5. Bhadro (August-September)	Harvesting of Aus and jute almost complete. Land preparation and transplantation of Aman. Threshing of Aus.	Same as 'Srabon'.
6. Aswin (September-October)	Weeding grass and unwanted plants from Aman fields.	Some husking of Aus and work connected with jute cleaning and separating fibres.
7. Kartic (October-November)	Weeding of Aman. On very few plots Aman is ready for harvest.	Not much agricultural work at all. Some work may be there if Aman is harvested.

Continued

Table 3.12 (continued)

Month	Male	Female
8. Agrahayan (November-December)	Harvesting Aman. Irrigating plots manually for winter crops. Sowing potato. Threshing Aman.	Post-harvest Aman operations.
9. Poush (December-January)	Harvesting of Aman complete. Land preparation for winter or 'rabi' crops.	Same as 'Agrahayan'.
10. Magh (January-February)	Sowing of 'dhondha', sweet potato, potato, onion, pea-gram pulses and vegetables.	Some post-harvest Aman work; but on the whole, little agricultural work.
11. Falgon (February-March)	Irrigation Rabi crop fields. Rather little work on farm.	Little or no agricultural work.
12. Chaitra (March-April)	Harvesting onion, chilli and pea-gram pulses.	Little or no agricultural work.

on these activities depends on the amount of land under cultivation. Time spent on these activities varies inversely with the size of landholding. The amount of time spent on these activities also depends on the time of the year. Generally, during the busy periods less time is spent on these, while during the slack periods more time is spent on these activities.

A discussion on the mode of cultivation remains incomplete if nothing is said on the employment of outside labour. Out of 256 households with cultivable land, 84 households reported that their land was cultivated solely by members of the household. That is, about one-third of the households with land had not employed any outside labour. Over 90 per cent of such households had land between 0.01 to 1.0 acre. One hundred and seventy-two households, or over three-fifths of households with cultivable land reported using outside labour. Of such households, 4.7 per cent reported depending solely on outside labour. These were households with females as household heads and had no adult male member. About 50 per cent of the households reported using outside labour during the busy periods; i.e. during transplanting and harvesting seasons. During such periods the tasks have to be completed within a relatively short period of time and the demand for outside labour is quite high. Another 16 per cent of the households reported utilizing outside labour also at times other than transplanting and harvesting seasons. These were mostly households with relatively more land. Such households utilized outside labour also for such tasks as weeding, manual irrigation, etc.

3.10 Production Relation

The economic life of a people is, no doubt, revealed to some extent by a general consideration of the economic activities and the state of technique of production or by the categorization of the people into homogeneous units of similar economic status. The operation of an economy is the total manifestation of the inter-relationsh: of the people concerned in regard to the production of wealth in the society. The composition of the economic structure is the total representation of the different types of production relations of the people. The economic structure should reflect the way in which the means of production are owned. Agriculture is the main basis of the economy. The composition of the economic structure is the expression of the production-relations in the agrarian economy as a whole. The composition of the economic structure is mainly the result of inequality in land distribution and its concentration. Therefore, the characteristics of the economic structure are to a significant extent the expression of property inequality. To this is added the exploitation of the landless and the near landless by households having land. This results in a more top-heavy economic structure for the village.

Besides land, which is undoubtedly the principal factor of production, let us examine the ownership of implements. Out of 160 bullocks, households with land areas greater than two acres own 20 per cent of the total. Out of 174 ploughs, households with land areas greater than two acres own 18 per cent of the total. This, again, points to the inequality in the distribution of other factors of production. The rich farmers have an upper hand. Whenever a poor peasant has to hire animals or a plough he has to work on the land of the rich farmers. Due to poor economic conditions, he cannot pay for the charges of hiring these things and, therefore, sells his labour

power. Again, however pressing the need for these things, he can only obtain these from the rich farmers when they do not require these. As a result, the poor farmers often get these after land of the rich farmers has been prepared for cultivation. This means that often the poor peasants are forced to cultivate their land late, resulting in a delay in planting the crop and, therefore, they suffer loss in production.

In fine, the functioning of the economic structure leads to the concentration of means of production in the hands of a few comparatively rich farmers, rendering most of the households in a state of landless or near landlessness and the exploitation of the majority by a minority. In such a situation the landless and the near landless are compelled to depend on the rich farmers. Although farmers having land areas greater than two acres account for only eight per cent of all households in the village, yet due to their greater share over the means of production it is the predominant group in the village, while the impoverished peasantry are merely the cogs in the wheel of production for the rich farmers.

3.11 Economic Organisation:

Most of the households in rural Bangladesh and in Barkait are concerned with agriculture, household industry or trade, or with a combination of these. For such occupations the household usually works as a unit. That is, the members of the household share between themselves the types or stages of the operations involved, or jointly work for each operation. As a result, it is difficult to distinguish workers according to the degree of their contribution to the household occupation. This is possible if and when they take to different occupations or when each person is directly remunerated by a cash income, for example, in the case of agricultural wage labourers.

Crop production was the most important source of income for 75% of all households in the village. Of this a vast proportion depended on the cultivation of paddy. In contrast, crop production was the most important source of income for 39% of all households in village Char Gopalpur[1]. Agricultural wage employment was the principal source of income for 12% of households in Barkait, compared to 23% in Char Gopalpur[2]. Non-agricultural occupations provided the major source of income for less than 10% of all the households in the village, compared to 16% in Char Gopalpur. Among non-agricultural occupations rickshaw pulling, hawking, handicraft and hair-cutting were important. Three persons had hair-cutting as their major source of income. One of them belonged to a landless household and two to households with up to 1.0 acre of land. All of them were Hindus. One of the barbers had a small shop in the village market. However, their main form of business was visiting different villages on local market days. There was only one person in the village who was a tailor. However, his primary occupation was cultivation. From tailoring he earned between Tk.1 to Tk.3 (roughly U.S. cents 6.20) on each bi-weekly market day (haat) at Barkait. There were two persons whose primary occupation was the repair of others' houses both in the village and in other villages. They had

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1 & 2 Mead Cain, op.cit. 1977

no arrangement to be employed daily. In the case of nine households income from rickshaw-pulling was the major source of income. The fare between Barkait and Chandina (a distance of approximately four miles) ranges between Tk.4 to Tk.6 (U.S. cents 25 to 30) depending on the time of the day and the year. A rickshaw-puller, on average, earned between Tk.15 to Tk.20 (U.S. $1.0 to $1.20) daily and after having paid for the rent at the rate of Tk.8/- daily was left with Tk.7 to Tk.12/-. This provides a somewhat higher income than that provided by agricultural wage employment, although it is a more strenuous job than working on farm. The other point worth mentioning is that there were very few rickshaws available in relation to the demand for these. Consequently, those who maintained good relations with the owners of rickshaws were given rickshaws on hire. Increasing the supply of rickshaws would provid employment opportunities to many more.

3.12 Standard of Living:

The standard of living is a comprehensive term. It includes in its connotation such things as the in-take of food and its quality, comforts and luxuries, dwelling place and other things of daily life. In this section a brief description of the daily life of the people under the categories of food, clothing, housing, hygiene and health is made to examine the living standards of the people of Barkait.

3.12.1. Food:

As regards food, the staple diet of the people is boiled rice. Several other things are made of rice, usually by the comparatively richer households, such as khoi (puffed paddy) muri (puffed rice), chira, etc. Our inquiry revealed that most families could not afford two rice meals daily throughout the year. 28.5% of all households in the village had two rice meals daily throughout the year preceding the survey. While 88% of households with land areas in excess of two acres had two ricemeals daily, the proportion was less than 10% among landless households and one-quarter among households with up

to 2.0 acres of land. This points to the starvation or semi-starvation level at which a vast proportion of the population lives. It would be unthinkable in rural Bangladesh where rice consumption is so basic to way of life that the average living standard could rise without an increase in per capita consumption of rice. There is evidence indicating that rice consumption per capita declined over several years in Bangladesh[1].

Next to rice, dhoudha, potato, sweet potato and some vegetables are the important food items. The main vegetables during winter and spring are cabbage, cauliflower, kidney-bean (seem), and during summer and autumn are jinga (a cucurbitaceous fruit), kumra (gourd), lau (the long gourd), ladies finger, etc. The villagers consume various leaves, such as spinach and the leaves of the gourd plant, etc.

Preparation of pulses (dal) is usually a common item. Several types of pulses, such as pea-gram (chola), kidney-bean (kalai), mosor, etc. are consumed.

Though fish and meat are the favourite items of food of the people, many cannot afford to buy these. A comparison of the 1961 National Sample Survey with the Quarterly Surveys of Current Economic Condition of 1963-64 and 1966-67 in the country shows that the consumption per head of fish has been declining rather drastically[2]. The fish consumed by the villagers are mostly caught from the local tanks and paddy fields. In general, the villagers consume fish in small quantity and that also not more than once in every three or four days. Meat is rarely consumed. The villagers usually eat meat on the occasion of Bakr-Eid when cows and goats are slaughtered.

3.12.2. Clothing:

As regards clothing, men usually wear lungi (a piece of cloth to cover the body from the waist downwards). It is only when they visit friends and relations do they wear a shirt or a punjabi (an upper garment similar to shirt). Women wear saree to cover their body. Although the saree should be at least five yards in length for an adult person, due to poor economic condition

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1 A.R.Khan - The Economy of Bangladesh, p.20

2 Ibid. page 16.

the saree worn by village women are usually of four and a half yards in length. Generally, these women do not wear any upper garment, except those belonging to comparatively richer households. Children up to the age of three or four years usually do not wear anything. When going out and on ceremonial and religious occasions they wear shorts and shirts. Boys around seven or eight years start wearing lungi, while girls around nine to ten years of age start wearing saree.

During winter men usually wear a wrapper only. But, those belonging to the comparatively better-off families also wear a shirt and a cardigan. Women also use a wrapper. Children also use a wrapper and sometimes warm vest if the household can afford it.

Leather shoes are quite uncommon, but rubber shoes and sandals are not that uncommon.

Expenditure on clothing in rural Bangladesh accounts for over 95% of total expenditure on apparel, textile, footwear and personal effects[1]. This shows that expenditure on items other than clothing is quite negligible.

3.12.3. Housing:

The villagers live in mud huts usually built by themselves. The richer households have an outer and inner courtyard, but most of the poorer households do not have outer and inner courtyard. The poorer households usually have only one room - used for sitting, preparing food and sleeping. Again, many households do not have cow-sheds and the animals live in the open, sometimes under the shade of trees.

The floors and the walls are generally made of mud and need regular maintenance and repair, usually done by women. The roof may be thatched with paddy straw or covered with corrugated iron sheets, if the owner can provide for the latter. Less than 15% of households in Barkait have roofs of corrugated iron sheets.

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[1] Statistical Yearbook of Bangladesh, 1975, op.cit.

The size of the room generally varies. For bedrooms the breadth varies between 6 and 10 feet; the height between 7 and 10 feet from the floor to the ceiling and the length may vary between 8 and 20 feet. On average, the size of a bedroom is about 12 feet in length, 8 feet in width and 9 feet in height.

3.12.4. Health and Diseases:

On the whole, the villagers do not have a sound physique. The poor and imbalanced diet and lack of proper health facilities are responsible for their weak health condition. The health of a man, other things remaining the same, affects his productivity. Low productivity, in at least some of the less developed countries, is due to low physical strength of the people. In addition, due to poor physical condition people are less immune to diseases. Table 2.1 shows that during the period of observation in the village 108.9, 145.2 and 217.8 hours were lost on account of sickness in the case of males aged 10-14 years, 15-54 years and those aged 55 years and above respectively. Among females aged 10-14 years, 15-54 years and those aged 55 years and above the numbers of hours lost was 72.6 hours, 108.9 hours and 217.8 hours respectively.

Several diseases such as influenza, diarrhoea, dysentery and slight fever incapacitate the villagers for a period of about a week or so. Diseases such as typhoid, chronic dysentery and rheumatism incapacitate the villagers for a longer period, often a fortnight or more. Hookworm is quite prevalent, especially among children. This often leads to anaemia, which is also caused by poor diet and frequent childbirths among women. A substantial proportion of women in the village suffer from anaemia.

The village has no qualified doctor. There are two persons in the villag serving as doctors. They have no formal training in medicine. They have gathered experience by working under qualified doctors and through practice, and the villagers have faith in them. Usually it is the homoeopathic treatment with a slight admixture of the allopathic medicine and sometimes of the indigeneous kabiraji type. There are two drug stores situated at the

village market, which sell medicine to the inhabitants of Barkait and the neighbouring villages. These stores are owned by people living in neighbouring villages.

3.12.5. Hygiene and Sanitation:

The sanitation of the village depends on the water supply and the method of disposal of refuse. The sources of water supply are the tanks and tube-wells. There are only five tube-wells in the village. That is, for every 340 persons there is only tube-well to supply drinking water. The number of tube-wells is not sufficient and people are often forced to draw drinking water from the tanks. The villagers use the tanks for bathing, washing clothes and cleaning household utensils as well.

As regards the disposal of human refuse the entire village has two sanitary latrines (constructed by the author during the period of fieldwork). Most men go a little away from the dwelling site and women use the plots adjoining the dwellings. There are no urinals and the people use the creeks and corners of the dwelling site or the adjoining gardens and the fields for the purpose. As regards animal refuse, there is no systematic arrangement to dispose of the same, which becomes quite a serious problem during the monsoon.

Thus, it can be said that a vast majority of the people in the rural areas have a dismally low level of consumption of goods and services. On a material scale most families live at a level of substantial deprivation, when compared to the people in the urban areas. Whatever material possessions the richer farmers have are only modest compared to most town dwellers. The poor are indeed poor and the rich are no more than moderately well-to-do. However, there still exists a substantial difference between the poor and the comparatively well-off persons in the village. Table 3.13 illustrates the point.

Table 3.13. Proportion of Households in Each Land Holding Group with Each of the Various Objects.

Ownership of Objects [own one or more of these objects].	Households (in acres)				
	landless	0.01-1.0	1.01-2.0	>2 acres	Total
A. Productive Goods:					
1. Plough	1.8	44.7	92.0	100.0	49.0
2. Bull	3.6	27.0	66.0	84.0	33.6
3. Cow	3.6	27.0	48.0	56.0	29.2
4. Dhekhi	7.1	59.1	90.0	100.0	58.0
5. Rickshaw	2.0	1.0	0	0	1.0
6. Sewing Machine	0	0	2.0	0	0.3
B. Consumption Goods:					
1. Radio	0	0.5	12.0	15.0	3.5
2. Tables	1.8	7.2	28.0	56.0	13.5
3. Chairs	1.8	3.9	26.0	48.0	10.6
4. Bicycles	0	2.2	4.0	15.0	3.2
5. Partially corrugated iron sheet house	1.8	7.2	34.0	60.0	14.7
6. Cots	100.0	100.0	100.0	100.0	100.0
N	56	181	50	25	312

3.13. Income and Wages:

During the period Bangladesh was still part of Pakistan the pattern of development strategy adopted had generated income inequalities among various groups of people. The development strategy pursued by the government had placed major stress on private investment and, thereby, sought to generate a higher saving rate in favour of those groups whose savings rates were relatively high. In other words, the redistribution of income was skewed in favour of this group. Consequently, this resulted in an increasing concentration of income in the hands of the few. Griffin suggested that the real income of Pakistan's rural population declined from 1949/50 onward till the earl 1960's, whence forward it gradually rose to the 1949/50 level in 1964-65[1]. Bose presented some estimates of per capita factor incomes of total, agricultural, rural and urban populations of Bangladesh from 1949-50 to 1963/64 at 1959/60 prices[2]. He found that per capita rural income was Rs.275 during the period between 1949-50 to 1953-54. This declined to Rs.253 during 1954-55 to 1958-59 and rose to Rs.268 during 1959-60 to 1963-64. This shows that per capita rural income during the third period, although registered increase over the second period, yet, failed to catch up to the level of the first period. Bose found that during that period the decline in per capita income of agricultural population was even sharper. From Rs.228 during 1949-50 to 1953-54 it fell to Rs.201 during 1954-55 to 1958-59 and then rose only slightly to Rs.202 during 1959-60 to 1963-64. During the same period the per capita urban income increased steadily, although slowly. It rose from just over Rs.600 in the early 1950's to about Rs.700 in the early 1960's. The decline in the per capita rural income indicates that the real income of the poorest section of the population in the rural areas declined quite appreciably during the period. Data from Barkait reveal that per capita annual income comes to Tk.406 (U.S.$27.0 approx.). Bose's estimate of per capita income was lower than this.

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1 Griffin, K.B., "Financing Development Plans in Pakistan", Pakistan Development Review, Vol.V, No.4, Winter, 1965.

2 Bose, S.R., "Trends of Real Income of the Rural Poor in East Pakistan, 1949-66", Pakistan Development Review, Vol.8, 1968.

However, he presented estimates for the period 1949-50 to 1963-64 at 1959-60 prices. Based on current prices, Bose's estimates seem to be somewhat higher than that for Barkait. This is consistent with Bose's finding that per capita rural income had been declining. In a recent I.L.O. Report based on a study in Indonesia, Malaysia, Pakistan, the Philippines, some states of India and Bangladesh it was found that average income has increased in all these countries with the exception of Bangladesh in the last few years[1].

Table 3.14 presents the percentage distribution of the households in different income groups by size of net cultivable land area. The table shows sharp income inequalities in the village. While about two-fifths of all households in the village had weekly income of up to Tk.30.0, only about 8% of households had weekly income in excess of Tk.80.0. There is not much difference between households possessing no land and those having up to 1.0 acre of land. This is because some of the persons belonging to landless households work as rickshaw-pullers who, on average, earn roughly between Tk.6.0 and Tk 8.0 per day. While a small proportion of households having land areas ranging between 1.01-2.0 acres had income in excess of Tk.80.0 weekly, over two-fifths of households with over two acres of land had weekly income of more than Tk.80.0.

The income of the villagers is derived mainly from two sources - from the production on one's own farm and from outside employment. The major form of outside employment is work on others' farm, while employment on non-agricultura activities, such as pulling rickshaws, etc. is also prevalent. In the rural areas income is mainly derived from agriculture and, thus, those with little or no land fall in the lowest category of the rural poor. Though self employment far exceeds wage employment in agriculture and owner and owner-cum-sharecr pers outnumber the landless agricultural laborers, yet a significant proportion of the agricultural labour force is made up of landless agricultural labourers. The proportion of landless agricultural labourershas been increasing over time.

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[1] Cited in The Bangladesh Observer, Dacca, Nov.10, 1977, p.12.

Table 3.14. Proportion of Households in Different Income Groups by Size of Net Cultivable Area.

Weekly Income of Households (in taka)[1]	Net Cultivable Area (in acres)				
	Landless	0.01-1.0	1.01-2.0	>2.0 acres	Total
1. Up to Tk. 20.0	26.8	23.2	14.0	8.0	21.2
2. Tk. 21.0 - Tk. 30.0	7.1	23.2	20.0	4.0	18.3
3. Tk. 31.0 - Tk. 40.0	25.0	16.0	6.0	4.0	15.1
4. Tk. 41.0 - Tk. 50.0	8.9	9.9	18.0	12.0	11.2
5. Tk. 51.0 - Tk. 60.0	16.1	14.9	8.0	8.0	13.5
6. Tk. 61.0 - Tk. 80.0	16.1	9.4	20.0	16.0	12.8
7. Tk. 81.0 or more	0	3.4	14.0	48.0	7.9
Total	100.0	100.0	100.0	100.0	100.0

[1] A taka is equivalent to approximately U.S. seven cents.

In 1951 they formed 14% of the total agricultural labour force and in 1961 the proportion went up to 17%[1]. For families of landless and near landless agricultural labourers, wages constitute almost the total income.

Generally, there are two forms of wage payments prevalent in rural areas. The first is a cash and/or kind payment, while the second is known as share payment. The first form of payment is either fixed on a daily basis or on a contract basis. In other words, labourers may be paid a certain wage fixed on a daily basis or given a contract wage. A contract wage is paid when the owner of land hires in labour for a particular operation and fixes the amount to be paid, regardless of whether the operation is completed in a day or spread over several days. Under the traditional share system of payment labour receives a portion of the crop. Under such an arrangement, the real wage rate per man-hour is a positive function of yield. However, the introduction of the system of cash contracts and daily wages has broken this link between wage rates and yields. In Barkait it was generally observed that cash payment was more prevalent among the bigger farmers and during such times as land preparation, transplanting, harvesting, etc.; whereas, share payment was more prevalent among farmers with little land, who could not afford cash payments and during such times as harvesting and threshing. Also, for such activities as weeding, thinning, manual irrigation, etc. contract wages were more prevalent as a form of payment.

Wage rates varied seasonally. During the peak periods of agricultural activities higher wage rates prevailed, compared to those which existed during other times. During peak periods an adult male in Barkait normally received Tk. 6 (0.40 U.S. cents) plus two meals. The value of each meal was estimated at Tk. 2 (0.13 U.S. cents) each. In other words, during such a period, an adult male received Tk. 10 (0.66 U.S. cents). A boy of 10-14 years of age usually received somewhat less than an adult male. He normally received

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[1] Government of Pakistan, Census of Pakistan 1951 and 1961 [1951 Census - vol.I, Table 14; 1961 Census, vol.II, Table 51].

Tk.4 (0.26 U.S. cents) plus two meals, or approximately Tk.8 (0.52 U.S. cents). An adult female normally received Tk.4 (0.26 U.S. cents) either in cash or in kind, although kind payment was more prevalent. The payment in kind was usually two seers of unhusked paddy or in some cases it consisted of one seer of unhusked paddy plus a meal. A girl of 10-14 years normally received the same wage as an adult female. During the relatively less busy periods, lower wage rates existed. While an adult male received on average Tk.4 plus one or two meals, a boy of 10-14 years received about Tk.3 plus one or two meals. As regards females, it was observed that one and a half seer of unhusked paddy was paid.

Clay observed that during peak periods of activity, such as land preparation, transplantation and harvesting, laborers traditionally receive wages substantially in excess of day to day family subsistence requirements[1]. Although in Barkait the wages received during peak periods were not substantially high in excess of family subsistence requirements, it was, on average, 20 to 25% higher than during relatively less busy periods.

3.14. Economic Index:

An idea of the material standard of living can, perhaps, be better shown by constructing an Economic Index. Two such indexes have been constructed. The first index is constructed taking into consideration the amount of a household's own cultivable land area and access to food, housing and other objects of wealth, while the second index is constructed without taking into account land area. This has been done to see how important land is in determining the wealth of the household. The method of contruction of index is given in Table 3.15.

Basically, the index expresses the standing of the households from the point of view of wealth with 1 showing that the household has virtually no possession and 5 implying a substantial amount of material possessions. In the cases of cots and condition of housing 1 does not mean zero. This is because

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[1] Clay, E. "Institutional Change and Agricultural Wages in Bangladesh", The Bangladesh Development Studies, Vol.4, Oct. 1976., No.6.

Table 3.15: Economic Index of Households.

Objects:	Range of Grades					Weight
	1	2	3	4	5	
1. Own land	Landless	0.01-1.0 acre	1.01-2.0 acres	2.01-3.0 acres	>3 acres	5
2. Rice meals	No rice meals & hungry for eight or more months.	One rice meal or less & hungry for eight or more months.	One rice meal or less and not hungry for eight or more months.	Two rice meals or less and hungry for eight or more months.	Two rice meals & not hungry for eight or more months.	5
3. Cows	0	1	2	3	4+	3
4. Bulls	0	1	2	3	4+	3
5. Goats	0	1	2	3	4+	2
6. Chicken	0	1-4	5-8	9-12	13+	0.5
7. Ducks	0	1-4	5-8	9-12	13+	0.5
8. Plough	0	1	-	2	3+	2
9. Chair	0	1	2	3+	-	1
10. Table	0	1	2	3+	-	1
11. Cots	1	2	3-4	5-6	7+	1
12. Radio	0	1	-	2	-	2
13. Sewing Machine	0	-	-	1	-	3
14. Bicycle	0	-	1	-	-	3
15. Rickshaw	0	-	-	1	-	4
16. Condition of Housing.	Kacha	-	Partially corrugated	-	Corrugated	3

Minimum possible points 39
Maximum possible points 178

each household had a minimum of one cot and since each had a house to live in. It was, therefore, felt necessary to assign 1 to the minimum value of these two objects.

Since all the objects are not of equal importance, it was thought necessary to assign weights to determine their relative importance. The index has been constructed with due consideration to the importance and price of each of these objects. Both these points had to be considered, since if we just took account of the one and ignored the other, the index would tend to either underestimate or overestimate the wealth of the households. For example, an acre of cultivable land is significantly much more important than a cot and, therefore, possession of an acre of land was allotted 10 points while the possession of a cot was given 1 point. Again, the possession of a bull was given 6 points while that of a radio was given 4 points. This is because the price and importance of a bull was higher than that of a radio.

Table 3.16 presents the percentage distribution of households by Economic Index and Net Cultivable Area. The table shows quite clearly that there existed an uneven distribution of wealth in the village. Over 90% of landless households and 70% of households with up to 1.0 acre of land belonged to the first three categories of weighted score of Index I, while none of the households with over one acre of land belonged to these categories. Again, while just over one-fifth of households with land areas ranging between 1.01-2.0 acres belonged to the last two categories, the proportion was over four-fifth among households with over two acres of land. If we look at Index II the same sort of a pattern is repeated. This indicated that households with little or no land are clearly poorer, compared to households with relatively more land.

Next, is shown the relationship between size of household and economic index. For the present purpose, economic index is constructed without taking into consideration land area possessed by the households. It, thus, depicts the wealth of the household minus land. Land has been omitted from the index to examine the relationship between these two variables as such without the effect of land having to influence the results.

Table 3.17 presents the distribution of Economic Index by size of household. It becomes obvious from the table that the larger the size of household, the higher is the proportion of the households placed on higher categories of

Table 3.16: Percentage Distribution of Households by Economic Index and Net Cultivable Land Area.

Weighted Score:	Economic Index I[1]				Economic Index II[2]			
	Landless	0.01-1.0	1.01-2.0	>2 acres	Landless	0.01-1.0	1.01-2.0	>2.0 acres
1. 35-48	19.6	0.5			60.7	13.3	4.0	
2. 49-58	71.4	12.2			35.7	55.9	52.0	
3. 59-68	7.1	56.7			3.6	25.9	32.0	12.0
4. 69-78	1.9	25.7	14.0			4.9	12.0	40.0
5. 79-88		4.9	64.0	12.0				28.0
6. 89-98			16.0	32.0				16.0
7. 99 or more			6.0	56.0				4.0

[1] Economic Index I takes into account the net cultivable land area of household.

[2] Economic Index II does not take into account the net cultivable area of household.

the index. Over three-fifths of the households, with up to three members, are placed on categories I and II and none of these households are placed on categories V and VI. Over one-fifth of the households, with up to six members, are placed on categories I and II, while only 7% are placed on categories V and VI. Only one-ninth of the households, with up to nine members are placed on category II and none on category I, as against over one-fourth on categories V and VI. None of the households, with ten or more members, are placed on the first two categories, whereas, three-fourths of these households are placed on categories V and VI.

Thus, it can be said from the above tables that the size of a household is closely associated with its wealth and economic condition and bears a positive relationship with it. This is also clear from Tables 3.2 and 3.3.

Table 3.17: Distribution of Economic Index by Size of Household [Percentage distribution].

Size of Household (in persons)	Economic Index Categories[1]					
	I	II	III	IV	V	VI
1 - 3	8.3	55.5	22.2	14.0		
4 - 6	1.9	20.5	41.5	29.5	5.0	1.6
7 - 9		11.1	29.6	32.1	19.8	7.4
10+			8.3	16.7	25.0	50.0

[1] I = up to 39 points on the Index.
II = 40-49 points on the Index.
III = 50-59 points on the Index
IV = 60-69 points on the Index.
V = 70-79 points on the Index
VI = 80+ points on the Index.

CHAPTER 4. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION

This chapter analyzes some of the socio-demographic characteristics of the population under study and draws comparison with Bangladesh as a whole. An account of some of these characteristics of the population is helpful to an understanding of the society with which the study is concerned. Besides, the participation in labour force activity is influenced by such variables as age, sex and other socio-demographic attributes of the population, which have important implications for the rate and pattern of change in the agricultural sector, and which, in turn, influences the nature and pattern of labour utilization. Conversely, what happens in agriculture, is believed to exert an influence on the rate and pattern of change in demographic variables. Agricultural policy-making must be concerned with the influence of demographic factors on agricultural change. It is in the context of the determination of the development objectives that demographic variables exert a decisive influence on agricultural policies. All such objectives, e.g., the attainment of a certain level of employment, can only be defined in relation to the actual and projected values of such socio-demographic variables.

Most of the data analyzed in this chapter are derived from the Household Census, together with some information obtained from the Attitudinal Survey on the Value of Children and the records of births registered during the period of fieldwork.

4.1 Family

The family is at the heart of Bengali social life. Many of the families in Bangladesh are extended, patrilineal and patrilocal. Over 40% of the families in Barkait are joint families. The different kinsmen, along with their spouses and children, occupy the same dwelling, eat and pray together and enjoy property in common. They cooperate in economic activity. The joint family system provides nursing care for the sick, social security for the unemployed and support for the aged. They share the various problems and joys of social life and have strong feelings of mutual obligations under crisis. Even those families which are not purely joint in nature still share the various problems and joys of social living and have strong feelings of mutual obligation under crisis with other related families. For example, brothers living separately take up the problem faced by one of the brothers as their common problem and are seen to have strong feelings that each is fully involved. The extended family system in Bangladesh and the male lineages connecting them are very significant in the social system of the country. The female is encouraged to reproduce and understands that her acceptance by and security among the husband's kin depends greatly upon her success. A woman's first responsibility is to her home and her immediate family. Her key roles have been and remain those of the wife, mother and home-maker. Even when she is not married her expectations of assuming these roles exercise an influence on the character and extent of her economic activities. The familial and social status of a couple is very much dependent on the birth of a child. The birth of the first child assures the adult status and social identity of the young couple. Children provide prestige and strength in village politics and are considered to be economically beneficial.

Table 4.1 presents the percentage distribution of type of families by size of household. It is interesting to see from the table that there is a positive relationship between the size of household and the proportion of joint families. Larger households tend to be more often joint families.

Joint families keep their land intact, since unlike the case of the smaller households, land is not usually partitioned amongst their members.

Table 4.1: Distribution of Types of Families by Size of Household

Size of household (persons)	Number of joint/extended families	Number of simpler families	Total number of families	Joint families as % of total number of families
1-3	16	47	63	25
4-6	53	103	156	34
7-9	53	28	81	65
10 or more	12	0	12	100
All sizes	134	178	312	43

4.2 Institution of Purdah

The term "purdah" literally means curtain. The term is commonly used in many South Asian countries to describe the system of secluding women from menfolk and enforcing high standards of female modesty. It is most closely associated with the Muslim population of the region, though it also exists to some extent among the Hindus.

It is customary for girls in the rural areas to observe purdah when they reach puberty. Even before a girl reaches puberty she is made aware of the two separate worlds of men and women. A man's world is outside the home; whereas, for a woman it is usually her home. It is this purdah system which enforces the separation of the two worlds and determines the sexual division of labour in the household.

The observance of purdah calls for two kinds of restrictions on women's movements. The first is that women have to be confined within the four walls of their homes. This implies that rooms, tanks for bathing, etc., have to be set aside for use by women exclusively. Men outside the kin-group cannot usually go to these places. The second is that when a women goes out of her home, she must wear a "burqah" (concealing cloak worn by women). The burqah

covers a woman from head to ankle. Women, wearing a burqah, see through the eye-holes of the same. When a woman travels by rickshaw (trishaw) and if she is not wearing a burqah, the rickshaw is usually covered by a cloth, so that, no person can see her.

Though purdah is usually observed by women in rural Bangladesh, the degree of its rigidity varies according to the socio-economic status of the family to which she belongs. The poor households cannot ensure purdah of women by allocating separate rooms, tanks, etc. A burqah is not a very cheap item and most of the poorer families cannot afford it, nor can they afford to travel by rickshaw. Some women belonging to poorer families go out to work at others' places and, hence, cannot observe purdah as rigidly as women belonging to comparatively richer households. Strict seclusion of women is not very characteristic of the poor. Women belonging to higher social hierarchy observe purdah more rigidly. It was observed that women belonging to "Maulvi Bari" and "Bhuiya Bari" in the village were more particular about purdah than many others.[1]

4.3 Literacy and Level of Education

A vast majority of people in Bangladesh are illiterate. In 1974 22.2% of population aged 5 years and above were literates - the proportion for males was 29.9% and that of females was 13.7%.[2] The country is now passing through an era of various development activities. Educated and technically qualified people are required for the purpose of planning and execution of development plans. Moreover, it is generally believed that education helps to promote the idea of small family size and in the diffusion of family

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1 "Maulvi Bari" and "Bhuiya Bari" are two households in the village on a higher social hierarchy.

2 Bangladesh Population Census, 1974, Bulletin 2, 1975.

planning practices.[1] It is generally maintained that education, besides providing opportunities for personal advancement and awareness of social mobility, also provides, "new outlook, the freedom from traditions, the willingness to analyze institutions, the values and pattern of behaviour and the growth of rationalism."[2] Information on educational level is extremely valuable for socio-economic and demographic studies.

This section analyzes data on literacy and educational levels in Barkait. The survey followed closely the procedure adopted in the 1974 Bangladesh Census. Below are given the basic concepts and the definitions used in the survey:

1) Literates: Persons who could read and write a simple statement in any of the four languages, viz., Bengali, Urdu, Arabic and English.

2) Can read Holy Koran only: Those persons who could read Holy Koran only, without understanding the meaning.

3) Can read and write but no schooling: Those persons who could read and write but had not schooling. In other words, persons who learnt to read and write at home are included in this category.

4) Some primary schooling: Persons who attended or at the time of the survey were enrolled in between Class I to Class V.

5) Completed primary schooling: Those persons who passed Class V, but did not go to the secondary school.

6) Some secondary schooling: Persons who attended or at the time of the survey were enrolled in between Class VI and Class X.

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1 Coale, J. "Factors Associated with the Development of Low Fertility: A Historic Summary", Proceedings of the World Population Conference, 1965, Vol.II, (UN1967), pp.205-209.

2 Dandekar, K., "Effect of Education on Fertility", Proceedings of the World Population Conference, Vol.IV, 1965, pp. 146-149.

7) Completed secondary schooling: Those persons who passed Class X as well as those who appeared at the Matriculation Examination but had not passed it.

8) Matriculation: Persons who passed Matriculation or any equivalent examination and those who were enrolled in Intermediate or any other equivalent classes.

9) Intermediate: Persons who passed the Intermediate (Class XII) or any other equivalent examination and those who were enrolled in Degree classes.

10) Graduates: Persons who passed B.A., B.Sc., B. Com., or any equivalent degree examination.

4.3.1 Level of Literacy

The rate of literacy in Barkait was 30.7 per cent for the population aged 5 years and above; 44.2 per cent of males and 17.4 per cent of females were literates. This shows a difference of several points when compared to Bangladesh. It may be pointed out that the literacy rate for Comilla District was somewhat higher than the Bangladesh average. Moreover, the survey was conducted in 1976, i.e., two years after the Bangladesh Census was conducted. This may have raised the proportion of literates in the village. Furthermore, it may be pointed out that in 1974 there was a very serious famine in Bangladesh forcing many people to keep their children away from school and delay sending the younger ones to school.

Table 4.2 clearly points out the sex differential in respect of the literacy rate. In fact, about three times more males than females were literate. This differential is mainly due to three reasons. Firstly, there is is a severe lack of educational opportunities for females. The nearest secondary school for girls is situated about four miles from the village. Secondly, purdah places restriction on the movement of girls. And, finally, parents prefer to have their sons educated. Consequently, many girls are deprived of education.

Table 4.2: Extent of Literacy by Broad Age-Groups and Sex in Barkait (Percentage distribution)

Age-Groups	Male	Female	Both Sexes
10 years and above	46.4	17.4	30.8
5 years and above	44.2	17.4	30.7
All Ages	36.6	12.5	24.5

Table 4.3 presents the literacy rate by age and sex. The table indicates the trend of literacy during the last several decades. We can see from the table that there is a declining rate of literacy as age advances, with the exception of males in age-group 35-44 years. This shows that educational opportunities were, by and large, restricted to only a few people. For example, those in age-group 45-54 years were born during the period between 1922 and 1931 and most of them received their first few years of education during the period between 1927 and 1936. The per cent literate in this age-group allows one to form an idea of the extent of literacy prevailing during the corresponding period. If we go another decade backwards we find that the literacy rate among males falls, while none of the females received any education. Thus, it could be said that female education started sometime between 1927 and 1936. However, it is obvious that such data suffer from certain limitations. In particular, the persons of any age-group for whom data was collected at the time of the survey do not represent the whole cohort of persons born the corresponding number of years earlier. Mortality would have affected the original birth cohort perhaps with a differential effect on those with different levels of literacy. It is possible that some of those born during the period between 1927 and 1936 may have died during the famine of 1942 which swept Bengal. Migration may also be another important factor. Some of those born during 1927-1936 may have migrated to India with the partioning of the sub-continent in 1947. If the educational attainments of the migrant population were entirely different, this may

substantially change the level of literacy and education of the present population under study.

Table 4.3: Literacy Rate of Population Aged 5 Years and Above by Age-Group and Sex, in Barkait (Percentage Distribution)

Age-Groups	Male	Female	Both Sexes
5 - 9	37.3	23.1	32.3
10 - 14	56.2	34.3	44.9
15 - 24	54.7	18.6	33.0
25 - 34	41.5	14.7	28.4
35 - 44	50.0	11.4	30.6
45 - 54	41.1	4.6	21.5
55 - 64	38.3	0	19.2
65 & above	27.1	0	13.6

Nevertheless, the table does show a declining or downward trend of illiteracy or conversely a rising trend of literacy. Another interesting feature of the table is that it shows that as age advances the difference in the proportion of male literates to female literates widens. This indicates that female education during the last several decades received very little attention.

4.3.2 Level of Education

Table 4.4. presents the percentage distribution of population by educational level and sex. The table shows that while less than 8 per cent of the males belonged to the category of 'only Koran readers', almost 30 per cent of the females belonged to this category. Among the males over two-fifths had been to school compared with only about 16 per cent of the females. None of the females had completed secondary schooling, while about 10 per cent and 13 per cent of males aged 5 years and above and aged ten years and above, repectively, had either completed secondary school or had further education.

Although the proportion of males was still quite low, the sex differential is great. The reasons for such a differential are that when a girl reaches puberty her movements outside the home are restricted and only a few of them may continue to study. It is also commonly believed that by the time a girl attains puberty her formal and informal education is complete and from that time on she is trained for the role of a housewife. Also the fact that there is no secondary school for girls located in the village or in the neighbouring villages acts as a barrier to the further education of women.

Table 4.4: Percentage Distribution of Population by Educational Level, Sex, and Two Broad Age-Gropus in Barkait

	POPULATION AGED 5YRS+			POPULATION AGED 10YRS+		
	Male	Female	Both Sexes	Male	Female	Both Sexes
Educational Levels:						
1. Illiterate[1]	48.4	53.4	43.9	46.6	53.8	50.3
2. Can read Holy Koran only	7.6	29.2	18.6	7.1	30.0	18.9
3. Can read & write but no schooling	1.7	0.7	1.2	1.5	0.5	0.1
4. Some primary schooling	27.0	11.9	19.5	24.8	9.5	16.9
5. Completed primary schooling	5.4	3.7	4.6	7.1	4.6	5.7
6. Some secondary schooling	5.0	1.3	3.1	6.5	1.6	3.9
7. Completed secondary schooling	2.1	-	1.1	2.8	-	1.4
8. Matriculation & equivalent	2.1	-	1.1	2.8	-	1.4
9. Intermediate or equivalent and above	0.7	-	0.4	0.9	-	0.4

Note: 1. Here the proportion of those able to read Holy Koran only, is shown separately. However, this should be added to the proportion shown as illiterate to give the rate for total illiterates.

In summary, if we consider those persons as literates who had at least some schooling, just under 30 per cent of the total population - over 40 per cent males and about 16 per cent of the females were literates. Table 4.5 gives the current school enrolment by age and sex.

Table 4.5: Current School Enrolment of Children (aged 5-24 years) by Sex and Age in Barkait

Age-Groups	Males		Females		Both Sexes	
	Number of Students	Enrolment Ratio[1] %	Number of Students	Enrolment Ratio %	Number of Students	Enrolment Ratio %
5 - 9	56	34.8	30	21.6	86	28.7
10 - 14	54	56.3	48	47.0	102	51.5
15 - 19	15	29.4	3	3.3	18	12.8
20 - 24	6	10.9	-	-	6	4.8
All children 5-24 years	131	36.1	81	24.5	212	27.7

Note: 1. The enrolment ratio is defined as the number of children enrolled, divided by the total number of children in the same age-group, multiplied by 100.

Table 4.5 shows that in each age-group more boys were enrolled in school than girls. The difference is high in age group 5-9 years, narrows in age-group 10-14, widens substantially in age group 15-19yrs; at ages 20-24 yrs no females were enrolled in school. This difference, especially in the first two age-groups is due to the fact that parents attach more importance to the education of sons than that of daughters. As regards the last two age-groups it is mainly due to the observance of purdah and other factors discussed earlier.

A comparison of the above table with data from the 1974 Census of Bangladesh shows that in the first two age-groups, Barkait's enrolment ratios were higher and for the next two age-groups the enrolment ratios were roughly the same.[1] The Barkait enrolment ratio was not only checked against the school register but also over the period of several months it was possible to confirm that those enrolled were attending school, more or less

1 See Rabbani, D'Souza and Rahman "1974 Census Estimates of Fertility Levels in Bangladesh", Paper presented at Bangladesh Fertility Survey Seminar, Cox's Bazaar, Dec., 1976 (Appendix 3, Table 3, p.40).

regularly. There were just over 36,000 primary schools in Bangladesh in 1973-74.[1] That is, there was roughly one such school for every two villages. There is a primary school in Barkait, which explains why the school enrolment ratios in Barkait were higher for age-group 5-14 years than for Bangladesh.

4.4 Age and Sex Distribution of Population

Table 4.6 gives the percentage distribution of the population in Barkait by five-year age-groups and sex. It is usual in most villages of Bangladesh that as soon as a visitor enters the village he is at once surrounded by a countless number of young children. More than one-third of the population in Bangladesh is under ten years of age. Children aged 0-9 years constitute abour 35 per cent of the total population in Barkait and 35.8 per cent in Bangladesh.[2] In other words, over one-third of the total population in Barkait and in Bangladesh are under the minimum age requirement for enumeration in the labour force, criteria adopted in the 1974 Census. The high proportion of children clearly indicates that the new entrants to the labour force are of a sizeable order, which only aggravates the already grim unemployment and underemployment situation obtaining in the country. The disproportionately large number of children indicates a high rate of population increase.

The proportion reported in the different age-groups declines as age advances. In fact, it is typical of a country with high fertility to have a higher proportion in the younger age-groups and a lower proportion in the older age-groups. While the proportion under 15 years of age is close to 50 per cent, that of population aged 60 years and above is only 7 per cent.

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1 Govt. of Bangladesh, Statistical Yearbook of Bangladesh, 1975, Table 7.1, p.177.

2. Population Census of Bangladesh, 1974.

Table 4.6: Distribution of Population by Sex and Five-Year Age-Group in Barkait (Percentage Distribution)

Age-Groups	Male	Female	Both Sexes
0 - 4	17.5	17.1	17.3
5 - 9	19.0	16.3	17.7
10 - 14	11.3	12.0	11.7
15 - 19	6.0[1]	10.5	8.3
20 - 24	6.5[1]	8.3	7.4
25 - 29	6.7	6.5	6.6
30 - 34	5.8	5.4	5.6
35 - 39	4.5	5.5	5.0
40 - 44	4.7	3.7	4.2
45 - 49	3.4	3.9	3.7
50 - 54	3.2	3.7	3.5
55 - 59	2.7	1.6	2.1
60 - 64	2.8	1.9	2.3
65 & above	5.7	3.6	4.7

Note: 1. The relatively small proportion of males aged 15-24 years was on account of out-migration. Some of the males aged 15-24 years were studying in schools and colleges situated in Comilla Town and Dacca and were staying outside the villages, while some were working in Comilla Town and Dacca and were living outside the village.

4.5 Marriage

Negotiated and monogamous marriage, with a few exceptions of polygyny is the common practice in Bangladesh. The proportion of polygynous marriage in Bangladesh is insignificant. In Barkait only two such cases were found at the time of the fieldwork.

As soon as a girl attains puberty, she is not only put under purdah but also her marriage is arranged by her family. In rural Bangladesh most marriages are arranged. The father and other male members of the family have the dominant say in the matter. Marriage arrangements require negotiations with others and are, therefore, handled by the male guardian of the girl.

The usual form of marriage is for the bride's family to seek out the bridegroom and carry on negotiations with the bridegroom's family. Once

the terms and conditions are settled and other details worked out, the bridegroom's party consents to the marriage and the day of the marriage is fixed by consulting the religious calender. It usually takes place on Fridays. The time of the ceremony is usually fixed between two prayer times, so that when the ceremony is over, the party assembled can bid farewell after saying the prayer together.

On the day of the marriage the bridegroom, with his party, usually consisting of male members only, goes to the bride's place. There, they are received by some respected persons from the bride's side. At the bride's house the bridegroom and his party sit at the outer court, which is decorated according to the financial capacity of the bride's father. The bride remains inside the house and the bridegroom is not yet taken inside, since he is still considered to be an outsider.

The religious priest conducts the formal ceremony. The consent is taken from both the bridegroom and the bride. It may be pointed out here that though a girl's consent is mandatory, yet it is only a mere formality. After the consent is given by both parties, the priest recites some verses from the Holy Koran and asks for the blessings of Allah on the marriage. The marriage is thus solemnized. This is usually followed by a customary ceremony involving food and other rituals at the bride's house. The food served may vary from light refreshment to a full meal, depending on the economic condition of the bride's father. The bridegroom is then taken inside the house, where he sits by the side of the bride. Here, some formalities have to be completed before the bridegroom leaves the bride's place for his residence accompanied by his bride.

The expenses incurred on marriage vary, depending on the socio-economic condition of both sides, particularly that of the bride's father. Here, I must say a few words on the dowry system, prevalent in Bangladesh villages. In Bangladesh as well as in Barkait, marriage is not so much between a boy and a girl as between two groups of relations. Dowry or <u>joutuk</u> (as it is

known in Bengali) is money, land or property, which a woman brings to her husband at marriage. The dowry depends on the economic and social status of the family as well as on the education and beauty of the girl. If the girl's family comes of a better background, the boy's side will not make heavy demands. Again, if the girl's father is rich, he may be willing to give a substantial amount as dowry. If the girl is educated, the dowry will be less, as is also the case if she is beautiful. The parents try to recover the money spent on raising their sons from the parents of the prospective daughter-in-law at the time of marriage. In most cases the bride's father, rather than the groom, bears the greater expenses of marriage. This could be described as "groom price". Ellen Sattar mentions the case of a person in a village in Comilla who sold half an acre of land to get his daughter married off.[1]

4.5.1 Marital Status

Tables 4.7 and 4.8 present breakdown of marital status by sex and broad age-groups for Barkait and Bangladesh respectively. The Bangladesh data has no category of "separated". This may have been included in the "currently married" group or among the "divorced". Both the tables show that the proportion of ever-married women was higher than that of ever-married men at all ages. The Bangladesh data represent both urban and rural areas. The age at marriage was higher in urban areas and, therefore, this may have resulted in a higher proportion in the "never married" categori for both males and females in Bangladesh than in Barkait. The proportion reported "widowed" in Barkait were fairly close to those in Bangladesh. However, the proportions reported "divorced" in Barkait were higher than those reported for Bangladesh.

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1. Sattar, Ellen. "Village Women's Work", Women for Women, Bangladesh, Dacca, 1975.

Table 4.7: Marital Status by Sex and Age-Groups in Barkait (Percentage Distributions)

Marital Status	MALES			FEMALES			BOTH SEXES		
	10-14	15-19	20+	10-14	15-19	20+	10-14	15-19	20+
1. Currently Married	1.0	5.9	85.6	3.9	62.2	74.3	2.5	41.8	79.9
2. Never Married	99.0	94.1	8.9	95.1	21.1	0.5	96.9	47.5	4.7
3. Separated			0.3		6.7	1.8		4.3	1.0
4. Divorced			1.8	1.0	7.8	3.7	0.6	4.9	2.8
5. Widowed			3.3		2.2	19.6		1.4	11.5

Table 4.8: Marital Status by Sex and Age-Groups in Bangladesh (Percentage Distributions)[1]

Marital Status	MALES			FEMALES			BOTH SEXES		
	10-14	15-19	20+	10-14	15-19	20+	10-14	15-19	20+
1. Currently Married	0.26	4.47	80.97	5.54	64.26	77.99	2.72	32.97	79.5
2. Never Married	99.72	95.27	15.41	94.02	32.41	1.31	97.07	65.30	8.7
3. Divorced	0.01	0.16	0.52	0.33	2.28	0.96	0.16	1.17	0.7
4. Widowed	0.01	0.09	3.02	0.10	1.05	19.74	0.05	0.55	10.9

Note: 1. Calculated from Table 3, p.26 Report on the 1974 Bangladesh Retrospective Survey of Fertility and Mortality, 1977. Those whose ages were not stated and those ever-married not stated or ever-married but present marital status not stated, are excluded from calculation.

4.5.2 Age at Marriage

The fertility of a population is the consequence of a number of different though interrelated demographic, economic and social factors. In a country such as Bangladesh, total fertility is high and about 50 per cent of the population is under 15 years of age. Age at marriage of women in such a country as Bangladesh is one of the major determinants of future fertility. Marriage is often the most important factor which regulates the production of children. In most less developed countries marriage usually takes place

at a relatively early age compared to the developed countries. Coale and Tye, using the stable population technique, have demonstrated that in general fertility declines with an increased age at marriage.[1] A study in 1965 in India showed that an increase in average age at marriage from 15.6 years (existing in 1965) to 19-20 years would bring about a decline in crude birth rate by 29 per cent 30 years later. That is, crude birth rate would fall from 47.8 births per 1000 population in 1965 to 33.9 in 1995.[2] Sadiq noted that in Pakistan, the advancement of minimum age at marriage by about 5 years will result in an immediate reduction in birth rate, besides causing a permanent decline.[3]

Table 4.9 shows ages at which 25 per cent, 50 per cent, and 75 per cent of all women in Barkait were married by their current age-agroups; 25 per cent, 50 per cent and 75 per cent of all women aged 15 years and above were married before they reached 13, 14 and 16 years of age respectively. The table also shows the trend in age at marriage. At age 50 years and above 75 per cent of all women were married at ages just over 13 years and for women aged 40-49 years 75 per cent of women were married under 15 years of age, while 75 per cent of women in age-group 30-39 were married under 16 years of age. The age at marriage rises further at younger ages. Over 20 per cent of women in age-group 15-19 years were unmarried, while less than 3 per cent of women in age-group 20-24 were unmarried. It is likely that when all women in age-group 15-19 years are married, the age at which 75 per cent of women in this age-group are married will, perhaps, be higher

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1. Coale, A.J. and C.Y Tye, "The Significance of Age Patterns of Fertility in High Fertility Populations", Milbank Memorial Fund Quarterly, October, 1961.

2. Agarwala, S.N., "Effect of a Rise in Female Marriage Age on Birth Rate in India", paper presented at the UN World Population Conference, Belgra Sept., 1965.

3. Sadiq, N.M., "Effect of Change in Age at Marriage on Births and Populati Growth", paper presented at the Seventh Pakistan Statistical Conference, Dacca, March, 1967.

than for those in age-group 20-24 years. In summary, the table shows that age at marriage had been rising.

Table 4.9: Ages at which 25 per cent, 50 per cent and 75 per cent of all Women had Married in Barkait

Age-Groups	25%	50%	75%
15 - 19 (N = 90)	13.56	15.67	17.7[1]
20 - 24 (N = 71)	12.98	14.94	18.04
25 - 29 (N = 56)	12.73	14.17	16.50
30 - 34 (N = 46)	12.72	14.20	15.50
35 - 39 (N = 47)	12.64	13.95	15.47
40 - 44 (N = 32)	12.40	13.25	14.33
45 - 49 (N = 33)	11.25	12.83	14.35
50+ (N = 93)	10.49	12.08	13.24
All women aged 15+	12.32	13.69	15.73

Note: 1. It may be pointed out that 25 per cent of girls in this age-group were still unmarried. It is likely, therefore, the age at which 75 per cent of women in age-group 15-19 years get married will be higher than the present figure suggests.

The average age at marriage in Bangladesh, as in the rest of the sub-continen has been very low. In Bangladesh only about 1 per cent of males aged 30 years and above and about 0.2 per cent of females aged 25 years or more had never married.[1] In Barkait only two males aged 30 years or more and two females aged 20 years or more were unmarried. That is, only 0.7 per cent of males aged 20 years and above, and 0.6 per cent of females aged 20 years and above remained unmarried. In Bangladesh more than half of the girls from rural area and more than half of the girls from the urban areas were married at the age of 13 years or less and 14 years or less respectively.[2] Another study shows that 42 per cent of all rural women in Bangladesh were married by the time they reached 12 years of age.[3]

1. Population Census of East Pakistan, 1961, Bulletin No.3.

2. Dacca University, I.S.R.T., Demographic Survey of East Pakistan, 1961-62.

3. Sirageldin, I., Norris, D. and Ahmed, M., "Fertility in Bangladesh: Facts and Fancies" in Population Studies, July, 1975, No.2, (Table I, p. 208).

Recently it is seen that the age at marriage has gone up. About 90 per cent of girls aged 15-19 years were married in 1951 and 1961 but only 68 per cent of females in this age-group were married in 1974.[1] Sadiq also observed a rising trend in age at marriage during the last few decades.[2] Afzal, in a study based on a sample of women from the 1961 Census, concluded that the mean age (derived from stated duration of marriage) had been rising in both urban and rural areas of Bangladesh for some time prior to 1961.[3] The Bangladesh Retrospective Survey of Fertility and Mortality, 1974, confirms that the age at marriage had been rising. It reported over 24 per cent of males aged 25-29 years and 1.1 per cent of females in the same age-group as unmarried. The main reason for the rise in the age at marriage is that more girls are studying at present than before. Table 4.5 of this chapter shows that 47 per cent of girls in age-group 10-14 years were enrolled in school. In Bangladesh 1.8 million girls were enrolled in schools in 1970-71 compared to 2.8 million in 1973-74.[4] This is surely a reason for increased age at marriage.

4.5.3 Patterns of Marital Dissolution

Tables 4.7 and 4.8 give the current marital status of population by broad age-groups and sex in Barkait and Bangladesh respectively. 2 per cent of males aged 20 years and above and 5.5. per cent of females in the same age-group in Barkait were separated or divorced. The proportion of divorced was 0.5 per cent among males and about 1 per cent among females in Bangladesh. The

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1. Report on the 1974 Bangladesh Retrospective Survey of Fertility and Mortality, 1977, p. 561.

2. Sadiq, N.M., "Estimation of Nuptiality and Its Analysis from the Census Data of Pakistan", Pakistan Development Review, Vol.V, No.2, Summer, 1965.

3. Afzal, M., "The Fertility of East Pakistan Women", in W.C. Robinson (ed.) Studies in the Demography of Pakistan, Pakistan Institute of Development Economics, Karachi, 1967, pp.57-91.

4. Statistical Yearbook of Bangladesh, 1975, Table 7.1, p.177.

proportion of separated or divorced was twice as much among females as among males. The reasons for dissolution of marriage could be due to the fact that since marriages are arranged by parents, these may so turn out that the marriage partners are dissatisfied. Dissolution also takes place due to economic problems and lack of education. Divorce is more frequent in the rural areas, especially among the poorer section of the community.

In the case of divorce men usually take the initiative. The Muslim Family Laws Ordinance, 1961, put a number of restrictions on the males' sharia regarding polygamy and divorce. Yet, in practice the prevailing social norms still permit men greater freedom to practice polygamy and divorce.

In socially established families divorce is looked down upon. A divorced woman, if she is young, is usually remarried, since there is no social standing for an unattached woman, be she single, widowed or divorced.

The other major form of marital dissolution is widowhood. This shows a sharp differential by sex. In Barkait 3.3 per cent of males aged 20 years and above and 19.6 per cent of females in the same age-group were widowed. The proportion was 3 per cent among males and 19.7 per cent among females in Bangladesh. About 10 per cent of all females were widowed compared to 4 per cent among males.[1] Jean Ellickson in a study of a Bangladesh village reported 42 widows and only 2 widowers.[2] This indicates that while men can and do marry at almost all ages, women cannot. This is also due to

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1. Dacca University. Demographic Survey in East Pakistan, 1961-62, Part II, Ch.1.

2. Ellickson, Jean. "Rural Women", Women for Women, Bangladesh, 1975.

higher age-specific mortality rates of men. The fact that husbands are usually older than their wives by 5 to 10 years, on average, exposes them to higher mortality risks again. In addition, a man whose wife dies is more likely to be remarried than for a woman who loses her husband. These men often marry women who are much younger than themselves. This again implies that the older women are not likely to be remarried.

4.6 Fertility

In Bangladesh, as well as in Barkait, fertility is high. In the recent past the country witnessed some efforts to reduce the birth rate, primarily through popularising family planning. The population policy of the erstwhile Government of East Pakistan and that of Bangladesh is primarily service-oriented. The service-oriented policy stems from the belief that couples are having unwanted pregnancies and that a large part of the demand could be met by providing the necessary information and services and that through this mechanism the birth rate would be slowed down. However, the population policy of the erstwhile Government of East Pakistan did not make strong headway. This is apparent from the findings of the National Impact Survey, 1968-69 which shows that only 3.6 per cent of rural and 6.5 per cent of urban married couples under 50 years of age were currently practising family planning in 1968-69. This suggests that the supply factor is not the major constraint for the acceptance of family planning.

Practically no attempt is made to control fertility in Barkait, as is probably very usual with most other villages of Bangladesh. Presumably the only restraint upon it are short periods of sexual absistence due to ill health of the wife as well as sexual absistence for a month or so immediately after the birth of a child. None of the women in this village have at any stage attempted any anti-natal practice, except continence. Rarely would a rural woman practise any form of birth control. A survey in Comilla shows that after six years of widespread publicity about family planning, only

about 4 per cent of women practise some measure of birth control.[1]

4.6.1 Cumulative Fertility

Table 4.10 presents the total fertility which the surveyed woman had experienced prior to their enumeration in the Household Census. For comparison, the table also contains data on parity of all ever-married women of Bangladesh.

The table shows that only 7 per cent of all ever-married women in Barkait had not experienced any live birth. In contrast the proportion is almost double that for Bangladesh. A large number of childless women belonged to the age-group 15-24 years in both Barkait and Bangladesh. A differential exists in both the young and old ages regarding the proportion childless in Barkait and Bangladesh. More than twice as many women in age-group 15-24 years and four times as many women aged 50 years and above in Bangladesh had borne no child, in comparison to Barkait. It may be pointed out here that the Bangladesh data are derived from the BRSFM,1974, which was conducted in rural and urban areas of the country and the data presented in the table is for all the survey areas combined. Thus, the differences that exist between Barkait and Bangladesh, especially in the age-group 15-24 years may be due to higher age at marriage and lower fertility in the urban areas. However, it appears from the table that childlessness is quite low in both Barkait and in Bangladesh. The problem of sub-fertility appears more real than that of sterility, particularly among women aged 50 years and above who had borne only one or two births.

The table shows that over one-half of all ever-married women reported between one and five live births both in Barkait and in Bangladesh. About 7 per cent of all ever-married women in Barkait reported nine or more births and the proportion was over 8 per cent in Bangladesh.

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1. Stoeckel, John and Chowdhury, M.H., Fertility, Infant Mortality and Family Planning in Rural Bangladesh, Dacca, Oxford University Press, 1973.

Table 4.10: Parity by Age of Ever-Married Women in Barkait and in Bangladesh (Percentage Distribution)

PARITY	BARKAIT					BANGLADESH[1]				
	15-24 (N=117)	25-39 (N=149)	40-49 (N=65)	50+ (N=93)	15+ (N=424)	15-24 (N=4561629)	25-39 (N=6350098)	40-49 (N=2606294)	50+ (N=3292879)	15+ (N+16810900)
0	15.9	5.4	3.1	1.1	7.0	35.03	4.5	3.4	4.4	12.6
1	29.4	4.0	1.5	0	9.9	27.16	5.7	3.7	8.0	11.6
2	29.4	4.0	1.5	1.1	10.1	18.92	10.1	5.2	8.7	11.4
3	15.1	14.1	3.1	2.0	10.1	10.44	14.1	7.4	10.6	11.4
4	5.9	13.4	6.2	10.8	9.6	5.12	15.8	9.9	12.1	11.2
5	4.2	23.5	21.5	12.9	15.5	1.89	14.9	11.9	11.5	10.2
6		14.8	21.5	20.4	12.9	0.69	13.9	12.5	10.3	9.4
7		12.8	15.4	15.1	10.1	0.21	8.8	12.5	9.5	7.2
8		6.0	9.2	19.4	7.7	0.05	6.0	11.3	7.9	5.6
9		1.4	6.2	7.5	3.0	0.02	3.6	8.4	6.0	3.8
10+		0.7	10.8	8.6	3.9	0.01	3.5	13.6	10.3	5.7
Average number of children ever born	1.8	4.7	5.9	6.7	4.5	1.3	4.6	6.0	5.1	4.0

Note: 1. Calculated from Table 8 (p.38) Bangladesh Census 1974 Retrospective Survey of Fertility and Mortality, 1977. The original Table also contains 819 women whose ages are not stated. For the purpose of this Table, children ever born of all women whose ages have been reported, have been considered.

Table 4.11: Mean Number of Ever-Born Children Per Ever-Married Women in Barkait and in Bangladesh [1]

Age Group	Barkait	Bangladesh 1961	Demographic Survey 1961-2	Bangladesh 1974	BRSFM 1974
15 - 19	1.10	0.77	1.42	0.67	0.57
20 - 24	2.34	2.24	2.73	1.91	1.94
25 - 29	3.46	3.51	4.16	3.29	3.52
30 - 34	5.46	4.64	5.46	4.58	4.94
35 - 39	5.45	5.24	6.22	5.49	5.88
40 - 44	5.94	5.49	6.28	5.70	6.21
45 - 49	6.52	5.74	6.47	5.85	6.11

Note: 1. Rabbani, D'Souza and Rahman, 1974 Estimates of Fertility Levels in Bangladesh, paper presented at BFS Cox's Bazaar Seminar, December 1976, (Table 17, p.21).

The average number of children ever-born by age of ever-married women is presented in Table 4.11. The figures show that fertility levels are high at all ages in Barkait and Bangladesh. A comparison of the 1961 and 1974 Census data shows that while the mean number of children ever-born to women in the young age groups was somewhat lower in 1974 than in 1961, higher mean number was reported in the older age groups in 1974. The number of children born to women aged 45-49 years in Barkait was higher compared to the findings of the censuses and the surveys. The table reveals that by the time a woman reaches the end of her reproductive life she has given birth to around six live births or more.

4.6.2 Age-Specific Fertility Rates[1]

In this section the age-specific fertility rates and total fertility rates for Barkait are analyzed and comparison is made with data from other sources,

1. Age-specific fertility rates refer to the number of births per 1000 women in the particular age-group in the course of a year. The total fertility rate (TFR) is the sum of age-specific fertility rates, multiplied by 5.

relating to other areas of Bangladesh.

The data are derived from the number of births reported to have occurred during the twelve months prior to taking the Household Census in Barkait and from the records of births registered by the author and members of his research team during the period of fieldwork. Since the fieldwork covered approximately nine months, the number of births is inflated to calculate the rates for twelve months.

Table 4.12 presents age-specific fertility rates for Barkait and other areas of Bangladesh. The table clearly shows that childbearing begins at an early age. In fact, age specific fertility in age-group 15-19 is quite high and except for the BRSFM data it is 200 and above for all other surveys. Childbearing is highest in age-group 20-34, and is highest of all in age-group 20-24. This is because those who get married around 20 years of age like to have a baby born within a year or two and because some in this age-group may be interested in another child. Although childbearing is quite high in the next two age intervals, i.e., 25-29 and 30-34, it tends to decline as age advances and after age 39 it stops substantially. Such a pattern of fertility as shown in the table is due to the fact that marriages take place at an early age, and because women begin childbearing early and finish late. On average, a woman's childbearing period is spread over twenty years or more.

While fertility in age-group 20-24 for Barkait (A) is similar to the Impact Survey, fertility for Barkait (B) is very similar to other sources. This possibly suggests that recall lapse might have occurred in the former case, thus showing a lower rate than the latter. The next age-group, i.e., 25-29 shows a rate of over 300 only under the BRSFM and Rural Bangladesh, while a rate of somewhat under 300 is reported elsewhere. In age-group 30-34 less than 200 is reported under the Impact Survey whereas all others show about 200. The Impact Survey 1966-68, perhaps, underestimated true rates of fertility for the country at the time of the survey. It is possible to come

Table 4.12: Age-Specific Fertility Rates for Barkait and Other Areas of Bangladesh

Age-Groups	Barkait (A)[1]	Barkait(B)[2]	Rural Bangladesh[3]	Impact Survey 1966-68[4]	Matlab Survey 1966/7-1968/9[5]	BRSFM[6]
15 - 19	200	225	203	252	225	198
20 - 24	304	333	332	301	341	337
25 - 29	250	286	301	250	299	311
30 - 34	239	260	236	198	227	262
35 - 39	170	170	152	126	123	197
40 - 44	094	094	069	037	045	095
45 - 49	060	030	022	003	016	014
TFR	6.58	6.99	6.58	6.02	6.44	7.08

Notes: 1. Data on children born in the twelve months preceding the survey, from the Household Census.

2. Data from births recorded during the period of fieldwork and after having inflated it to calculate the rates for twelve months.

3. Khan, A.R. and Lewis, L.H., "Some Estimates of Current Levels of Fertility and Mortality in Bangladesh: Preliminary Analysis of the Pregnancy Histories of Bangladesh Fertility Survey Data", paper presented at the Bangladesh Fertility Survey (BFS) Seminar at Cox's Bazar, December, 1976.

4. Cain, Norris & Siragelden, "Pre-Independence Levels of Fertility: Evidence from the Pakistan
and 5. National Family Planning Impact Survey, 1968-69", paper presented at BFS Seminar at Cox's Bazar, December, 1976. (Table I).

6. Report on the 1974 Bangladesh Retrospective Survey of Fertility and Mortality, 1977.

to this conclusion from the data of the Matlab Fertility Survey carried on during the same period. Moreover, it is generally believed that fertility in Matlab is lower than that for the country as a whole. This is also clear if we look at the total fertility rate of Matlab which is 6.4 and is lower than TFR reported from all other areas, except from the Impact Survey. While the TFR of Barkait(A) and that of Rural Bangladesh are exactly similar, the TFR of Barkait(B) is very close to that of the BRSFM.

4.6.3 Fertility Differentials

This section is devoted to a discussion on fertility differentials existing among various landholding groups in Barkait. The importance and role of land in the lives of Bengali peasants have already been analyzed in the previous chapter, which shows that the size of household is positively related to the size of the landholding. It would be, thus, interesting to examine fertility differentials based on landholding.

Table 4.13 presents the number of children born by age of mothers and landholding group in Barkait. Except for age-group 20-24, at all other ages the mean number of children born to mothers increases as the size of landholding group gets bigger. Fertility of women aged 45 years and above indicate completed or near completed fertility. At this age the mean number of children born varies quite sharply by landholding group. The mean number of children born to women in the second landholding group is 29 per cent higher compared to those in the first group. Those in the third group had about 9 per cent more children than those in the second group, while those in the fourth group had 8 per cent more children born compared to those in the third landholding group.

It is likely that the differences are largely real due partly to sub-fecundity among the very poor and partly due to the fact that because of higher infant mortality among the smaller landholding groups, they might omit to mention a higher proportion of their births.

Table 4.13: Mean Number of Children Born by Age of Mother and Landholding Group in Barkait

	Landless	0.01 to 1.0 acre	1.01 to 2.0 acre	72 acres
Age of Mother:				
15 - 19	0.57	0.90	0.56	1.00
20 - 24	2.29	2.34	2.13	2.00
25 - 34	4.00	4.47	4.33	5.30
35 - 44	4.71	5.61	5.91	7.25
45+	5.06	6.55	7.14	7.72
All ages, 15+	3.58	4.33	4.59	5.47
N	73	258	84	53

4.7 Fertility Ideals and Attitudes

This section contains a brief discussion on fertility ideals and attitudes of the people of Barkait.[1] Some knowledge of this is essential to understand why people in rural Bangladesh want many children, especially sons, who as we shall see later contribute significantly to the household economy. For the purpose responses to some of the questions on the Attitudinal Survey on the Value of Children are analyzed here. (See Table 4.14)

1. For further details see also Barkat-e-Khuda, "Value of children in a Bangladesh village", in The Persistence of High Fertility, (ed.) J.C. Caldwell, Canberra, 1977.

Table 4.14: Fertility Attitudes in Barkait. (Selected reponses to some specific questions by sex; N=146 males and 146 females; i.e., 292 respondents.) (Percentage Distributions).

A). What do you think is the best number of children to have*?

Number of children preferred	Male	Female	Both Sexes
1 - 3	2.0	10.2	6.5
4	18.5	21.9	20.2
5	21.2	19.2	20.2
6	17.1	29.5	23.3
7	13.7	4.8	9.2
8+	3.4	1.4	2.4
No response	4.8	3.4	4.1
"Up to God"	18.5	9.6	14.0

*The question referred to living children.

One-seventh of the respondents replied "Up to God" when asked this question. This is neither an evasive nor a superstitious reply. Such respondents feel that these are matters over which they have little or no control and that to attempt control would probably achieve little, while displeasing God. Others, less than 5 per cent gave no answer to this question. Thus, over four-fifths of the respondents gave numeric responses. Of those who gave numeric response, only a little over 7 per cent preferred between one and three children, while about half of such respondents preferred between four and five children, another, about two-fifths preferred between six and seven children and another 5 per cent preferred eight or more children.
A comparison with Nigerian data shows that the proportion replying "Up to God" was higher in Nigeria (among the Yorubas and the Ibos) compared with Barkait and that in Nigeria, especially in the rural areas, the proportion desiring between one and three children was very small, although the proportion preferring four and more children was roughly the same in Barkait and in rural Nigeria.[1]

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1. See Caldwell, J.C., The Socio-Economic Explanation of High Fertility, Changing African Family Project Series Monograph No.1, Canberra, 1976, Table 1, p.11).

   See Okore, A.O., The Value of Children Among Ibo Households in Nigeria, A.N.U., Canberra, 1975.

A high preference in favour of sons exists in Bengali society. In Barkait, over 70 per cent of all respondents desired between three and six sons and an almost equal proportion desired between one and three daughters. In fact, the maximum number of sons desired is six as against only three for daughters.

Respondents were asked to say whether they thought that if a friend of theirs decided to have only two children, this was a wise step. Less than 10 per cent of males and 22 per cent of females considered it to be a wise step, while over 80 per cent of males and about 50 per cent of females thought that it was unwise. A sex differential exists in response to this question, although a majority of both sexes felt it was unwise.

In response to a question whether the respondents felt sorry for a man with no sons, 100 per cent of males and about 95 per cent of the females felt so. The main reasons were that there would be nobody to continue the family name; there would be nobody to look after him in old age and that if the person had enough land he would have to hire outside labour and, thereby, incur financial loss.

In the case of a person having less than half an acre of land, over 70 per cent of the respondents felt that it was useful for him to have a large number of children. The major reasons advanced in favour of their views were that sons would earn money and help to maintain family expenses and that sons could assist in farm work. However, 12 per cent of the respondents thought that for such a person it would not be useful to have a large number of children and another 14 per cent had no answer to offer.

Respondents were asked to say whether they thought that, in the case of a person who has no land at all, it was still valuable to have a large number of children. About two-thirds of the respondents thought it was not valuable, while one-fifth considered it was still valuable.

Respondents were asked to express their choice from among a variety of things. Response to this question is given below:

B) What would you like to have from the following if you were able to choose only one? (Percentage Distributions)

Alternatives	Male	Female	Both Sexes
1. A pair of bullocks	4.8	2.7	3.8
2. New clothes	-	4.1	2.1
3. Buy some land	39.0	33.6	36.3
4. A new house	6.2	10.3	8.2
5. Another child	37.0	43.8	40.4
6. More education for children	13.0	5.5	9.2

Two-fifths of all respondents were most in favour of another child, followed by the desire to buy some new land. A small differential between the two sexes is noticable, in respect of these two choices. Thus, either another child or purchase of some new land were favoured by about four-fifths of all respondents. We have found that the number of children already born was negatively associated with the desire for an additional child and positively associated with the desire to acquire some new land. In other words, the fewer the number of children born, the stronger was the desire for an additional child and weaker was the desire for acquiring some new land and vice versa. All of the childless couples were in favour of a child, while none of those who had seven or more children wanted an additional child. Again, almost half of the parents with seven or more children expressed their desire to acquire some new land, while only 25 per cent of those with up to three childre and none without any children wanted to buy some new land.

Size of land holding was negatively associated with the desire to buy some land. Over half of the respondents belonging to landless households were in favour of buying some land. The proportion was over two-fifths among those belonging to households with up to 1.0 acre of land, one-quarter among those belonging to households with land areas ranging between 1.01 and 2.0 acres

and less than one-tenth in the case of those with over 2 acres of land. About two-fifths of respondents belonging to landless households and households up to 1.0 acre of land and those belonging to households with land areas ranging between 1.01 and 2 acres were in favour of a/another child. The proportion was less than one-fifth in the case of those belonging to households with over 2 acres of land. Size of land holding was positively associated with the desire for more education for children. None of the respondents belonging to landless households were in favour of more education for their children. The proportion was 5 per cent, about one-quarter, and about three-fifths among those belonging to households with up to 1.0 acre of land, land areas ranging between 1.01 and 2 acres and over 2 acres of land areas respectively. Among the other alternatives, about one-eleventh of all respondents wanted more education for their children. Males gave more emphasis to the education of children than did females, although emphasis laid on the education of children is still not very high. Education, thus, occupies less importance in the minds of the rural people than either another child or land. The failure to obtain jobs after completing secondary school is, perhaps, the main reason why parents attach less importance to more education for children. It may be pointed out here that thirteen out of the twenty persons in Barkait who passed Matriculation or its equivalent, have failed to obtain jobs outside the village and they work on farms. Of the rest who passed the same examination five were students, one worked at a tea-stall and the other was a primary school teacher.

Respondents were asked to say whether, if the government decided to pay for the education of all their children until they passed the S.S.C. Examination (equivilent of Matriculation) but only if they agreed to have a maximum of four children, they would accept the offer. Over 52 per cent of the respondents already had four or more children and another 3 per cent had crossed the childbearing age. The question was, therefore, applicable in the case of only 45 per cent of the respondents. Of the eligible respondents about three-

fifths said that they would not accept the offer, while only 15 per cent expressed their willingness to accept the offer and the others offered no answer. The importance of education is, therefore, given less consideration. Bengali peasants, rather, want to be sure that they have at least five or six children and, as pointed out above, a strong preference for sons exists.

In fine, responses of the peasants clearly indicate the need and desire for a large family size, which, apart from other considerations, helps the household economy in terms of labour input. Even those households with little or no land seem to benefit from the production of a sizeable number of children, especially sons, in terms of financial and other sorts of support. However, it may be pointed out that from the macro-perspective of the village or the nation, continued rapid growth of the population can only serve to intensify the pressure on resources and erode the overall economic welfare of these social units. However, in Bangladesh it is neither the village nor the state which are the locus of decisions governing human reproduction or production. Such decisions are most often the purview of the households and individuals. They take decisions keeping in view the socio-economic situation facing them.

CHAPTER 5. CHARACTERISTICS OF THE LABOUR FORCE IN BARKAIT

This chapter analyzes the labour force characteristics of the population under study and draws comparison with Bangladesh as a whole. The chapter is divided into two parts. Part I analyzes data from the labour force survey conducted on the basis of the census approaches and Part II analyzes data obtained on the basis of the labour utilization approach (LUS).

Part I - Labour Force Data from the Census Approaches

5.1.1 Size of the Labour Force

The total labour force enumerated in Barkait was 809 and 504 on the basis of the GWA and LFA respectively. The overall participation rate in Barkait and in Bangladesh is presented in Table 5.1.

Table 5.1: Overall Labour Force Participation Rates[1] in Barkait and in Bangladesh (Population Aged 0 yrs. and above)

BARKAIT						BANGLADESH[2]		
GWA			LFA					
Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
52.9	42.3	42.9	51.1	4.9	27.9	50.6	18.7	35.2

Note: 1. The rates are calculated by taking into account both the employed and the unemployed, but looking for work.

2. It may be pointed out here that the 1974 Census of Bangladesh adopted GWA in cases of persons pursuing agricultural occupations and LFA in cases of those having non-agricultural occupations. The rate is an aggregate for the country and is not broken down by rural and urban area [Source: Bangladesh Population Census, 1974, Bulletin No. 2, pp. 168-69] A discussion of Bangladesh census approach is contained in Chapter 1, Section 1.1 of the thesis.

A comparison of the two approaches shows that overall participation rate under the LFA was about three-fifths that under the GWA. This was mainly due to the striking difference in the female labour force participation rates under the two approaches. The overall participation rate for females under the LFA

was about one-ninth that under the GWA. The rates for males under both the approaches were quite similar. This stems basically from the social law that assigns to the men the role of breadwinners, particularly in the adult age span of 15 to 60 or 65 years. This is more so in the rural areas, where men do not retire at ages 60 or 65 years, but rather continue to work on the family farm.

A comparison with Bangladesh data shows that the overall participation rate for both sexes combined was higher under the GWA but lower under the LFA. The overall male participation rates under both the approaches in Barkait and that for Bangladesh were roughly the same. However, as regards females the rate was higher under the GWA and lower under the LFA when compared to the Bangladesh rate for females. The difference between the Bangladesh rate for females and that under the LFA in Barkait is mainly due to the difference in the length of the reference periods adopted. The difference between the Bangladesh rate for females and that under the GWA in Barkait arises mainly due to undercount of female workers in the case of Bangladesh. The lack of sincerity on the part of the enumerators and the lack of supervision on the part of the census officials are mainly responsible for this undercount of female workers. It is possible that the enumerators shirked responsibility by returning marginal cases as full dependents. Moreover, their judgement could have been affected by other considerations, such as age and sex of the persons involved. It may also be due to the fact that the head of household might have exaggerated his own importance by returning part dependents as full dependents. Again, there was perhaps some undercount of workers in the unorganized non-agricultural sector, such as retail trade, household industry, etc. Most of these are low income-yielding activities, with a relatively significant proportion of women, children and old men participating.

According to Ahmed, considerable underenumeration existed in the Bangladesh

census of 1974.[1] He put forward a number of reasons. He stated that there is a tendency among enumerators to understate the age of persons in the age-group 10-19 years. "By understating the ages, the enumerators, who had the prerogative to estimate age, could save one-third of the work by not completing questions about economic characteristics of the respondent who is thereby left out of the labour force". Besides, he observed that since the census was conducted at a time when economic activity was sluggish in agriculture, this might have resulted in the underenumeration.

Evidence of undercount of workers in censuses is not a new thing, in so far as many of the developing countries are concerned.[2] A comparison of the 1951 Census of India working force data with those of the Agricultural Labor Enquiry conducted during 1950-51 and the National Sample Survey, 9th round, conducted in 1955 in ten states of India reveals that the census rates in rural areas were lower than those of the Agricultural Labor Enquiry and the National Sample Survey in most of the states. The rates for the Agricultural Labor Enquiry and the National Sample Survey were quite similar and this suggests that there was undercount in the 1951 Census of India.[3] It seems that the undercount of workers was mainly in respect of the unpaid family workers. Explanations regarding the undercount of workers in the 1951 Census of India were first given by the Deputy Registrar General of India, who stated that the unpaid family workers, who should have been enumerated as self-

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1 Ahmed, Iftikhar, "Employment Strategy in the First Five Year Plan of Bangladesh", paper presented at the First Annual Bangladesh Economic Conference on the First Five-Year Plan, Dacca, March 1974, p. 3.

2 It is believed that considerable undercount existed in the 1931 Census of India. According to Khan the labour force could be considered as having bee completely enumerated, provided about 7.17m. housekeeping women, who were wrongly entered as working dependents under "domestic service" were treated a workers in the agricultural sector [source: Khan, N.A., "Some Reflections on the Census of 1961", The Indian Economic Journal, vol. X, Nos. 3 and 4, January and April Issues, 1963].

3 Thorner, Alice, "Working Force Size and Structure in India, 1951: A Regional Analysis of Census and Sample Survey Data", SANKHYA, the Indian Journal of Statistics, Series B, vol. XXV, parts 1 and 2, November 1963, pp. 122-94.

supporting persons or earning dependents, were largely classified as non-earning dependents.[1] Referring to the undercount of workers in the 1951 Census, Thorner suggested that the persons whose work activity was not recorded in the Census were in large part family helpers in cultivation or persons working irregularly as farm labourers.[2] Visaria pointed out that many persons who could be returned as workers according to the 1961 definition of work ("some regular work of more than one hour a day throughout the greater part of the working season"), could not probably be entitled for a recognition as joint cultivators with a recognised share in the family income according to the 1951 definition, thus resulting in a larger percentage undercount in 1951.[3]

5.1.2 Age-Specific Labour Force Participation Rates

This section examines the age-sex participation rates in Barkait. By calculating the age-specific participation rates we control for the effect of age structure on participation rates. Being independent of population age structure, the age-specific participation rates provide a better measure of labour force participation than do overall participation rates. It should be pointed out that the size of the labour force is determined not only by the extent of participation but also by the structure of the population. A heavier concentration of the population at the "non-working ages" will result in a lower overall labour force participation rates, if the participation intensity at the working ages is held constant.

Table 5.2 presents age-specific labour force participation rates by sex in Barkait under the two approaches. While the male age-specific participation rates are the same for each age group under both the approaches, those for

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1 Government of India, Census of India, Paper No. 4, 1955. Economic Classifica by Age Groups, 1951 Census, Mysore, Foreword. This statement was made with respect to Mysore State, although it is believed that undercount of family workers existed in other states as well.

2 Thorner, Alice. op cit, p.140.

3 Visaria, P.M., "Comparability of 1961 and 1951 Census Economic Data - A Comment", Artha Vijnana, vol. 7, no. 3, September 1965.

females show striking differences. The highest labour force participation rate for females under the GWA was over 80 per cent, but under the LFA remained below 20 per cent. Women in rural Bangladesh do contribute significantly in terms of productive work, mainly during post-harvest periods, besides, of course, contributing to household maintenance activities. Thus a large proportion of women in each age group were shown as "working" under the GWA, while a very small proportion of them were shown as "working" under the LFA. This means that while a lot of them may have worked over the course of a year in terms of economically productive activities they were practically idle during the week used as reference period for the labour force approach.

Table 5.2: Age-Specific Labour Force Participation Rates by Sex in Barkait

Age-Group	GWA[1]		LFA		N for Males	N for Females
	Male	Female	Male	Female		
10 - 14	37.5	34.3	37.5	7.8	96	102
15 - 19	70.6	70.0	70.6	12.2	51	90
20 - 24	89.1	67.6	89.1	5.6	55	71
25 - 29	100.0	76.8	100.0	12.5	57	56
30 - 34	98.0	87.0	98.0	15.2	49	46
35 - 39	100.0	76.6	100.0	8.5	38	47
40 - 44	100.0	87.5	100.0	12.5	40	32
45 - 49	100.0	66.7	100.0	6.1	29	33
50 - 54	100.0	64.5	100.0	9.7	27	32
55 - 59	100.0	50.0	100.0	7.1	23	14
60 - 64	95.8	56.3	95.8	18.8	24	16
65+	91.7	64.4	91.7	6.4	48	31
10+	52.9	42.3	51.1	4.9	537	570

5.1.3 Factors Affecting Labour Force Participation

The overall and age-specific participation rates vary over time and space. These variations are usually associated with differences or changes in a variety of demographic , economic, social and cultural factors. Among the

[1] A discussion on GWA and LFA is contained in Chapter 1 of the thesis.

important ones may be mentioned the following: the age structure of the population, the level of economic development, literacy and level of education, marital status, fertility, customs and attitudes, etc.

The size and age distribution of the total population are the underlying determinants of the size of the labour force in any country and the rate of population growth and the factors associated with it exert an impact on labour force participation rates, on labour force estimates and on unemployment and underemployment. According to Boomen the effects of these demographic factors on the potential supply of labour, outweigh, as a rule, those caused by social and economic development.[1] However, in the case of the females and of the younger and the older males it is believed that socio-economic and cultural factors seem to influence labour force participation significantly.[2]

The importance of the age structure in determining overall labour force participation rates is well recognized.[3] The countries characterized by high overall labour force participation rates for males are generally those with a high proportion of their population in the ages of 15-64 years. Most less developed countries have a smaller proportion of their population in this age group and a higher proportion of their population under 15 years of age than most developed countries. This unfavourable age distribution arises due to higher rates of population growth in most less developed countries.

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1 Boomen den van J., "Population and Labour Force Growth in Selected Latin American Countries", Proceedings of the World Population Conference, vol. IV Belgrade, 1965, p. 258.

2 International Labour Office, "The World's Working Population: Some Demographic Aspects", International Labour Review, vol. 73, 1956, pp. 152-76.

3 See, for example: 1) Spengler, J. Joseph, "Population and World Economic Development", Science, 131, 1960, pp. 1497-1502 and 2) U.N. Demographic Aspects of Manpower, Report I, 1962.

Factors Affecting Male Labour Force Participation

A comparison of the male age-specific participation rates in Bangladesh with those of other countries, classified according to the degree of industrialization is presented in Table 5.3. This will help to explain the factors affecting male participation in work.

A definite pattern of male age-specific labour force participation rates is discernible in Table 5.3. The work participation rate increases from the young age group 10-14 years to the age of 25 years, then levels off above 95 per cent till the age of 54 years or so and then declines progressively.

It is found that only 4 per cent of the males aged 10-14 years are in the labour force in the industrialized countries, although the corresponding figures are 13 per cent, 24 per cent and 58 per cent in the semi-industrialized and agricultural countries and Bangladesh respectively. "While working conditions in agriculture and related activities permit the employment of children at an early age, there are fewer such opportunities in urban industries. Moreover, the economically advanced nations can afford greater investment in education for their youth and can keep them in schools for a greater number of years".[1] Moreover, children in less developed countries often start working at an early age on family farm or business or on wage employment to supplement family income. Thus, the male labour force participation rate in the younger ages bears a negative relationship with school participation and a positive relationship with the importance of agriculture and household industry and the need of children to work to supplement family income.

The differences between the industrialized and agricultural countries are less consistent when the participation rate in age group 15-19 are compared. This is largely due to the omission of "persons seeking work for the first time" from the census count of the economically active population in some of the

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1 U.N. Demographic Aspects of Manpower, Report I, p. 12.

Table 5.3: Average Age-Specific Labour Force Participation Rates for Males in Bangladesh and Countries Classified According to the Degree of Industrialization[1]

Age-Group	Bangladesh[2]	Industrialized Countries[3]	Semi-Industrialized Countries[4]	Agricultural Countries[5]
10 - 14	58.1	4.1[6]	13.2[6]	23.9[6]
15 - 19	81.6	72.4	70.3	78.4
20 - 24	91.6	91.5	91.8	91.2
25 - 34	96.9	96.7	96.2	96.3
35 - 44	96.5	97.6	97.1	97.5
45 - 54	97.1	95.9	95.9	96.3
55 - 64	93.5	85.6	88.9	91.6
65+	81.3	37.7	61.0	70.1

1. A country is categorized as "agricultural" if 60 per cent or more of its active males are engaged in agriculture and related industries, "semi-industrialized" if 35-59 per cent and "industrialized" if less than 35 per cent. 72 countries for which relevant data on agricultural employment were available were included in this classification. Source: U.N. Demographic Aspects of Manpower, Report I, p. 6.
2. Population Census of Pakistan, 1961, Census Bulletin No. 5, Table 3.
3. 21 countries having less than 35 per cent of the active males engaged in agriculture and related industries.
4. 30 countries having 35-59 per cent of the active males engaged in agriculture and related industries.
5. 21 countries having 60 per cent or more of the active males engaged in agriculture and allied industries.
6. Excluding countries where a minimum of 15 years was adopted for the enumeration of the economically active population. There were three such cases among the industrialized, two among the semi-industrialized and three among the agricultural countries.

agricultural countries. It may be pointed out that the "first-time job seekers" usually belong to this age group.

Varying the degree of industrialization is seen to have no effect in the middle age span of 20-54 years. The Bangladesh rates are in close agreement with those of the three groups.

There seems to be a positive relationship between the importance of agriculture as a source of employment and livelihood and the labour force participation rates in the older age groups. Agricultural countries, including Bangladesh, report appreciably higher labour force participation rates for the older age groups than do the industrialized countries. The semi-industrialized countries occupy an intermediate position. Agricultural work can be continued to a later age than most other types of employment. Moreover, in most agricultural societies, people live at a subsistence or even below subsistence level, and men out of necessity have to work as long as they are physically able to do so. The higher participation rate among the older age groups in agricultural societies such as Bangladesh and Barkait is also facilitated by the fact that in most of these societies agriculture is a family enterprise, where the old may continue to work either as owner-cultivators or as unpaid family workers. Moreover, the seasonal nature of agricultural work and the use of primitive cultivation methods require as many hands as possible during peak periods. In the industrialized societies, the high rate of savings and the provision of social security schemes stimulate earlier retirement. Moreover, in such societies there is a certain age limit after which people have to retire from their jobs.

A comparison of Table 5.3 with Table 5.2 shows that the pattern observed in Barkait is quite consistent with that of Bangladesh as a whole. However, the labour force participation rate in age group 10-14 was somewhat lower in Barkait, compared to Bangladesh and that in age-group 65 years and above was somewhat higher. The difference in the young age group could be due to the

following reasons: 1) educational opportunities in 1976 was higher than in 1961. Moreover, the school enrolment ratio for children in age-group 10-14 was higher in Barkait than in Bangladesh.[1] Regarding those aged 65 years and above, a lower participation rate reported for Bangladesh may be due to undercount.

Factors Affecting Female Labour Force Participation

Generally women are treated as a special group in manpower studies. They encounter special problems rooted in social values and cultural traditions which adjust with varying degrees and in different directions in response to social and economic development of a country. This is reflected in the extreme variability of female activity rates across countries. The crude male participation rates vary between 50 and 60 per cent in most countries, but the female rates vary considerably, ranging from less than 5 per cent to over 50 per cent.[2]

Work and education do not present themselves as the only alternatives to women of working ages, as is usually the case with a large majority of the males. In most of the developing countries, particularly in the rural areas, a significant proportion of the females are married by the time they reach 18 years of age. Marriage offers other alternative roles to women These are childbearing, childcare, household duties, etc. in which a large proportion of the women is engaged. Again, the desire and ability of women to participate in economic activities outside home are influenced by various factors, such as rural-urban residence, production technique, economic condition of the family, level of education, customs and beliefs such as the institution of purdah, besides responsibility towards childcare and childbearing.

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1 Please refer to Table 4.5.

2 See different Demographic Yearbooks. These rates refer to population of all ages. Examples of countries with very low female labour force participation rates are Morocco (8.0%); and Syria (8.6%); [source: Demographic Yearbook, 1973].

Table 5.4 presents average age-specific labour force participation rates for females in Bangladesh and countries, characterized by degree of industrialization.

As in the case of the male participation rates, the female rates at the youngest and oldest age groups are higher in Bangladesh and the agricultural countries than in the industrialized countries.[1] The difference is largely on account of the same reasons as in the case of the males.

In the industrialized societies, a large number of girls enter the labour force in their late teens and continue to work till they marry. Many re-enter the labour force as they become widowed, separated or divorced, or as their children grow up, and again retire from work as they reach old age. The relationship between age and level of economic activity is less simple in the case of females. Depending on marital and maternal status and on the ages of children, the woman's functional role as a home-maker or worker may switch at different stages of her life cycle.

The labour force participation rates in agricultural countries like Bangladesh show little variation from the late teens to old age. Since a large part of the economic activity in the agrarian societies is carried out within the household, changes in a woman's marital status or her responsibility towards the care of children do not adversely affect her participation in work, as they do in the industrialized countries, where most of the economic activities are centred outside the home. In facilitating participation in work agriculture and household industry are much more important for females than for males. The inability to take up jobs outside the home due to reasons, such as social prestige, purdah, responsibility towards household maintenance activities, etc. restrict the participation of women in non- agricultural activities. Youssef found that female labour force participation in non-agricultural sectors was lower in the Middle East countries than in Latin American countries. She believed that the main reason was that social organisation and family structure in the Middle East countries restricted women from participating in the

1. It needs to be recognized, however, that there is a great variability among agricultural countries in respect of female labour force participation rates.

Table 5.4: Average Age-Specific Labour Force Participation Rates for Females in Bangladesh and Countries Classified according to the Degree of Industrialization.

Age-Group	Bangladesh	Industrialized Countries[a]	Agricultural Countries[c]
10 - 14	12.8	2.4[b]	10.2
15 - 19	16.8	53.6	30.9
20 - 24	17.5	51.9	31.5
25 - 34	19.2	30.3	29.9
35 - 44	19.2	28.3	30.6
45 - 54	20.5	28.1	28.9
55 - 64	16.5	20.8	23.7
65+	11.7	7.1	14.3

Sources: Population Census of Pakistan 1961, Census Bulletin No. 5, Table 3 and United Nations, Demographic Aspects of Manpower, Report I, Table 5.1, p. 22.

a. Fourteen countries having less than 35 per cent of active males engaged in agriculture and related activities. These countries are Argentina, Australia, Belgium, Canada, Denmark, England and Wales, France, Israel, Netherlands, New Zealand, Norway, Sweden, Switzerland and the United States.

b. Excluding two countries where a minimum age limit of 15 years for enumeration of the EAP was adopted.

c. Twelve countries having 60 per cent or more of its active males engaged in agriculture and related activities. These countries are Algeria (Moslems), Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, India, Morocco (indigeneous), Paraguay, Philippines and Tunisia.

labour force.[1]

The influence of cultural traditions on the reporting of female economic activity is evident in the case of Bangladesh. The reportedly low female labour force participation rates reported throughout 1901-74 period supposedly stems from the social institution of purdah, which calls for the seclusion of women from men other than family members, and does not allow and encourage their participation in a mixed society.

1 Youssef, Nadia Haggag, Women and Work in Developing Societies, Population Monograph Series No. 15, University of California, Berkeley, 1974.

Table 5.5 presents an international comparison of refined female participation rates, calculated as averages for different regions of the world. However, it should be noted that any international comparison of female rates should be interpreted cautiously. More than in the case of males, different definitions, biases and census errors and different practices and customs, etc. obscure and falsify the pattern and especially the level of female participation in economic activity. Table 5.5 uses participation rates of female populations aged 15 years and above and, therefore, eliminates the differences arising out of the different minimum age limits for economic reporting.[1] While the percent of female population aged 15 years and above in the labour force of Bangladesh is quite similar to that of other Muslim countries, it is considerably lower compared to other regions.

Several researchers have attributed the low level of female participation in labour force in Muslim countries to the religious attitude on the role of women in the society.[2] A negative correlation between Islamic values and female labour force participation appears quite strong. Table 5.5 shows that if we exclude the Muslim countries of Asia the average percentage rises by 6.6 points for the zone.

However, a series of arguments can be put forward to show the absence of such negative correlation between Islamic values and female labour force participation. There are some Muslim countries with significantly high female participation rates. In Turkey 33.7 per cent of the total female population

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1 It may be pointed out that the highest minimum age limit for labour force enumeration in any country is 15 years.

2 See, for example, Beau L. Lee, "Utilization of Human Resources: the Case of Women in Pakistan", International Labour Review, vol. 97, no. 4, 1968, pp. 391-410; Leser, C.E.V., "Trends in Woman's Work Participation", Population Studies, vol. XII, no. 2, November 1958, pp. 100-110; Denti Ettore, "Sex-Age Patterns of Labour Force Participation by Urban and Rural Populations", International Labour Review, vol. 98, no. 6, December 1968; Karwanski, R.A., Projections of Labour Force for Pakistan and Provinces, 1960-1990 (Islamabad: I.L.O./U.N.D.P. Manpower Planning Project), 1969, pp. 20-31.

Table 5.5: Average Percentages of Female Population aged 15 years and Above in Economic Activity by Region[1]

Region	Number of Countries	Average Percentage	Standard Deviation (percentage)
Africa	18	36.3	18.0
Non-Muslim African Countries	14	37.1	15.8
America	26	29.7	14.6
Asia	24	34.2	22.2
Non-Muslim Asian Countries	15	40.8	20.2
Europe	23	35.6	14.0
Oceania	11	28.1	16.6
Muslim Countries*	13	23.3	20.0

* Countries included here are: Brunei, Indonesia, Iran, Iraq, Jordan, Malaysia, Morocco, Pakistan (including Bangladesh), Sudan, Syria, Tunisia, Turkey and the U.A.R.

1. The table is reproduced from Lee L. Bean, "Utilization of Human Resources: the Case of Women in Pakistan", International Labour Review, vol. 97, no. 4, 1968, Table II, p. 396.

was in the labour force.[1] Sudan reported 40.5 per cent of females aged 5 years and above in economic activity.[2] In Barkait 42.3 per cent of the female population was reported in the labour force on the basis of "gainful worker approach". Female participation rates in Algeria (Muslim population only) was reported at 25.2 per cent and in Morocco (Muslim population only) at 24.5 per cent.[3] In Malaysia, the participation rate for the female Malayan population (aged ten years and above) mainly Muslims, was 23.2% compared to 25% for all races.[4]

Again, it may be pointed out that among many non-Muslim countries female

1 U.N., Demographic Yearbook, 1972.

2 U.N., Department of Economic and Social Affairs, Population Growth and Manpower in the Sudan. Population Studies no. 37 (New York, 1964), Table 1, p. 59.

3 U.N., Demographic Aspects of Manpower, Report I, Table A-1, p. 55.

4 Jones, G.W. "Female Participation in the Labour Force in a Plural Economy, th Malayan Example," The Malayan Economic Review, vol.X, No.2, Table 2, 1965.

labour force participation rates are low. This is evident from Table 5.6 which shows low crude female labour force participation rates for some non-Muslim countries.

Table 5.6: Non Muslim Countries with Low Female Labour Force Participation Rates

	Country	Year	Overall Participation Rate (all ages)
1.	Honduras	1961	7.7
2.	Papua New Guinea	1971	13.5
3.	Cuba	1953	9.0
4.	Guatemala	1964	7.9
5.	Paraguay	1962	14.4
6.	Mexico	1970	11.0
7.	Nicaragua	1963	12.3
8.	Costa Rica	1963	9.6
9.	Dominion Republic	1950	12.3
10.	Chile	1970	13.3
11.	Colombia	1964	11.6
12.	Brazil	1970	13.2
13.	Ecuador	1962	10.5
14.	Venezuela	1961	12.1
15.	Mauritius	1962	9.8
16.	Spain	1970	13.3
17.	Puerto Rico (rural)	1970	12.2
18.	Portugal	1960	13.1

Sources: U.N., Demographic Yearbook, 1964, 1972 and 1973.

There are strong reasons to believe that the female labor force participation rates reported in Bangladesh and other Muslim countries where low rates are reported were not true rates. Women in a predominantly agrarian society, besides carrying out household maintenance activities, help their families in a number of jobs. They are mainly engaged in post-harvest operations. Since these are usually carried out to a significant extent immediately after the harvest, the period during which the census is conducted is important. The Bangladesh Census of 1974 was taken in February, 1974. This was a relatively slack period which may have prompted many heads of households to report their female members as dependents or engaged in household

work only, even though the reference period should, if strictly followed, have resulted in their being included in the labour force.

5.1.4 Dependency Burden

The population of a country or a village may be divided into two groups namely, the economically active and economically inactive. The latter is often referred to as the dependent population. The dependent population is often subdivided into various groups, according to their functions. This gives a more refined approximation of the dependency burden. Here, dependency is measured by whether a person is occupied in income-generating activities or not. That is, it is determined by the labour force criteria. However, this criterion of determining the dependency burden has been the subject of controversy. According to Morgan, if the unpaid work done by women, could be measured, it would be found to have increased the estimated G.N.P. for the U.S.A. by 38 per cent in 1964.[1] Again, any such functional grouping of the population, including those persons not in the labour force is not strictly definable and not entirely mutually exclusive. A considerable overlapping of the functions may exist.[2] However, despite its limitations and the problems associated with it an analysis of the composition of the dependent population is important. It serves as a guideline for social welfare policies and for manpower planning. This is more relevant for manpower planning, since it provides an estimate of workers who may be potentially available. This, in turn, provides an estimate of the flexibility of the size of the labour force in a country or a village.

Table 5.7 presents a functional classification of the dependent population for Barkait and Bangladesh. The table shows that in Bangladesh there were

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1 Morgan, J.N., Productive Americans (Ann Arbor: Institute for Social Research, 1966), p. 5.

2 For more detailed discussion of the problems in distributing population into different functional groups see Bancroft, The American Labor Force, its Growt and Changing Composition, pp. 21 and 22 and Jaffe, A.J. and Stewart, C.D., Manpower Resources and Utilization, 1951, pp. 213-15.

Table 5.7: Functional Distribution of Persons not in Labour Force and Ratio of Persons not in Labour Force per 100 Labour Force Participants for Bangladesh and Barkait

Functional Groups	Bangladesh (in thousands)	Barkait (GWA)	Barkait (LFA)
Total not in labour force	33,405	890	1,196
en Doing Household Work only	11,097	124	430
Students	2,988	126	126
Others:	19,320	640	640
Under 10 yrs of age	17,410	593	593
10-60 yrs of age	910	23	23
60 yrs and above	1,000	24	24
	RATIO PER 100 LABOUR FORCE PARTICIPANTS		
Total not in labour force	191	110	239
en Doing Household Work only	64	15	86
Students	17	16	25
Others:	111	79	128
Under 10 yrs of age	100	73	118
10-60 yrs of age	5	3	5
60 yrs and above	6	3	5

Source: Population Census of Pakistan 1961, Census Bulletin No. 5, Table 3; Vol. I, Table 11.

almost two dependents for every worker. This was similar in Barkait under the LFA; whereas, under the GWA there was one dependent for every labour force participant. Quantitatively, the data for Bangladesh and for Barkait under the LFA represented a substantial dependency burden in terms of production efforts versus demand for consumption. A sizeable proportion of this consisted of women doing household work only. Such numerical importance of household work is partly due to reporting bias and also due to the influence of various socio-economic and cultural factors. This component of the dependency burden indicates potential additions to labour supply, given that sufficient jobs are generated.[1]

1 It may be pointed out that the measured dependency burden varies widely accor to the definition of work. Again, women could be available for more work, i social and economic conditions changed. It also needs to be stressed here t the main element of dependency is young children. However, in subsequent

(continued on next page)

The proportion of students to labour force participants remains low. This is on account of low educational investment in the country. It needs to be pointed out here that substantial investments in education will be required to expand the potential of high-level manpower which often proves to be a crucial bottleneck to development.

The residual category "others" was by far the largest component of dependency burden. Given the high levels of fertility in Bangladesh, it is not surprising to see that dependents under 10 years of age constitute 90 per cent in Bangladesh and 92 per cent in Barkait under the "others" category. This indicates the inevitability of large increments to the labour force in the next ten years or so. Given that only modest development funds may be available in the country, the amount of investment required to create jobs for this extra manpower, in addition to providing full employment to the vast segment of the unemployed and underemployed labour force, pose a serious challenge to the objectives of full employment to be achieved, say, in the next 15 or 20 years or so.

5.1.5 The Length of Working Life of Males

Another way of interpreting the data on economically active population is to calculate what they imply in terms of the average length of working life of a generation of men. Since in Bangladesh it is the men who form the bulk of the breadwinners at all ages, we propose to concentrate on men alone. We propose, here, to calculate the gross years of working life. The gross years of working life represent the average number of economically active years for those men out of a generation who do not die before retirement age. In our case we have assumed the age limit to be 64 years. The gross years of active life depend on the ages at which men begin to work and the age at which they retire.

(Footnote from previous page)

chapters, using data from time-budget study, it would be possible to show to what extent they really are dependents.

Given the set of age-specific labour force participation rates, gross years of active life are calculated as the summation of age-specific participation rates, multiplied by the number of years in the respective age intervals.[1] So measured, the gross years of active life represent a convenient summary of the levels of age-specific participation rates. It is independent of the age structure of the population. [2]

For the computation of the gross years of active life, the age limits of potential working life span is taken as 10-64 years (both years inclusive). It is assumed that each individual passing through this age span of 54 years participates in economic activity at the current age-specific rates. For example, if the participation rate at ages 15-19 years is 70 per cent, an individual between his 15th and 20th years is assumed to spend 70 per cent of five years, or a total of 3.5 years in the labour force.

Table 5.8 presents the gross years of active life of males in Bangladesh and Barkait. The gross years of active life in Barkait correspond closely to that of Bangladesh.

Table 5.8: Gross Years of Active Life of Males in Bangladesh and Barkait

Age-Group	Bangladesh [a]			Barkait		
	Yrs, in age group interval	Age-Specific participation rates	Gross yrs of active life	Yrs. in age-group interval	Age-specific participation rates	Gross years of active life
10 - 14	5	58.1	2.905	5	37.5	1.875
15 - 19	5	81.6	4.080	5	70.6	3.530
20 - 24	5	91.6	4.580	5	89.1	4.455
25 - 34	10	96.9	9.690	10	99.1	9.910
35 - 44	10	96.5	9.650	10	100.0	10.000
45 - 54	10	97.1	9.710	10	100.0	10.000
55 - 64	10	93.5	9.350	10	97.9	9.790
Total Gross Yrs, of Active Life			49.965			49.560

Source: [a] Population Census of Pakistan, 1961, Census Bulletin No. 5, Table 3.

1 U.N., Demographic Aspects of Manpower, Report I, p.18.

2 Here, we make no attempt to calculate the net years of active life.

5.1.6 Structure of the Labour Force

A three-way classification is often used to identify the stucture of the labour force: by industry, by occupation and by status. Industry refers to the activity of the establishment or enterprise in which the worker is engaged. Occupation refers to the type of work the worker does irrespective of his industry. Occupation is thus distinguished by the process of production, whereas industry is distinguished by the product. Status refers to the worker's position vis-a-vis other workers.[1]

An analysis of the structural aspects of manpower is relevant for its reflection on the organisation of the economy and the level of technological development attained.

A close relationship between the industrial and occupational structure of the labour force is found in countries, characterized by a predominantly agrarian economy and where simple methods of production exist in both agriculture and non-agricultural sectors. And, tautologically, the status composition of an occupation is similar to the status composition of the related industry. Phelps-Brown points out that the deployment of the labour force by industry is interlocked with the deployment by occupation. He states "Indeed in the simplest form of division of labor, when each man makes only one product but himself performs all the processes that go into making it, occupation and industry coincide ... As soon, however, as men specialize in processes, a difference appears".[2] Given the size of the agricultural sector in Bangladesh and in Barkait it may be hypothesized that a high degree of homogeneity exists between the occupational and industrial distributions of the

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1 For a general discussion on the definition of industry, occupation and status see: U.N., Handbook of Population Census Methods, vol. II, New York, 1958.

2 Phelps-Brown, E.H., The Economics of Labor (New Haven and London: Yale University Press, 1962), pp. 86-87.

labour force, and more so for females with their generally larger share of the occupation in agriculture and due to the great influence of socio-cultural norms on the types of activities that they can undertake.

Table 5.9 presents distribution of the labour force in Bangladesh and Barkait by two major industrial groups.

Table 5.9: Industry Division of the Labour Force in Bangladesh and Barkait

Industry	Bangladesh (in thousand)[1]			Barkait (GWA)		
	Both sexes	Male	Female	Both sexes	Male	Female
1. Total labour force	17,442	14,802	2,640	809	448	361
2. Agricultural labour force	15,000	12,577	2,423	741	400	341
3. Agriculture as percent of total labour force	86.0	85.0	91.8	91.5	89.3	94.4
4. Non-agricultural labour force	2,442	2,225	217	68	48	20
5. Non-agriculture as percent of total labour force	14.	15.0	8.2	8.5	10.7	5.6

1 Population Census of Pakistan, 1961, vol. 4, Table 8; vol. 3, Table 50.

Agriculture appears to be slightly more important as a source of livelihood in Barkait as compared to Bangladesh. This is due mainly to the fact that Bangladesh data was for the whole country, i.e. it includes both rural and urban areas. Moreover, the level of technological and economic development for Bangladesh as a whole may be somewhat higher, as compared to Barkait. The data seems to be in confirmity with Clark's hypothesis, which states that with economic development the proportion of agricultural labourforce declines and that of the secondary sector increases initially, and at a later stage, the share of the tertiary sector expands relative to that of the secondary.[1]

1 Clark, Colin, The Conditions of Economic Progress (London: Macmillan & Co Ltd. 1960), pp. 493-95.

The hypothesis is based on the theory that the relative demand for agricultural products falls with increasing income, while that for the products of manufacturing rises initially and then falls in favour of services. The level of economic development both in Bangladesh and in Barkait is still quite low and this explains why such a vast segment of the labour force is in the agricultural sector.

More than four-fifths of the total non-agricultural labour force in Bangladesh was concentrated in the three major industrial categories, viz. "manufacturing', "commerce" and "services". This truly represents the case of the urban labour force. In Barkait almost one-third of the non-agricultural labour force was engaged in "hawking". The other major category was "rickshaw-pulling", representing over one-tenth of the non-agricultural male labour force. Among the females "spinning yarn" was the major non-agricultural activity, representing over 60 per cent of the total female non-agricultural labour force. The large numbers in these groups, such as hawking, stall holders, etc. may be the result of a phenomenon observed in some other countries with low standards of living - non-avilability of jobs elsewhere may result in an increase in small, one-man or family-owned and operated businesses, since these may offer a relatively easy outlet for people with very small capital and working with family help.[1] In Barkait the non-agricultural labour force largely consisted of males and females from the landless and near landless households.

5.1.7 Status Distribution of Agricultural Labour Force

Table 5.10 presents the status distribution of agricultural labour force in Barkait. The table shows that more than half of the labour force were "unpaid family workers" - males just under one-fourth and females over four-fifths. In fact, almost four times as many females as males belonged to

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1 A similar kind of reasoning is expounded by Phelps-Brown, The Economics of Labor, pp. 82-84.

Table 5.10: Percentage Distribution of Cultivators by Status in Barkait

Status	Male	Female	Both sexes
All Cultivators	100.0	100.0	100.0
1. Owner-cultivators	15.3	2.7	9.5
2. Owner-cultivators-cum-share-cropper	28.7	2.4	16.6
3. Owner cultivator-cum-agricultural labourer	10.7	0.9	6.2
4. Unpaid family workers	22.5	85.0	51.3
5. Unpaid family workers-cum-agricultural labourers	7.0	1.1	4.3
6. Landless agricultural labourers	15.8	7.9	12.1

this category. In Bangladesh "unpaid family workers" constituted one-third of the total agricultural labour force - males one-fourth and females just under four-fifths.[1*] Only one-eighth of the agricultural labor force were landless agricultural labourers - twice as many males belonged to this category as females. In Bangladesh the proportion of landless agricultural labourers was about one-sixth, and three times as many males belonged to this category as females.[2] This corroborates the fact that women are mainly engaged in work inside the household, in keeping with the pre-requisites of purdah and other social and cultural values and limitations imposed by the society on the choice of work available to women.

Table 5.11 presents the status distribution of the agricultural labour force in Barkait by age-groups. One thing that clearly emerges from the table is that a very large proportion of women in all age-groups belonged to the

1 Population Census of Pakistan 1961, vol. 2, Table 50.

* The extent to which workers are either unpaid family workers or self-employed indicates the degree of traditionalism of the economy.

2 Population Census of Pakistan, 1961, vol. 2, Table 50.

Table 5.11: Status Distribution of Agricultural Labour Force by Age-Groups and Sex in Barkait (percent distribution)

Age Group	Male							Female							N for Males	N for Females
	Owner cultivator	Owner cultivator cum share cropper	Owner cultivator cum agric. labourer	Unpaid family workers	Unpaid family workers cum agric. labourers	Agricultural labourer	All Statuses	Owner cultivator	Owner cultivator cum share cropper	Owner cultivator cum agric. labourer	Unpaid family workers	Unpaid family workers cum agric. labourers	Agricultural labourer	All Statuses		
10 - 14				70.9	12.9	16.2	100.0				91.5		8.5	100.0	31	35
15 - 19	2.9	5.9	5.9	55.9	17.7	11.7	100.0	1.6	3.3	1.6	80.4	1.6	11.5	100.0	34	61
20 - 24	2.4	7.3	4.8	39.0	17.1	29.4	100.0	2.1	4.2		87.3		6.4	100.0	41	47
25 - 29	3.8	24.5	11.3	26.4	11.3	22.7	100.0	2.4	2.4		78.5		16.7	100.0	53	42
30 - 34	4.9	24.4	17.1	17.1	4.9	31.6	100.0	6.1	6.1		81.7		6.1	100.0	41	36
35 - 39	21.2	30.3	9.1	18.2	6.0	15.2	100.0	2.9		2.9	88.4		5.8	100.0	33	34
40 - 44	18.9	56.7	8.1	2.7	2.7	10.9	100.0	4.0	4.0		88.0	4.0		100.0	37	25
45 - 49	26.9	38.5	19.2	-	-	15.4	100.0				81.8	9.1	9.1	100.0	26	22
50 - 54	33.3	37.5	16.7	4.2		8.3	100.0	5.9			94.1			100.0	24	17
55 - 59	38.9	38.9	22.2				100.0				100.0			100.0	18	6
60 - 64	28.6	61.8	4.8	4.8			100.0	12.5		12.5	75.0			100.0	21	8
65+	31.7	41.5	14.6	7.3		4.9	100.0				87.5		12.5	100.0	41	8

category of "unpaid family workers". The proportion of males in this category was quite high in age group 10-14, then declines gradually and then rises slowly at age 65 years and above. Among the males the highest proportion of landless agricultural labourers were found in age-group 30-34. Almost one-third of men in this age group worked as agricultural labourers. Among the females the proportion of agricultural labourers at any age was significantly lower compared to males, and the highest proportion was reported in age group 25-29 years.

Another interesting feature of the table is that the proportion of males together in categories "owner cultivator", "owner cultivator-cum-sharecropper" and "owner cultivator-cum-agricultural labourer" increases as age advances; is unity at age group 55-59 years after which it starts to decline. In other words, as age advances more males assume responsibility as heads of household. This also indicates that as age advances few or none of the males work merely as "unpaid family workers".

5.1.8 Status Distribution of Non-Agricultural Labour Force

Other things remaining the same, it is often found that the more modern is the non-agricultural sector of the economy, the larger is the proportion of employees and the smaller is the proportion of employers and own-account or independent workers. This comes from the dominance of the wage institution which results from the need of industrial operations on a large scale. However, it may be pointed out here that a high proportion of employees in the labour force is not a sufficient condition for modernization. In a socialist country all the workers are state employees, although such a country may not necessarily be highly modern and developed. Again, when the non-agricultural sector is small, as in the case of Bangladesh, and when the public sector provides the main source of investment fund, the proportion of employees may be quite large. However, when the non-agricultural sector is very primitive and underdeveloped, as in the case of rural Bangladesh, the proportion of own-account or independent workers may be quite large.

Table 5.12 presents the distribution of non-agricultural labour force in

Table 5.12: Percent Distribution of the Non-Agricultural Labour Force by Status and Sex in Barkait

Status	Male	Female	Both Sexes
1. Employee	32.7	5.0	24.6
2. Independent or self-employed	59.2	35.0	52.2
3. Unpaid family workers	8.1	60.0	23.2

Barkait by status and sex. It shows that "employer" as a group was non-existent in the village. This points out the very modest form of non-agricultural sector as exists in the village. Those who were "employees" worked for persons outside the village. They were mainly "rickshaw-pullers" and the "rickshaws" were owned by people belonging to neighbouring villages. There was only one woman who worked as an "employee". She was engaged in spinning yarn and was employed in a neighbouring village. With regard to the sex differential in status distribution, we find that a vast majority of the women were either unpaid family workers or independent workers. Given the socio-economic and cultural structure of the village they have less scope for working in the capacity of "employees".

5.1.9 Unemployment[1]

Data on unemployment is obtained from the response to a question relating to "looking for work". In Bangladesh the unemployment rate was recorded at 1.2 per cent - males 2.0 per cent and females 0.4 per cent.[2] In Barkait on the basis of the "gainful worker approach" the unemployment rate recorded was 1 per cent - males 1.2 per cent and females 0.8 per cent. Such a low unemployment rate in

1 Chapter 8 of the thesis throws more light on the question of unemployment.

2 Bangladesh Population Census, 1974, Bulletin No. 2, p. 169.

Bangladesh and in Barkait on the basis of the "gainful worker approach" is obvious due to the following factors. First, since most of the people work on family farm or business, especially in rural areas, it is possible that they may not be without any work for a long time; rather, they may be underemployed. Secondly, the reference period was so long that if somebody had worked over the reference period regardless of the number of days or hours worked, he/she was reported as "working" and not "looking for work". Thirdly, the concept of "looking for work" is hardly relevant in rural agricultural societies, where most people work on family farm or business. It is therefore not surprising that when this question is put to somebody, he/she is at a loss what to reply. Finally, the rate was low, since it excluded the first-time job-seekers.

The unemployment rate recorded in Barkait on the basis of the "labour force approach" was 4.6 per cent - males 4.0 per cent and females 8.5 per cent. The rate was higher than that recorded for Bangladesh and for Barkait on the basis of the "gainful worker approach". This is due to the following reasons: (a) the survey was conducted at the end of March 1976 with a reference period of one week. The shorter reference period and the fact that the period when the survey was conducted was a slack period means that more people were out of work. This is more so in the case of females, since the last harvest took place about three to four months back and most women had not worked during the reference period, (b) since the first time job seekers were included, this may have pushed the rate up[1] and (c) the total female population in the labour force on the basis of the "labour force approach" was considerably smaller than that of males and as such this has pushed up the unemployment rate so far as females are concerned.

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1 Section 5.2.5. of the chapter shows that a high proportion of the non-working females who expressed their desire to work, if work were available, were mainly engaged in household work and were, thus, first-time job seekers.

Part II - Labour Utilization Survey

This part analyses data obtained on the basis of labour utilization survey. It discusses the structure of the work force, pattern of labour utilization and characteristics of the non-working population.

5.2.1 Size of the Labour Force

The work force consisted of (a) all persons who worked for a minimum of seven hours during the reference period (WORKERS), plus all those in the non-working section of the population aged ten years and above who had worked during the last cropping season, preceding enumeration and (b) workers, plus all those in the 'non-working' section of the population aged ten years and above, who had expressed their willingness to work, if work were available.

Table 5.13: Overall Labour Force Participation Rates in Barkait on the Basis of Two Measures, as specified above

(a)			(b)		
Male	Female	Both Sexes	Male	Female	Both Sexes
54.7	44.8	49.8	54.5	49.2	51.8

Both the measures yield roughly the same rate in the case of males, while a difference exists in the case of females. The number of males in the 'non-working section' who worked during the cropping season preceding enumeration and those who expressed their willingness to work, if work were available, were roughly the same. They constituted 6.2% and 5.8% of the total male population aged ten years and above in the village. Among females, those who worked during the cropping season preceding enumeration was 2.8% of total female population aged ten years and above, while those who expressed their willingness to work was 9.3 per cent. This accounts for the difference in female labour force participation rates on the basis of the two measures. This also indicates that those women who did not work during the cropping season, preceding enumeration, but who

expressed their willingness to work, would accept work when available and therefore should be considered part of the labour force.

5.2.2 Age-Specific Labour Force Participation Rates

Table 5.14 presents age specific labor force participation rates in Barkait, under the two measures, as discussed above. While the male age specific rates under the two measures are the same for most age groups, those of females differ, except in the last age group. As discussed earlier, this is since more females had expressed their willingness to work than those who had worked during the last cropping season preceding enumeration. The table indicates that they belong to age group 10-64 years.

A comparison with the census approaches shows that for boys aged 10-14 years the the present measures yield higher rates than the census approaches. In all other age groups among males the difference is not pronounced. As regards females, these measures yield higher rates for girls aged 10-14 years than the rates obtained on the basis of the GWA. These measures yield slightly higher rates for all other age groups as well, except those aged 65 years and above. The difference is significant when we compare these rates with those obtained on the basis of LFA for all age groups. This is due to the following reasons: a) labour utilization approach placed emphasis on the number of hours of work, rather than on occupation. This, therefore, included such persons as students, and those who worked only casually, such as those women engaged more or less, in full-time household work. The contribution of some of these persons to the household economy in respect of labour input are overlooked under the census approaches, especially those in the age groups of 10-14 years. The labour force participation ratios of both males and females in age group 10-14 years are higher under the labour utilization approach than under the census approaches. (b) Under the census approach "work" means only directly productive work and includes only those persons

Table 5.14: Age-Specific Labour Force Participation Rates by Sex (Labour Utilization Survey, [L.U.S.])

Age Groups	(a)[1]		(b)[2]		N	
	Male	Female	Male	Female	Male	Female
10 - 14	51.0	47.1	54.2	55.9	96	102
15 - 24	84.0	73.4	84.0	78.9	106	161
25 - 34	99.1	82.4	99.1	91.2	106	102
35 - 44	100.0	79.8	100.0	86.1	78	79
45 - 54	98.2	66.2	98.2	72.3	56	65
55 - 64	97.9	58.1	91.5	61.3	47	31
65+	85.4	30.0	81.3	30.0	48	30

1. All persons who had worked for a minimum of 7 hours during the reference period, plus all those in the 'non-working' section of the population who worked during the cropping season, preceding enumeration.

2. All persons who had worked for a minimum of 7 hours during the reference period, plus all those in the 'non-working' section of the population who expressed their willingness to work, if work were available.

who are usually engaged in such "work". Under the labour utilization approach the definition of "work" has been broadened to include such activities as tending animals and scaring birds. These activities are not only essential to the maintenance of household but also often young children by performing such tasks free other older members of the household for more productive work. Accordingly, persons who had contributed only to such activities have also been included in the work force under the labour utilization survey. (c) The inclusion of anybody who had worked for a minimum of seven hours during the reference period also helps account for the difference. Persons who work only for such smaller hours are usually not reported as members of the labour force under the census approaches. In the labour utilization survey the objective was to bring into the fold of the work force anybody who had contributed to the labour input of the household. (d) The fact that the labour utilization survey coincided with a busy period helped to swell the size of the work force. And, finally, the concept of "looking for work" under the census approaches yielded a low proportion of the population who were not working but available for work. Such a concept of "looking for work" is meaningful and relevant in modern industrialized economy where the notion of a "job", that is, employment by another is firmly embedded. In the LDCs, especially in rural agricultural sectors, on the other hand, such a concept is practically meaningless, since the kinds of formalized, institutional work situation which is generally found in the DCs is not present. In these countries, much of the population maintains some sort of a connection with family enterprise and most of them are largely detached from an organised wage labour market. Within this framework of organisation, household members may make an important, though not necessarily a continuous, contribution to the household economy. The Census Commission of Pakistan observed that cultivators do

not regard themselves as unemployed if their families own land and if they are supported by the general economic activities of the household. The Commission further observed that even among non-agriculturists there was evidence of considerable reluctance to admit unemployment and in the case of independent or own account workers, the whole conception of unemployment is indefinite.[1] Rahmat observed that unemployment had not been reported correctly in the Quarterly Survey of Current Economic Conditions (1963-64) due to peculiar socio-economic conditions of the rural areas in particular, where the conditions laid down in definitions for looking for work do not exactly fit.[2] Under the labour utilization survey such a question was not asked. Rather, those in the non-working section of the population aged ten years and above were asked to say whether they worked during the cropping season, preceding enumeration and also whether they would accept work, if work were available. These two questions help to establish the proportion of population in the working age groups who may be considered as "out of work" and "available for work" respectively. These two groups are therefore considered part of the work force in this study. The labour force participation rates obtained on the basis of the labour utilization survey, thus, tend to reflect the real situation obtaining in the rural areas in that not only do members of the labour force on the basis of the census approaches contribute to household economy, in respect of their labour input, but that others join them as well, at least during the busy periods.

5.2.3 Structure of the Labour Force

This section analyses the structure of the work force. The aim of this

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1 Government of Pakistan, Census Commission, Census of Pakistan, 1951, vol, I, p. 114.

2 Rahmat, Ali - Labour Force Statistics in Pakistan, CENTO Symposium on Household Surveys, Dacca, April 25 - May 2, 1966, p. 250.

section is to examine the proportion of workers who had worked inside or outside the household farm or business or both inside and outside and to look into the employment status of the working population.

Tab le 5.15 presents the proportion among the workers who worked inside family farm or business only, those who had worked for others only (i.e. wage employment) and those who worked both inside and outside. About four-fifths of all working persons worked inside family farm or business only. The proportion was just under 70 per cent for males and just over 90 per cent for females. The high proportion working inside indicates that the household is the primary unit of employment in the rural areas of the country. The difference between the two sexes in the proportion working inside only arises from two main causes: (1) the fact that male members are the main breadwinners of the family, who must resort to employment outside the household as well, if inadequate work opportunities exist inside the household, and (2) the institution of purdah, which places restriction on the movement of females.

If we look at the different landholding groups, we find that the proportion working inside increases with an increase in the size of land area. While only one-fifth of the males belonging to the landless households worked inside, the proportion was three-fifths, over four-fifths and 100 per cent for males belonging to households with up to 1.0 acre, up to 2.0 acres and over 2.0 acres of land respectively. Quite similar is the case with respect to females.

The table also shows that about 11 per cent of all working persons worked outside only. The proportion was almost twice as high for males as compared to females. They included such persons as agricultural wage labourers, rickshaw pullers, masons, school teachers, etc. They mostly belonged to landless or near landless households. About another 11 per cent worked both inside and outside. While the proportion was almost one-fifth of all working males, it was very low in the case of females. This means that if the

Table 5.15: Percentage Distribution of the Working Population by Location of Workplace, Sex and Landholding Group(L.U.S.)

Location of Work	Landless			0.01 to 1.0 acre			1.01 to 2.0 acres			>2 acres			Total		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
1. Working inside household farm or business only	21.2	37.1	27.6	60.5	94.1	77.3	80.9	100.0	93.7	100.0	100.0	100.0	67.9	90.5	78.3
2. Working outside only	69.2	54.3	63.2	10.0	3.6	6.8	1.1	0	0.6	0	0	0	13.7	7.4	10.8
3. Working both inside and outside	9.6	8.6	9.2	29.5	2.3	15.9	10.0	0	5.7	0	0	0	18.4	2.1	10.9
4. Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
5. N	52	35	87	220	220	440	90	68	158	68	44	112	430	367	797

female members have work at home, they are in most cases not allowed and encouraged to work outside. While over three-fifths of all females belonging to landless households either worked outside only or both inside and outside, only about 6 per cent of the females belonging to households with up to 1.0 acre of land and none in the case of households with cultivable land area in excess of one acre of land either worked outside only or both inside and outside.

Table 5.16 presents the employment status of the working population by sex. It shows that more than half of the working population consisted of "unpaid family workers". The proportion was just under one-fourth for males and over four-fifths for females. Less than one-tenth of the working population belonged to the category of "agricultural wage labourer". The proportion of males in this category was twice that of females.[1] The findings here bear close similarity with the status distribution under the census approach, which is discussed in Section 5.1.7 of this chapter. Thus, it is clear that a large proportion of the working population, especially in the case of the females work within the household. This corroborates the fact that women are mainly engaged in work inside the household, in keeping with the pre-requisite of purdah and other social and cultural values and limitations imposed by the society on the choice of work available to women.

5.2.4 Pattern of Labour Utilization

This section examines the pattern of labour utilization in Barkait and analyses differentials on the basis of certain variables, such as age and sex,

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1 It may be pointed out that over three-fifths of all females belonging to landless households either worked outside only or both inside and outside. In contrast, only about 6 per cent of females belonging to households with up to 1.0 acre of land and none in the case of households with cultivable land area in excess of one acre of land either worked outside only or both inside and outside.

Table 5.16: Percentage Distribution of the Working Population in Different Employment Status Categories by Sex (L.U.S.)

Employment Status	Male	Female	Both Sexes
1. Owner-cultivator	12.3	2.1	7.7
2. Owner-cultivator cum share-cropper	24.4	1.9	14.1
3. Agricultural wage labourer	13.0	6.3	9.9
4. Unpaid family workers	24.4	85.6	52.6
5. Owner-cultivator cum agricultural wage labourer	9.8	0.8	5.6
6. Unpaid family worker cum agricultural wage labourer	6.3	1.1	3.8
7. Employee	3.5	0.3	2.0
8. Independent/self-employed	6.3	1.9	4.3
Total	100.0	100.0	100.0
N	430	367	797

landholding, employment status, location of work place and role in the household. The purpose of this section is to see to what extent do these variables affect labour utilization.

Table 5.17 clearly shows the differential by sex. Among males the average number of hours worked was over 41 hours per week compared to about 28 hours among females. The difference is more pronounced if we consider the average of all males and all females aged 10 years and above, irrespective of whether they worked or not. Moreover, the table also shows that while less than one-quarter of males worked less than 4 hours a day the proportion was about three-fifths in the case of females. The sex differential is due to the following reasons: a) a large proportion of females were only part-time workers, who had to spend a considerable amount of time on household maintenance activities. We shall see later in Chapter 6 that compared to males females spend 600 per cent more time on household maintenance activities, b) the nature of farm operations require that if a household is to avoid engaging outside labour, its male members must work longer hours to complete the work on the farm; whereas, the post-harvest operations carried out by women can be done in fairly easy instalments and c) post-harvest operations require less time than pre-harvest and harvesting (see Table 3.8, chap. 3).

The table also shows the differential by age. The difference was quite pronounced in the case of males b ut not so in the case of females. Among males the average number of hours worked per week rises with age and then falls at age-group 45-54 years. By the time a person reaches 45 years of age he normally has grown-up sons to help him, thus, bringing about a small decline in the number of hours worked. Among females the differential was less pronounced. This is because most of them work inside their own household, either in agricultural or non-agricultural activities and share amongst themselves the quantum of work available.

Table 5.17: Percentage Distribution of Working Population According to the Number of Hours Worked per Week, and Average Number of Hours Worked per Week by Age and Sex (L.U.S.)

Number of Hours Worked	Males (Age Group)							
	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1) 7 - 13 hours	11.6	8.2	3.0	2.6	1.9	0	5.9	4.7
2) 14 - 27 "	65.1	28.2	11.1	5.3	9.3	10.3	20.6	19.3
3) 28 - 39 "	16.3	29.5	20.2	22.4	14.8	25.6	29.4	22.5
4) 40 - 55 "	4.7	20.0	33.4	34.2	46.3	43.6	26.5	30.0
5) 56+ "	2.3	14.1	32.3	35.5	27.7	20.5	17.6	23.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of hours worked per week	21.9	34.6	42.9	48.1	45.5	45.1	38.3	41.2
Total number of persons working	43	85	99	76	54	39	34	430
Average number of hours worked of all persons in age-group (i.e. those working plus those in the age-group but not working)	9.8	24.5	39.4	46.9	43.9	37.4	27.1	32.9
	Females (Age Groups)							
	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1) 7 - 13 hours	12.8	9.9	7.3	8.3	11.9	17.7	25.0	10.4
2) 14 - 27 "	46.8	48.7	45.1	45.0	47.6	52.9	50.0	47.1
3) 28 - 39 "	31.9	26.1	41.5	25.0	26.2	23.5	12.5	29.7
4) 40 - 55 "	8.5	10.8	4.9	18.4	4.8	5.9	12.5	9.5
5) 56+ "	0	4.5	1.2	3.3	9.5	0	0	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of hours worked per week	25.7	27.6	27.5	29.5	29.8	23.4	22.5	27.6
Total number of persons working	47	111	82	60	42	17	8	367
Average number of hours worked of all persons in age-group	11.9	19.0	20.8	22.4	19.2	13.3	5.8	16.1

Here, a comparison of findings from Barkait with findings from other studies is made. In 1955 the I.L.O. conducted a manpower survey in Bangladesh.[1] According to this survey 35 per cent of all working persons had worked 56 hours or more over the reference period of one week. The proportion was lower in Barkait and more so with respect to females. Such a difference arises out of three main factors. Firstly, the I.L.O. considered a person to be employed if reported to be working for four out of seven days before the interview. Moreover, the I.L.O. survey did not consider unpaid family workers working less than 15 hours a week as part of the labour force. The present survey considered anybody as working who worked for a minimum of seven hours during the reference period. By so doing the present survey considered persons to be working who worked shorter hours than under the I.L.O. survey. Secondly, the I.L.O. survey considered only those who contributed directly to productive activities only; whereas the present survey considered those engaged in such activities as tending animals, scaring birds, etc. Those normally engaged in directly productive activities usually work longer hours than those engaged in activities such as scaring birds, tending animals, etc. Thirdly, the I.L.O. survey shows that only about 60 per cent of the total rural labour force consisted of the self-employed and unpaid family workers and 40 per cent were wage and salary earners. In 1967-68 the proportion of such self-employed and unpaid family workers amounted to nearly 70 per cent of the total labour force in the country.[2] In 1961 over 80 per cent of workers in the agricultural sector

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1 International Labour Office; Expanded Programme of Technical Assistance: Report to the Government of Pakistan on a Manpower Survey, Geneva, 1956.

2 Government of Pakistan, C.S.O., Summary Report on Population and Labour Force, 1967-68.

consisted of the self-employed and unpaid family workers.[1] In Barkait over 80 per cent of the workers consisted of the self-employed and unpaid family workers. Wage earners are employed for fixed hours of work and are found to work longer hours than the self-employed and unpaid family workers, at least for those days of the week they are fully employed. Thus, the relatively higher proportion of wage and salary earners under the I.L.O. survey have resulted in a higher proportion having worked 56 hours or more, than under the present survey.

In a study on rural employment in Thailand, Fuhs and Vingerhoets found that only about 28 per cent of all working persons had worked up to 32 hours a week. The rest had worked 40 hours or more weekly.[2] In contrast, over three-fifths of all working persons worked up to 32 hours a week in Barkait. Fuhs and Vingerhoets do not present estimates separately for males and females and, therefore, a comparison on the basis of sexes is not possible. The difference is mainly due to the fact that employment on non-farm activities is more prevalent among the Thai farmers than among farmers in Bangladesh. It was found that income from non-farm activities was of overwhelming importance among the Thai farmers. On average 77 per cent of the total family earnings came in 1969/70 from non-agricultural activities.[3] Muscat observed the widespread practice among the Tahi farmers of carrying on occupations in two

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1 Population Census of Pakistan 1961, vol. 2, Table 50.

2 F.W. Fuhs and J. Vingerhoets, Rural Manpower, Rural Institutions and Rural Employment in Thailand, National Economic Development Board, Government of Thailand, Bangkok, 1972 (Table 9, p. 15).

3 Ibid, p. 9.

or more sectors, or in two or more occupational categories.[1] This explains why farmers in Thailand had worked longer hours than those in Barkait.

Table 5.18 shows that the longest hours of work were done by those who worked both inside their own household and worked as wage labourers as well and the lowest number of hours of work were done by those who worked exclusively inside their own household. Those who worked outside only occupied the intermediate position. This was true of both the sexes. Just over two-fifths of males, working inside their own household, worked 40 hours or more over the week. The proportion was about 70 per cent and about 80 per cent for those who worked outside only and those who worked both inside and outside respectively. Just under two-fifths of all females, working inside their own households only, worked 28 hours or more over the week, compared to about 70 per cent and 100 per cent in the case of those who worked outside and those who worked both inside and outside, respectively. The number of persons who worked outside only and those who worked both inside and outside constituted just over one-fifth of all working persons. Even if we combine these two categories we get the same result, i.e. such persons worked more than those who worked inside their own household only. Those working inside only worked less than others, since such persons shared the available work among themselves. Such persons do not remain totally idle when there is work available on family farm or business but share it with members of the family. Such a type of work-sharing is quite common in rural agricultural societies. The question of "looking for work" does not make much sense to them, for such persons hardly seek outside employment.

Those heads of households who worked less than two hours a day were all females. Over three-fifths of all household heads worked over 40 hours a week and about 30 per cent of them worked 8 hours or more daily (see Table 5.19). In contrast, all others, except servants, worked considerably

1. Muscat, R.J., Development Strategy in Thailand, New York, 1966.

Table 5.18: Percentage Distribution of the Working Population According to the Number of Hours Worked Per Week, and Average Number of Hours Worked Per Week by Location of Workplace (L.U.S.)

Number of Hours Worked	Location of Workplace								
	Inside Household Only			Outside Household Only			Both Inside and Outside		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
7-13 hours	6.8	11.1	9.1	0	3.7	1.2	0	0	0
14-27 "	22.3	49.8	36.9	16.9	29.6	20.9	10.1	0	9.2
28-39 "	27.4	27.7	27.6	13.6	44.5	23.3	11.4	62.5	16.1
40-55 "	26.7	9.3	17.5	30.5	11.1	24.4	41.8	12.5	39.1
56+ "	16.8	2.1	8.9	39.0	11.1	30.2	36.7	25.0	35.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of hours worked per week	37.6	26.6	31.7	46.7	34.5	42.9	50.4	44.5	49.8
N	292	332	624	59	27	86	79	8	87

Table 5.19: Percentage Distribution of the Working Population According to the Number of Hours Worked Per Week and Average Number of Hours Worked Per Week by Role in the Household (L.U.S.)

Number of Hours Worked	Role in the Household								
	Household Head	Housewife	Son			Daughter	Servant	Others	Total
			10-19	20+	Total				
7-13 hours	2.8	7.4	11.8	8.7	10.2	17.4	0	9.7	7.2
14-27 "	11.0	42.9	54.4	23.2	38.7	50.7	0	53.8	32.1
28-39 "	21.9	34.5	22.1	31.9	27.0	26.1	16.6	18.3	25.9
40-55 "	34.6	10.8	8.8	23.2	16.1	4.4	41.7	15.0	20.6
56+ "	29.7	4.4	2.9	13.0	8.0	1.4	41.7	3.2	14.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of hours worked per week	45.3	29.6	24.5	36.1	30.4	23.9	54.9	27.2	34.9
N	283	203	68	69	137	69	12	93	797

less. Servants clearly worked more than anybody else. They were labourers attached to households and had to work considerably longer hours. There were thirteen such persons, of whom one was absent at the time of enumeration. Over four-fifths of them worked 40 hours or more over the week and over two-fifths worked eight hours or more daily. Such persons belonged to households with relatively more land and would not have been employed, unless they were prepared to work longer hours. While a little over 7 per cent of housewives worked less than two hours a day, the proportion was over 10 per cent and over 17 per cent among boys and girls respectively. These were mostly children in age-group 10-14 years. Some of them were students and helping the household only part-time. More than half of the housewives worked less than four hours a day. They were clearly part-time workers who attend to productive work after performing household maintenance activities. Just over 15 per cent of housewives worked 40 hours or more. Just under half of male children worked less than 4 hours a day compared to over three-fifths among girls.. This clearly indicates that more girls were engaged in part-time work than boys. This becomes more apparent if we look at the proportion working 40 hours or more over the week. The last category "others" consisted of dependent parents, other relations such as nephews and nieces and persons not related to the household but living with them. These persons were either students or part-time teachers in religious schools. In exchange for meal and boarding they were required to teach children belonging to household. However, the vast majority in this category were dependent relations. Over three-fifths of them worked less than 4 hours a day, while only 18 per cent worked 40 hours or more over the week.

If we look at the average number of hours worked per week we get the same results. The average number of hours worked by servants was higher than anybody else, followed by heads of households.

Table 5.20 shows that among males those who worked the highest number

of hours belonged to the category of "owner-cultivator-cum-agricultural-labourer". These persons belonged to households with little land and a significant proportion of them worked for others, in addition to working on their own farms. Moreover, persons belonging to such households engaged outside labour only when it is absolutely necessary. They are, therefore, required to work longer hours. Persons belonging to the categories of "owner-cultivator-cum-sharecropper" and "agricultural labourer' were the next to follow in terms of the number of hours worked. A person who works as a wage labourer is either fully employed or not at all.

Clearly, persons who besides cultivating their own plots also rent in land on a share-cropping basis, have to work longer hours to complete work on both their own plots of land and the plots rented in. It may be pointed out that sharecropping is usually on the basis of a 50-50 sharing of the yield and the owner of the land does not supply labour or any other input. Therefore, if such a person was to depend wholly or largely on outside labour to get the rented in plots cultivated, his share of the return falls, since he has to pay wages to such labour which are not shared by the owners of the land. When somebody rents in land from others, it may be out of sheer necessity since he has very little of his own land or to make gains in terms of yield. Under both these circumstances, members belonging to such households are likely to work longer hours to achieve their objectives.

Unpaid family workers worked the lowest number of hours. Over half of them worked less than four hours a day, on average, and less than 5 per cent worked eight hours or more daily. Those unpaid family workers who also worked as agricultural wage labourers worked for considerably longer hours than those who worked exclusively within the household.

As regards females, the interpretation is difficult, since one category, namely the "unpaid family worker" constituted more than 85 per cent of the

Table 5.20: Percentage Distribution of Working Population According to the Number of Hours Worked Per Week and Average Number of Hours Worked per Week by Employment Status and Sex (L.U.S.)

Number of Hours Worked	Males								
	Owner cultivator	Owner cultivator cum share-cropper	Agricultural wage labourer	Unpaid family workers	Owner cultivator cum agric. wage labourer	Unpaid family worker cum agric. wage labourer	Employee (non-agriculture)	Independent self-employed (non-agriculture)	TOTAL
7-13 hours	0	3.8	0	11.4	0	7.4	0	7.4	4.7
14-27 "	13.2	6.7	16.1	42.9	4.8	18.5	20.0	18.5	19.3
28-39 "	26.4	21.0	17.9	29.5	11.9	26.0	20.0	18.5	22.5
40-55 "	35.9	40.0	28.5	11.4	42.8	29.6	20.0	40.8	30.0
56+ "	24.5	28.5	37.5	4.8	40.5	18.5	40.0	14.8	23.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of hours worked per week	44.2	45.9	46.6	27.5	53.0	40.1	45.5	39.2	41.2
N	53	105	56	105	42	27	15	27	430

	Females			
	Unpaid family workers	Agricultural wage labourers	Others	TOTAL
7-13 hours	10.8	0	13.3	10.4
14-27 "	50.0	26.1	33.3	47.1
28-39 "	28.4	43.4	33.3	29.7
40-55 "	8.9	13.1	13.3	9.5
56+ "	1.9	17.4	6.8	3.3
Total	100.0	100.0	100.0	100.0
Average number of hours worked per week	26.5	38.2	30.7	27.6
N	314	23	30	367

total female working population. Most of the agricultural wage labourers among females belonged to landless and near landless households. They worked longer hours than the others of necessity. If we lump together all save the unpaid family workers in one category, we find that persons belonging to this category worked longer hours than unpaid family workers. Less than two-fifths of such persons worked less than 4 hours a day; whereas, over three-fifths of unpaid family workers worked less than 4 hours a day. Again, about one-fourth of all such persons worked 40 hours or more over the week, compared to only about 11 per cent in the case of unpaid family workers.

Among males working less than two hours a day the lowest proportion was recorded among those belonging to landless households (see Table 5.21). This is because if such persons do not carry out non-agricultural activities inside their own household, they would either have little or no work at all, or if employed by others, would be hired for longer hours of work. While it is possible in the case of households with land to have some of its members doing very little work on family farm, this is not possible in the case of persons belonging to the landless households. Moreover, some persons belonging to households with land who do not help regularly, such as students and other dependents, often help their households during the periods of peak labour requirements. Such work opportunities do not exist in the case of persons belonging to landless households. Persons belonging to landless households usually work as wage labourers. Wage employment usually involves work for the whole day, rather than just for short hours. Mujumdar notes that an outstanding feature of the employment of wage earning labourers is that they are either fully employed or not at all.[1] This so

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1 Mujumdar, N.A., Some Problems of Underemployment, 1961, p. 81.

happens since presumably a wage worker would not be employed without there being enough and continuous work for him for the day. Hence, persons belonging to landless households, on average, worked longer hours than those belonging to households with cultivable land, especially those in excess of one acre.

Among households with land we see that the number of hours worked decrease as the size of land area increases. About 38 per cent of those (both sexes combined) belonging to households with up to 1.0 acre of land worked 40 hours or more during the reference period; whereas the proportion was 28.5 per cent and 25 per cent in the case of those belonging to households with land areas ranging between 1.01 to 2.0 acres and over 2.0 acres respectively. The reasons for such a difference is that 10 per cent of males belonging to households with land areas ranging between 0.01 to 1.0 acre worked outside family farm only and another about 30 per cent worked both inside family farm as well as outside. In contrast, only 1 per cent and 10 per cent of the males belonging to households with land areas ranging between 1.01 to 2.0 acres and none in thecase of males belonging to households in excess of 2.0 acres worked outside or both inside and outside respectively.

None of the females belonging to households in excess of one acre of land either worked outside the household or both inside and outside, and about 6 per cent of females belonging to households having land areas ranging between 0.01 and 1.0 acre of land either worked outside only or had worked both inside and outside. Moreover, households with up to 1.0 acre of land seldom employ outside labour. About half of such households reported having cultivated their land solely with the labour of members of households. Persons belonging to such households had to work longer hours to complete work on the farm. In contrast, only 4 per cent of households with land areas

ranging between 1.01 to 2.0 acres and one of the households having land in excess of two acres reported having cultivated their land solely with the labour of members of households. Such households depend on outside labour to supplement the labour input of household members and, therefore, work shorter hours. Households with land ranging between 0.01 to 1.0 acres seldom employ outside labour, except during the busiest parts of the year, although 60 per cent of households with land in excess of 2.0 acres reported having employed outside labour also at times other than the busiest parts of the year, to carry out such tasks as weeding, manual irrigation, etc.

The finding here gives supporting evidence from other studies for the argument that smaller farmers use their land more intensively. Hosain, in a study of a Bangladesh village, found that the cropping intensity was higher for smaller farms.[1] This, again, requires that persons belonging to smaller farms must work longer hours than those with relatively more land. Hosain also found that labour use per acre on smaller farms was higher than on relatively bigger farms. Data from time-budget study show that total labour hours per acre on smaller farms in Barkait was greater than total labour hours per acre on relatively bigger farms, viz. over 800 hours per acre on farms with up to 2.0 acres of land compared with over 500 hours per acre on farms with over two acres of land. (These figures include labour hours of men, women and children and at a later date the author intends to show hours worked per acre on a standard man hour basis).

In another Bangladesh study it was found that persons belonging to households with more land spent less time on directly productive activities, i.e. self-employment and employment outside household than those with relatively less land.[2] In another study Habibullah found that the extent of unemployment per worker on smaller farms was lower than on relatively bigger farms.[3] This, again, may imply that the extent of labour utilization

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1. Hosain, M., "Farm Size and Productivity in Bangladesh Agriculture: A Case Study of Phulpur Farms", The Bangladesh Economic Review, vol. II, January 1974, No. 1.

2. Islam, Nurul, "Concepts and Measurement of Unemployment and Underemployment in Developing Economies", International Labour Review, vol. 89, 1964, pp. 240-56.

3. Habibullah, M., The Pattern of Agricultural Unemployment, 1962, Appendix C-2.

Table 5.21: Percentage Distribution of Working Population According to Number of Hours Worked Per Week, and Average Number of Hours Worked Per Week by Landholding Group and Sex (L.U.S.)

Number of Hours Worked	Males					Females				
	Landless	0.01 to 1.0 acre	1.01 to 2.0 acres	>2 acres	Total	Landless	0.01 to 1.0 acre	1.01 to 2.0 acres	>2 acres	Total
7-13 hours	0	5.4	5.6	4.4	4.7	11.4	12.3	2.9	11.4	10.3
14-27 "	19.2	17.3	20.0	25.0	19.3	31.4	43.6	57.4	61.4	47.1
28-39 "	19.2	15.5	33.3	33.9	22.6	42.9	30.0	27.9	20.5	29.7
40-55 "	21.2	36.8	23.3	23.5	30.0	5.7	9.1	11.8	4.5	9.5
56+ "	40.4	25.0	17.8	13.2	23.5	8.6	5.0	0	2.2	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average number of hours worked per week	45.2	42.5	38.6	37.2	41.2	29.7	27.8	27.4	25.2	27.6
N	52	220	90	68	430	35	220	68	44	367

was higher in the case of smaller farms than for bigger farms. Purcal, in a study in West Malaysia, found that with the exception of very large farms having cultivable land area of about eight acres and over, the extent of labour utilization was generally high on smaller farms.[1] Rabbani observed that total man-days utilized per acre and per maund of paddy seem to vary inversely with the size of holding.[2]

It has already been observed that in the case of females, participation in economic activity in agrarian societies like rural Bangladesh shows little variation from the late teens to old age. A large part of the economic activity in such societies is carried out within the household and changes in a woman's marital status and her responsibility towards the care of children do not adversely affect her participation in work. The findings of Tables 5.22, 5.23 and 5.24 revalidate the hypothesis that changes in marital status, the number of children born and the age of the youngest child

Table 5.22: Percentage Distribution of the Working Female Population According to the Number of Hours Worked per Week, and Average Number of Hours Worked per Week by Marital Status (LUS)

No. of Hours Worked	Marital Status		
	Currently Married	Never Married	Separated, divorced and widowed
7 - 13	6.8	15.0	20.7
14 - 27	47.8	46.7	44.8
28 - 39	31.3	30.0	22.5
40 - 55	10.4	6.7	8.6
56+	3.6	1.7	3.4
Average No. of Hours worked per week	28.7	25.2	25.4
N =	249	60	58

1 Purcal, J.T., Rice Economy: Employment and Income in Malaysia, 1972.

2 Rabbani, Ghulan, A.K.M., "Measurement of Underemployment in Rural Households: A Case Study of Rice Cultivation in E. Pakistan" in CENTO Symposium on Household Surveys, Dacca, 1966, p. 233.

do not affect a woman's participation in economic activity adversely. Sheehan and Standing, in a study of the economic activity of women in Nigeria, found that neither marital status nor fertility appear to place important constraints on women's economic activity in either urban or rural areas of Nigeria.[1]

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1. Sheehan, Glen and Standing, Guy, "A Note on Economic Activity of Women in Nigeria", The Pakistan Development Review, vol.XVII, Summer 1978, no.2, pp.253-261.

Table 5.23: Percentage Distribution of the Working Ever Married Female Population According to the Number of Hours Worked per Week, and Average Number of Hours Worked per Week by Number of Children Ever Born (L.U.S.)

No. of hours worked	Number of Children born to Mother			
	0 - 1	2 - 3	4 - 5	6+
7 - 13	10.7	8.2	17.3	6.4
14 - 27	53.3	42.6	36.0	50.5
28 - 39	24.6	37.7	37.3	25.7
40 - 55	9.8	6.6	6.7	12.8
56+	1.6	4.9	2.7	4.6
Average no. of hours worked per week	26.5	27.8	26.4	29.5
N =	62	61	75	109

Table 5.24: Percentage Distribution of the Working Mothers According to the Number of Hours Worked per Week by Age of the Youngest Child (L.U.S.)[1]

Number of Hours Worked per Week	Age of the Youngest Child (in years)					
	1	1	2	3	4-5	Total
7 - 13	10.2	9.5	0	13.2	5.6	8.3
14 - 27	39.0	38.1	46.9	39.5	50.0	41.7
28 - 39	44.1	47.6	31.3	39.5	22.2	38.7
40 - 55	5.1	4.8	9.4	7.9	16.7	7.7
56+	1.7	0	12.5	0	5.6	3.6
N =	59	21	32	38	18	168

1 Only mothers with living children of up to 5 years of age have been considered in the preparation of this table.

5.2.5 Characteristics of the Non-Working Population

This section examines some of the attributes of the non-working section of the population aged ten years and above in Barkait and looks at the proportion among them who worked during the cropping season preceding the survey and those who expressed their willingness to work, if work were available.

Table 5.25 shows that the proportion in the non-working population was quite high in the young age groups. This is because four-fifths of the boys in age-group 10-19 years were students. Among girls aged 10-14 years about 70 per cent were students and among girls aged 15-19 years 75 per cent were engaged in household work only. The proportion in the non-working population falls as age rises and finally rises again as age advances. Among males this was mainly due to illness. It is interesting to see that among males the proportion in the non-working population was higher in age-group 20-49 years than in age-group 50-64 years. This is because 25 per cent of those non-working in age-group 20-49 years were students. The table also shows that while less than one-fifth of males aged 10 years and above in the village belonged to the non-working section of the population, the proportion was over one-third among females. In fact, almost twice as many females were in the non-working section of the population as males. This is basically because of two reasons: (a) males are the breadwinners of the family and those that are able to work engage themselves in productive activities, and (b) there are more work opportunities available to men than to women.

Over half of the non-working males were students and a fifth were those who were physically unwell (see Table 5.26). Most of the students were concentrated in age group 10-19 years. That is, by the time a man reaches 20 years of age he is normally engaged in productive work. Over 7 per cent had no work during the refference period. Over three-fourths

Table 5.25: Percentage Distribution of Non-Working Population by Age and Sex (L.U.S.)

Age-Groups	Male	Female	Total
10 - 14	55.2	53.9	54.5
15 - 19	29.4	31.3	30.5
20 - 49	5.8	24.6	15.6
50 - 64	1.4	41.3	25.5
65+	29.2	50.0	48.7
10 and above	19.9	35.6	28.0
Total Population aged 10yrs and above	537	570	1107
Total Non-Working Population aged 10yrs and above	107	203	310

of them belonged to the landless households. One-tenth of the non-working population were dependent, all of whom were concentrated in age groups 10-14 and 65 years and above.

Among the non-working female population the highest proportion consisted of those doing household work only and less than one-fifth consisted of students. A vast majority of the students were concentrated in age-group 10-14 years. In contrast to males, a very small proportion of females in age-group 15-19 years were students. This is mainly due to the fact that the institution of purdah places restriction on the movement of girls of this age-group and also because parents show preference towards their sons rather than their daughters in respect of education. The proportion of dependents was higher for females than for males. Again, while dependents among males were concentrated only in age groups 10-14 years and 65 years and above, in the case of the females they were also found in age group 15-19 years and 50-64 years. While the proportion dependent among females in age-group 10-14 years was lower than that in the case of males in this age-group, the

Table 5.26: Percentage Distribution of Status of the Non-Working Population by Age and Sex (L.U.S.)

Status	Males						Females					
	10-14	15-19	20-49	50-64	65+	Total	10-14	15-19	20-49	50-64	65+	Total
1. Household work only						0	23.6	75.0	91.3	60.0	37.5	60.2
2. Students	77.4	85.8	25.0	0	0	53.3	69.1	3.6	0	0	0	19.4
3. Disabled/Sick/Insane	0	7.1	31.2	77.8	64.3	20.6	0	7.1	0	0	4.2	1.5
4. Out of work during the reference period	7.5	0	18.8	0	7.1	7.5	1.8	3.6	2.9	0	0	2.0
5. Dependent	11.3	0	0	0	28.6	10.2	5.5	3.6	0	36.0	54.1	12.9
6. Beggar	0	0	6.2	22.2	0	2.8	0	0	5.8	4.0	4.2	3.0
7. Not present at the time of interview (i.e. away from household)	3.8	7.1	18.8	0	0	5.6	0	7.1	0	0	0	1.0
All Statuses	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total non-working population in each age group	53	15	16	9	14	107	55	28	70	26	24	203
Total number of persons in each age group	96	51	268	74	48	537	102	90	285	63	30	570

proportion dependent among females in the older age-groups was higher than that of males. This is because males continue working even at old age. About 3 per cent of the non-working population of both sexes were beggars, all of whom belonged to the landless households. The proportion among females having no work during the reference period was considerably lower than that among males.

Out of 107 non-working males and 203 non-working females, 36 males and 21 females were reporting as "working" under the "gainful worker approach". Out of these 36 males and 21 females, 29 males and 7 females were reported to be either indisposed or out of work under the labour utilization survey. A comparison with the employment status under the "gainful worker approach" shows that out of these 36 males and 21 females, over one-third of such males belonged to the category of "unpaid family workers" and the proportion was 70 per cent among females.

The non-workers were asked to say whether they worked during the last cropping season, preceding the survey. A total of 33 males and 16 females were reported as having worked during that period.

Table 5.27 shows that about one-third of the non-working males worked during the last cropping season, preceding the survey, while less than 8 per cent of the non-working females were reported as doing so. This, again, clearly indicates the point made earlier that men cannot remain idle as long as their physical condition permits and as long as work opportunities exist. In the case of males having worked during the cropping season preceding the survey the lowest proportion was recorded in age-group 10-19 years. In all other age groups the proportion was considerably higher. Among females the proportion was very low in all age-groups. In fact, the proportion among males in age-group 10-19 years, although very low, was higher than the highest

Table 5.27: Percentage Distribution of Non-Working Population by Age and Sex who Worked during the Last Cropping Season preceding the Enumeration (L.U.S.)

	Males					Females				
	10-19	20-49	50-64	65+	Total	10-19	20-49	50-64	65+	Total
Proportion having worked during the last cropping season	11.8	68.8	77.8	50.0	30.8	6.0	11.4	7.7	4.2	7.9
Total number of persons in the non-working population	68	16	9	14	107	83	70	26	24	203
Total number of persons in each age group	147	268	74	48	537	192	285	63	30	570

proportion recorded for females. If we consider those who worked during the specified period and were not working during the reference period as percent unemployed of the labor force under this survey, unemployment, rate among males comes to 7.1 per cent while that among females comes to 4.2 per cent. Most of these females were reported engaged in household work only. A comparison with the 'GWA' shows that males who worked during the specified period were also reported as working under the 'GWA', while out of 16 such females 14 were reported working under the 'GWA'. In other words, all such persons may clearly be regarded as members of the labour force, because most of them not only worked over the period of one year (GWA) but also worked during the cropping season, preceding enumeration.

A comparison with the employment status under the 'GWA' reveals that of the 33 males, two-thirds of them belonged to the categories of "owner cultivator", "owner cultivator-cum-share cropper" and "agricultural labourer", while the same proportion among females belonged to the category

"unpaid family workers".

Persons who worked during the cropping season, preceding the survey were asked to state the number of hours worked during planting and harvesting seasons. Table 5.28 shows the number of hours worked at different seasons. It shows that among males the proportion having worked 6 hours or more daily during planting and harvesting seasons was the same. Besides, it shows that over four-fifths of all such males worked 6 hours or more daily during each of these seasons. In other words, all such males were definitely engaged in productive work to a significant extent and their inclusion in the labour force is, therefore, justified.

As regards females none were reported to have worked during the planting season. This is because females in rural Bangladesh do not usually work on the farm, as in many other countries, such as India, Malaysia, etc. They are mainly engaged in post-harvest operations. It is seen from the table that a majority of them were only part-time workers. Only one-quarter of them worked 6-7 hours daily and none worked over seven hours a day. This is due to the fact that only after attending to essential household work do they make themselves available for directly productive activities.

They were also asked to state whether during the specified period they worked inside their family farm only, or outside only or both inside and outside. Table 5.29 shows the percentage distribution by unit of employment and season. The table shows that among males just under 50 per cent and just over 50 per cent worked inside family farm during the planting and harvesting seasons respectively. Another one-fifth were wage labourers belonging to landless households. About another 30 per cent of them worked both inside and outside. Most of them belonged to households with up to 1.0 acre of land. Over 80 per cent of females

Table 5.28: Number of Hours worked during Different Seasons by the Non-Working Population who worked during the Last Cropping Season preceding the Enumeration (L.U.S.)

Average No. of hours worked daily	Planting Season		Harvesting Season		
	Male	Female	Male	Female	Both sexes
2 - 3 hours	3.4	0	0	31.3	11.1
4 - 5 hours	13.8	0	17.2	43.7	26.7
6 - 7 hours	34.5	0	27.6	25.0	26.7
8 or more hours	48.3	0	55.2	0	35.5
Total number of persons working during planting/harvesting season	29	0	29	16	45

Table 5.29: Location of Workplace of the Non-Working Population who worked during last Cropping Season, preceding the Enumeration (L.U.S.)

Unit of Employment	Planting Season		Harvesting Season		
	Male	Female	Male	Female	Both sexes
1. Inside family farm only	48.3	0	51.7	81.2	62.2
2. Outside only	20.7	0	20.7	18.8	20.0
3. Both inside and outside	31.0	0	27.6	0	17.8
Total number of persons working in each season	29	0	29	16	45

were reported to have worked only inside the household and less than one-fifth worked for others. None of the females were reported to have worked both inside and for others. This bears a close resemblance to a previous finding in this chapter (see section 5.2.3).

The non-working population were asked to say whether they would accept work, if work were available. Such a question was asked instead of using the concept of "looking for work". Such a concept, as already pointed out, is highly irrelevant in rural agricultural societies. Table 5.30 shows the percentage distribution by age groups and sex, who had expressed their willingness to work.

Table 5.30: Proportion among Non-Working Population who Expressed their Willingness to Work, by Age and Sex (L.U.S.)

Age-groups	Male	Female	Both Sexes	Total Non-working Population		
				Male	Female	Both Sexes
10 - 14	17.0	18.2	17.6	53	55	108
15 - 24	20.0	32.7	29.0	20	49	69
25 - 64	65.0	34.7	41.1	20	75	95
65+	35.7	4.2	15.8	14	24	38
Total	29.0	26.1	27.1	107	203	310

Thirty-one males and 53 females expressed their desire to work. The proportion is roughly the same. This shows that over one-fourth of the non-working females clearly wanted productive work. Most of them belonged to the landless and near landless households. They clearly represent potential additions to the labour force.

The table also shows that the desire to work is related to age. It rises with age till it reaches its maximum at age group 25-64 years, after which it falls quite substantially, especially in the case of females. A higher proportion of females in age group 15-24 years expressed their

willingness to work than males. This is because at this age-group the proportion among males going to school was higher than among females. Among males aged 25 years and above the desire to work is higher than that among females. This is because, as has been pointed out earlier, in Bangladesh men are the principal breadwinners who must find some sort of work to maintain or to supplement family expenses.

Among males those who expressed their desire to work were mainly those who had been out of work during the reference period and those who were indisposed. Among females the majority were those who were mainly engaged in household work only. This is a clear indication of the fact that even such females were prepared to work, if work were made available. These females, besides doing household work, wanted to participate in productive work.

CHAPTER 6. THE USE OF TIME AMONG ADULTS

This chapter analyzes time-budget data collected daily over a period of seven months for a sample of thirty-four households in Barkait. For the purpose of this chapter, data relating to individuals aged 15 years and above have been analyzed. In the next chapter dealing with the use of time among children data relating to children aged 5-14 years will be examined.

The chapter provides an account of how people make use of their time divided between directly productive activities, household maintenance activities, personal care and needs, social needs and time spent in idleness.[1] The relationship of the use of time with other characteristics of the population such as age, sex, landholding group, occupation and employment status are examined.

Time is one of the scarce resources people use together with other factors of production to create utility. In the language of modern household economics, the time of household members is a resource or factor of production. It is the main household resource in the case of poorer households. Time is allocated to several activities in such a way as to minimize the cost of producing household goods. Use of time is relevant not only in the production of goods but also in respect of various services which are indispensable to the maintenance of household. The study of the use of time by individuals is relevant to the interests not only of development economists but of other social scientists as well.

The chapter is broadly divided into two sections. The first section deals with the characteristics of the sample population and the second

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1. A part of idleness is voluntary (i.e. leisure), while the other is involuntary. It is difficult to say what proportion of time spent in idleness was voluntary and what proportion was involuntary.

provides an account of how people make use of their time.

6.1. Characteristics of the Sample Population

In this section a brief account of the demographic and economic characteristics of the sample population is presented.

As already referred to in Chapter 2 the sample consisted of 34 households out of a total of 312 households in the village. This represented 11 per cent of the total number of households in the village.

The total population of the sample households was 190 - males 95 and females 95. The total population of the sampled households was 11.2 per cent of the total population of the village. Over 90 per cent of the sampled households were Muslim households. This is in line with the distribution of households on the basis of religion for the village as a whole.

Table 6.1 presents the age-sex distribution of the sample population.

About 35 per cent of the sampled population was under 10 years of age and the proportion was the same in this age group for the village as a whole. The low proportion among males in age group 15-24 years was on account of out-migration, as can also be seen for the village as a whole. The population distribution in most other age groups roughly correspond to that of Barkait.

6.1.1 Literacy:

The rate of literacy for the population aged 5 years and above of the sampled households was 36.9 per cent - males 51.4 per cent and females 23.4 per cent. The rates were somewhat higher than those for all Barkait population.

Table 6.1.

Distribution of Sample Population by Age and Sex
(Percentage distribution)

Age-Groups	Male	Female	Both Sexes
0-4	21.1	22.1	21.6
5-9	12.6	13.7	13.2
10-14	15.8	9.5[1]	12.6
15-24	11.6	17.9[1]	14.8
25-34	13.6	13.6	13.7
35-44	8.4	4.2	6.3
45-54	6.3	11.6	8.9
55-64	5.3	4.2	4.7
65 and over	5.3	3.2	4.2

[1] In most less developed countries it is often seen that the proportion of girls in age group 10-14 years is quite low and is quite high in age group 15-24 years. This may be due to the usual misstatement of age in these countries, out-migration in the case of males aged 15-24 years and also due to random variation in a sample as small as selected for the present study.

Table 6.2 clearly indicates the existence of a sex differential in respect of the literacy rate. Such a differential also exists for the village as a whole.

Table 6.3 presents the percentage distribution of the sampled population by educational level and sex. The table shows that, while only about 4 per cent of the males belonged to the category of 'only Koran readers', over one-quarter of all females belonged to this category. Among males over half had been to school, while the corresponding figure for females was one-fifth. Among males the proportion who had been to secondary school or had achieved further education (i.e. beyond secondary school) was roughly one-sixth, compared to around 5 per cent in the case of the females. The sex differential is quite pronounced. The reasons for such a differential have already been explained in Chapter IV (see section dealing with literacy and level of education).

6.1.2. Marital Status:

Table 6.4 presents breakdown of marital status by sex and broad age-groups for the sample population.

The table shows that the proportion of ever-married women was higher than that of ever-married men. None of the males aged 15-19 years were married while over four-fifths of the females belonging to this age group were married. At age 20 years and above one-ninth of all males were unmarried, while at this age group all females were married. This bears a close similarity to the pattern observed in Barkait and the country as a whole. The other interesting feature of the table is that among males there was no case of separated, divorced or widowed persons, whereas in

Table 6.2.

Percentage Distribution of Literacy Rate by Broad Age Groups and Sex Among the Sampled Population

Age-Groups	Male	Female	Both Sexes
5 years and above	51.4	23.4	36.9
10 years and above	56.7	20.9	38.5
15 years and above	57.4	20.8	37.0
All ages	42.0	19.6	28.6

Table 6.3

Percentage Distribution of Population by Educational Level, Sex and Broad Age-Groups

Educational Level	Population Aged 5 years +			Population Aged 10 years +			Population Aged 15 years +		
	M	F	BS	M	F	BS	M	F	BS
1. Illiterate	44.4	49.4	46.9	40.0	53.2	46.7	42.6	56.6	50.0
2. Can read Holy Koran only	4.2	27.3	16.1	3.3	25.8	14.7	2.1	22.6	13.0
3. Some primary schooling	30.6	14.3	22.1	31.7	9.6	20.5	27.6	9.4	18.0
4. Completed primary schooling	6.9	5.2	6.0	8.3	6.5	7.4	8.5	5.7	7.0
5. Some secondary schooling	4.2	3.9	4.0	5.0	4.8	4.9	6.3	5.6	6.0
6. Completed secondary schooling	4.2	0	2.1	5.0	0	2.5	6.3	0	3.0
7. Matriculation and/or above	5.6	0	2.8	6.7	0	3.3	8.5	0	4.0

Table 6.4

Marital Status by Sex and Broad Age-Groups for the Sampled Population
(Percentage distribution)

Marital Status	Males			Females			Both Sexes		
	10-14	15-19	20+	10-14	15-19	20+	10-14	15-19	20+
1. Currently married			88.4		60.0	78.5		42.9	83.5
2. Never married	100.0	100.0	11.6	100.0	20.0		100.0	42.9	5.9
3. Separated					10.0	4.8		7.1	2.4
4. Divorced					10.0			7.1	0
5. Widowed						16.7		0	8.2
N	13	4	42	9	10	42	22	14	84

the case of females, there were nine of this type. The pattern of marriage dissolution in the case of females was quite similar to the one observed among all females in the village.

6.1.3. Cumulative Fertility:

Table 6.5 presents the total fertility which the female population belonging to the sampled households had experienced prior to their enumeration in the Household Census.

Table 6.5

Parity by Age of Ever-Married Women Among the Sampled Households
(Percentage distribution)

Parity	15-24 yrs.	25-34 yrs.	35-54 yrs.	55 yrs.+	Total
0	29.4				7.8
1	31.3		6.7		11.8
2	29.4				7.8
3	9.9	23.1			11.8
4		30.8		14.3	9.8
5		38.4	13.3		13.7
6		7.7	13.3	14.3	7.8
7			66.7	71.4	29.5
Average no. of children borne	1.29	4.31	6.93	6.86	4.43
N	17	13	15	7	52

The table shows that about 8 per cent of the females belonging to sampled households had not experienced any live birth. In fact, all the childless women belonged to age group 15-24 years, all of whom had been

married less than one year at the time of the survey. In no other age group was there a single childless woman. As in the case of the village as a whole, over half of the females belonging to the sampled households reported having between one and five live births.

6.1.4. Landholding:

Table 6.6 gives an account of the net cultivable land area of the sampled households.

About 18 per cent of the sampled households were landless. Over 70 per cent of the sample households held cultivable land area ranging between 0.01 to 2.0 acres and about 12 per cent held cultivable land area in excess of two acres. This is generally in line with the findings for the village as a whole.

Table 6.7 indicates the relationship between the size of household and the size of net cultivable land area. As in the case of the village as a whole it shows that the larger the size of the household, the larger is the amount of net cultivable land area per household as well as per person, because the larger households are found more often to have a large net cultivable area.

Over three-fifths of all sampled households had a size ranging between one and six persons. In fact, households having a size varying between four and six persons made up 50 per cent of all sampled households. When related to different landholding groups it appears that a higher proportion of the sampled households which were either landless or near-landless had size ranging between one and six persons. In contrast, a significantly higher proportion of households having land in excess of one acre had seven or more members living in the household.

Over 70 per cent of all farms belonging to the sampled households were owner -operated and there was not a single farm which was purely tenant

Table 6.6

Distribution of Sampled Households by Net Cultivable Area

Size of Net Cultivable Area (in acres)	Number of Households	Total Population		Average number of household members	Total Cultivable Area		Average land-holding per household (in acres)	Average land per person (in acres)
		Number	% of total		Acres	% of total		
1. Landless	6	30	15.8	5.0	0	0	0	0
2. 0.01-1.0	19	94	49.5	4.9	8.06	22.1	0.42	0.09
3. 1.01-2.0	5	31	16.3	6.2	7.35	20.2	1.47	0.24
4. >2.0 acres	4	35	18.4	8.8	21.00	57.7	5.25	0.60
Total	34	190	100.0	5.6	36.41	100.0	1.07	0.19

Table 6.7

Distribution of Net Cultivable Land Area by Size of Household

Size of Household (in persons)	Number of Households	Number of Landless Households	Total Population	Total land-holding (in acres)	Average land-holding per Household (in acres)	Average land-holding per person (in acres
1-3	6	1	16	1.64	0.27	0.10
4-6	17	4	84	14.11	0.83	0.17
7+	11	1	90	20.66	1.83	0.23
Total	34	6	190	36.41	1.07	0.19

operated. Over 70 per cent of the farms had four or more fragments, while only 8 per cent of the farms were non-fragmented. Seventy per cent of the total cultivable area belonging to the sample households were devoted to rice. The rest of the area was devoted to 'dhondha',[1] jute, sugarcane, etc.

Out of a total of 28 sampled households which possessed cultivable land area, seven households (25 per cent) reported that their land was cultivated solely by members of the household. All of these households had land area ranging between 0.01 to 1.0 acre. Twentyone households (75 per cent) reported using outside labour. Of such households two reported depending solely on outside labour. These were households with females as head of household and had no adult male member living in the household. Their husbands were working and staying outside the village and for all practical purposes these women were heads of households. These two households had land area ranging between 0.01-1.0 acre. About two-thirds of the sampled households reported using outside labour during the busy periods, i.e. during transplanting and harvesting seasons. During such periods the tasks have to be completed within a relatively short period of time and the demand for outside labour is quite high. Eight of the households reported utilizing outside labour also at times other than transplanting and harvesting seasons. These were mostly households with relatively more land. Such households employed outside labour also for such tasks as weeding, manual irrigation, drying straw, etc.

6.1.5. Material Possession of Sampled Households:

Table 6.8 presents the proportion of the sampled households in each

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1. Dhondha is a native crop akin to rice but much inferior in quantity and quality.

landholding group with each of the objects as noted below.

Table 6.8

Percentage of the Sampled Households in Each Landholding Group Possessing Various Objects

Ownership of Objects (own one or more of these objects)	Landholding Group (in acres)				
	Landless	0.01-1.0	1.01-2.0	>2.0 acres	Total
A. Productive Goods:					
1. Bull	16.7	44.5	83.3	75.0	50.0
2. Cow	0	22.2	50.0	75.0	29.4
3. Plough	0	44.5	83.3	100.0	50.0
4. "Dhekhi"	0	61.4	100.0	100.0	64.7
5. Rickshaw	0	5.3	0	0	2.9
B. Consumption Goods:					
1. Radio	0	0	0	50.0	5.9
2. Tables	0	5.6	66.7	100.0	26.5
3. Chairs	0	5.6	50.0	75.0	20.6
4. Bicycles	0	5.6	16.7	25.0	8.9
5. Partially corrugated iron sheet house	16.7	16.7	66.7	50.0	29.4
6. Cots	100.0	100.0	100.0	100.0	100.0

The table shows that a cot was the only item which was possessed by all the sampled households. On most other items the ownership was unevenly distributed with the landless households having none of most of the objects while around 75 per cent of households with land in excess of 2 acres commanding ownership of most of these objects. This shows the very striking differences among the different landholding groups in ownership of possessions, thus indicating differences in real wealth among different landholding groups.

Table 6.9 presents the percentage distribution of the sampled households by Economic Index and Net Cultivable Area of the Household.

Table 6.9

Percentage Distribution of Sampled Households by Economic Index* and Net Cultivable Area

Economic Index (weighted score)	Net Cultivable Area (in acres)				
	Landless	0.01-1.0	1.01-2.0	>2.0 acres	Total
1. 49-58	100.0	26.3			32.3
2. 59-68		21.0			11.8
3. 69-78		47.4			26.5
4. 79-88		5.3	40.0		8.8
5. 89-98			60.0	25.0	11.8
6. 99+				75.0	8.8
N	6	19	5	4	34

* A discussion of how the Economic Index is constructed is contained in Chapter 3 (Section 3.14)

In line with the findings for the village as a whole, among the sampled households there existed an uneven distribution of wealth. While over two-fifths of the sampled households belonged to the first and second categories of the index, about one-fifth of the households belonged to the last two categories. Moreover, while all the landless households and eight of the households having land of up to 1.0 acre belonged to the first two categories of the index, none of the households having land in excess of two acres belonged to the first two categories. In fact, all the households with land in excess of two acres belonged to the last two categories of the index.

Table 6.10 presents the percentage distribution of the sampled households in different income groups by size of net cultivable land area. As in the case of the village as a whole there existed income inequalities

among the sample households. While about one-third of the households had weekly incomes of up to Tk.30.0 only about 15 per cent had weekly income exceeding Tk.80.0. None of the landless households and those possessing cultivable land area ranging between 0.01-1.0 acre had weekly incomes exceeding Tk.80.0, while 40 per cent and 75 per cent respectively of households with land area ranging between 1.01-2.0 acres and those with over two acres had weekly incomes exceeding Tk.80.

Table 6.10

Distribution of Sample Households in Different Income Groups by Size of Net Cultivable Area
(Percentage distribution)

Weekly Income of Households (in taka)	Net Cultivable Area (in acres)				
	Landless	0.01-1.0	1.01-2.0	>2.0 acres	Total
1. Up to Tk.20.0	16.7	15.8	0	0	11.8
2. Tk.21.0-30.0	0	31.6	20.0	0	20.6
3. Tk.31.0-40.0	33.3	5.3	20.0	25.0	14.7
4. Tk.41.0-50.0	33.3	15.8	0	0	14.7
5. Tk.51.0-60.0	0	10.5	0	0	5.9
6. Tk.61.0-80.0	16.7	21.1	20.0	0	17.6
7. Tk.81 and above	0	0	40.0	75.0	14.7
Total	100.0	100.0	100.0	100.0	100.0
N	6	19	5	4	34

6.1.6. Labour Force Characteristics:

The total labour force enumerated on the basis of the "gainful worker approach"[1] for the sampled households was 84 - 49 males and 35 females.

1. A discussion on the "gainful worker approach" is contained in Chapter 1.

The overall labour force participation ratio of population aged 0 years and above was 44.2 per cent - males 52.7 per cent and females 36.1 per cent. While the rates for both sexes combined and that of males were similar to the rates for Barkait as a whole, the female rate was lower than the rate for that of all females in the village.

Table 6.11 gives the age-sex specific labour force participation rates of the sample population.

Table 6.11

Age-Sex Specific Labour Force Participation Rates of the Sample Population

Age-Groups	Male	Female	N for males	N for females
10-14	23.1	55.6	15[1]	9
15-24	88.9	56.3	11[1]	17
25-34	100.0	61.5	13	13
35-44	100.0	75.0	8	4
45-54	100.0	72.7	6	11
55-64	100.0	25.0	5	4
65 and above	100.0	33.3	5	3

[1] Out of 15 boys aged 10-14 years and 11 males aged 15-24 years time-budget data have been collected for 13 boys and 9 males aged 10-14 years and 15-24 years respectively. Two persons in each age-group left the village for Comilla Town where they were studying and living.

A comparison with the age specific labour force participation rates (GWA) for Barkait (see Chapter 5, Table 5.2) shows that in the case of males the rates were fairly similar, though in the case of boys aged 10-14 years the rate for Barkait was higher than that of the sampled population while in the case of males aged 65 years and above the rate of the sample popu-

lation was somewhat higher than that of the village as a whole. In the case of females the labour force participation rates of girls aged 10-14 years and of females in age group 45-54 years were somewhat higher than the rates for females in these age groups for the village. In the other age groups the female labour force participation rates for the sample population were lower when compared with the rates for the village as a whole.

The "dependency ratio" for the sample population comes to 119 per 100 labour force participants. Of this the proportion of those under 10 years of age (the minimum age requirement for inclusion in labour force, according to the definition adopted for the Bangladesh Census, 1974) was 66 per cent, women doing household work only 16 per cent, students 14 per cent, and those aged 60 years and above 4 per cent. This corresponds to the findings for the village as a whole.

Of the dependent population aged 10 years and above, 9 boys and 4 girls aged 10-14 years and one boy aged 15-19 years were currently studying. Seventeen females aged 10 years and above were reported as engaged in full-time household work. This represented 28.3 per cent of the total female population aged 10 years and above belonging to the sampled households.

Table 6.12 presents a breakdown of broad occupational groups by age and sex. It is quite obvious from the table that just as in the case of the village as a whole the predominant occupation among the population belonging to the sampled households was agriculture. In the case of males, agriculture constituted about four-fifths of all occupational categories. Out of 49 males in the work force among the sampled households 10 were engaged in non-agricultural occupations. Out of these 10 persons, 4 were rickshaw-pullers. Two of the rickshaw-pullers hired rickshaws while the

other two shared a single rickshaw. Of the two who hired rickshaws one belonged to a landless household, while the other belonged to a household having between 0.01-1.0 acre of cultivable land. Of the other six pursuing non-agricultural occupations two worked at a tea-stall in the village and the remaining four were a teacher in a primary school, a barber, a mason and a hawker of vegetables and grain. In the case of females belonging to the sampled households agriculture was the only occupation, although about 6 per cent of all working women in the village pursued non-agricultural activities.

Out of the 49 working males 13 (26.5 per cent) had a subsidiary occupation. Four of them had cultivation as their subsidiary occupation, three were hawkers, two were masons, two were engaged in handicraft production, and one devoted time to teaching at the local religious school and the other was at times engaged in spinning yarn. None of the females were reported as having any subsidiary occupation.

Table 6.12

Percentage Distribution of Broad Occupational Categories by Age and Sex

	Male			Female	N	
Age-Groups	Agriculture	Non-agriculture	Total	Agriculture	Males	Females
10-14	100.0	0	100.0	100.0	4	5
15-24	87.7	12.5	100.0	100.0	8	10
25-34	84.6	15.4	100.0	100.0	13	9
35-44	62.5	37.5	100.0	100.0	8	4
45-54	83.3	16.7	100.0	100.0	6	9
55-64	80.0	20.0	100.0	100.0	5	2
65+	80.0	20.0	100.0	100.0	5	1
Total	79.6	20.4	100.0	100.0	49	40

Table 6.13 presents the employment status of the working population belonging to the sampled households.

Table 6.13

Percentage Distribution of the Employment Status of the Working Population by Sex

Employment Status	Males	Females	Both Sexes
1. Owner-cultivator	20.4	2.9	13.1
2. Owner-cultivator cum share-cropper	18.4	2.9	11.9
3. Agricultural wage labourer	12.2	2.9	8.3
4. Unpaid family worker	20.5	88.4	48.8
5. Owner-cultivator cum agricultural labourer	6.1	-	3.6
6. Unpaid family worker cum agricultural labourer	4.0	2.9	3.6
7. Employee	8.2	-	4.8
8. Independent/self-employed	10.2	-	5.9
Total	100.0	100.0	100.0

Over two-fifths of all working males in Barkait were either owner-cultivators or owner-cultivators cum sharecroppers. Among the sampled male population the proportion was just under two-fifths. Almost the same proportion of females, i.e. over 5 per cent, belonged to that category, both among the sampled female population and for the village as a whole. The proportions classified as unpaid family worker was similar to those recorded for Barkait. Among the female population the proportion recorded under agricultural wage labourer was considerably lower when compared to the rate for the village.

A breakdown by age (not shown here) shows that among the males all

owner-cultivators and owner-cultivators cum sharecroppers were aged 25 years or over. In fact, four of them were over 65 years of age. This, once again, reinforces the argument made earlier that in rural agricultural societies males do not retire at 60 or 65 years of age but continue to work on family farms or in family businesses. There were six agricultural wage labourers among males and one among females. Of the males one was aged 10-14 years and belonged to a landless household. Three were aged 25-34 years, while one was aged 35-44 years and 45-54 years each. The female agricultural wage labourer belonged to a landless household and to age group 10-14 years. There were 12 males and 25 females aged 15 years and above categorized as unpaid family workers. Of the males seven of them were aged 15-24 years and three belonged to age group 25-34 years. Among the females the unpaid family workers were spread over all age groups.

6.2. How Individuals Make Use of Their Time.

In this section it is intended to describe how individuals aged 15 years and above make use of their time, divided between different categories of time, outlined in Chapter 2 of the thesis.

6.2.1. Directly Productive Activities:[1]

Table 6.14 gives a breakdown of the proportion of the total time spent on various broad categories of DPA.

The table shows that males spent over four-fifths of their directly productive work time on activities inside the family farm or business and the proportion was over 90 per cent in the case of females. In other

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1. DPA is an abbreviation of Directly Productive Activities and throughout the analysis DPA will be used to refer to directly productive activities.

Table 6.14

Proportion of Time Spent Daily Among Various Directly Productive Activities

Categories	Male	Female	Both Sexes
All directly productive activities	100.0	100.0	100.0
1)(a) Inside family farm/business	85.6	91.9	87.6
(b) Outside family farm/business	14.4	8.1	12.4
2) Agricultural activities	55.1	59.0	57.1
a) Agricultural activities inside	43.1	57.6	50.6
b) Agricultural activities outside	12.0	1.4	6.5
3) Non-farming activities	26.0	20.1	23.0
4) Other productive activities[1]	18.9	20.9	19.9

[1] Other productive activities include tending animals and fishing.

words, the household is the primary unit of employment for the vast majority of the population. Over half of the time on DPA was spent on agricultural activities. Over four-fifths of all time spent on agricultural activities was on one's own or family farm or business (just under 80 per cent for males and 98 per cent for females). Villagers do not spend all their productive time on agricultural activities alone. They engage themselves in various non-farming activities as well. Non-farming activities involve about one-quarter of productive time. Besides, time spent on other productive activities involve approximately one-fifth of the time spent on DPA.[1]

1. This clearly points out the limitation of studies attempting to measure the extent of labour utilization in agriculture alone. This is why it is intended in this study to measure the extent of labour utilization in respect of total time spent on all directly productive activities, as well as in respect of time spent on total work.

Part (a) of Table 6.15 shows that the average number of hours spent daily and weekly on DPA rises with age, then falls at age group 35-44 years and remains constant till 54 years of age after which it falls again.[1] The same general pattern has been observed using data from the labour utilization survey conducted in the village (see Chapter 5, Table 5.17).

Males aged 15-24 years worked, on average, 0.7 hours more per day than those aged 55 years and above, but worked over one hour less daily than those in age group 25-54 years. Persons aged 25-54 years are normally the breadwinners of the family and had spent six hours or more per day on DPA.

Mead Cain, in a study of a Bangladesh village, found that the number of hours spent on total productive work rises with age and then falls at age group 22-59 years.[2] Because he lumped together 37 years (i.e. 22-59 years), his data cannot be compared with the age groups presented in Table 6.15. He found that males aged 13-15 years, 16-21 years and 22-59 years had spent 8.8 hours, 8.8 hours and 8.0 hours per day respectively. In Barkait the number of hours spent on DPA by males was less than reported by Cain. As already pointed out, Cain's data suffers from recall error and from extending the period of observation to 24 hours of the day, rather than for an effective working day of 14-16 hours, which might have resulted in over-reporting of the time spent on productive work.

A breakdown of busy and slack periods as well as the busiest and the slackest weeks is given in Table 6.15. A comparison of the busy and the

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1. See also Appendix III - Figure 1.

2. Mead Cain, "The Economic Activities of Children in a Village in Bangladesh", Population and Development Review, Vol.3, No.3, September 1977, pp.201-227.

slack periods shows that, on average, each person worked an extra 1½ hours per day during the busy period than during the slack period. The difference is much greater if we compare the busiest with the slackest weeks. On average, two-and-a-half hours more per day were worked during the busiest weeks compared with the slackest weeks.

The breakdown of the table by busy and slack periods also helps in pointing out the differential by age among males aged 35-54 years. While in the case of the total period of observation the differential was non-existent, a differential by age can be detected if we look at the busy and the slack periods. During the busy period and the busiest weeks males aged 45-54 years spent more time on DPA than males aged 35-44 years, although the opposite was the case during the slack period and the slackest weeks.

Part (b) of Table 6.15 shows that the number of hours spent on directly productive activities among females rises with age and then starts declining at age 45 years.[1] The same pattern has been observed using data from the labour utilization survey (see Chapter 5, Table 5.17), although the time-budget data shows the differential clearly.

Cain reported that females aged 13-15 years, 16-21 years and 22-59 years had worked 2.0 hours, 1.6 hours and 1.8 hours per day respectively.[2] This is about one hour less per day than in Barkait.

As in the case of males, females aged 15-24 years spent more time on DPA than those aged 55 years and above (half-an-hour more in this case). Females in age group 35-44 years spent more time on DPA than did the others. This is in line with the findings of Table 5.17 (Chapter 5).

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1. See also Appendix III - Figure 2.

2. Mead Cain, "The Economic Activities of Children in a Village in Bangladesh", op.cit.

As in the case of males, females spent, on average, about one-and-a-half hours more daily on DPA during the busy period than during the slack period and the difference was even more pronounced for the slackest and busiest weeks.

A comparison of males and females shows that males in all age groups spent over twice as much time on DPA as females. This corresponds to the findings of Table 5.17 (Chapter 5). Such a difference arises for the following reasons: a) the social law assigns to males the role of bread-winners who must contribute as much time to DPA as possible; b) the pre-harvest and harvest operations in agriculture involve more time than the post-harvest operations, in which females are usually engaged; c) females devote time to DPA in addition to the time spent on household maintenance activities.[1] As will be seen in subsequent analysis females spend considerably more time on HHMA than males, and d) females are not encouraged and in most cases not allowed to take outside employment. This is mainly on account of the values and norms prevailing in the society. Only 8 per cent of the working females in Barkait were agricultural wage labourers, while over four-fifths of them were unpaid family workers. This suggests that women share amongst themselves whatever directly productive work is available inside the family farm or business.

Table 6.16 shows that servants spent far more time on DPA than all others. There were two males who were attached to the households as servants and worked mainly on the land. They belonged to households with relatively more land. The minimum number of hours spent by the servants was just under 8 hours per day during the slack period, while the maximum

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1. Household maintenance activities will be referred to as HHMA from now on.

Table 6.15

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Age and Sex

Period		(a) Males						(b) Females					
		15-24	25-34	35-44	45-54	55+	Total	15-24	25-34	35-44	45-54	55+	Total
TOTAL[1]	Day	5.0	6.7	6.0	6.0	4.3	5.6	2.1	2.5	3.7	2.8	1.6	2.4
	Week	34.8	46.6	42.0	41.9	29.8	39.2	14.9	17.2	25.9	19.8	11.3	16.8
BUSY[2]	Day	6.1	7.5	6.5	6.8	4.8	6.4	2.9	2.8	4.3	3.3	1.9	3.3
	Week	42.7	52.8	45.3	47.9	33.7	44.8	20.3	19.5	30.1	23.3	13.6	23.3
BUSIEST WEEKS[3]	Day	6.5	8.2	7.0	7.5	5.3	6.9	3.6	3.2	5.2	4.1	2.4	3.6
	Week	45.6	57.5	49.2	52.6	37.0	48.6	25.5	22.7	36.4	28.7	17.1	25.0
SLACK[4]	Day	4.0	5.9	5.6	5.2	3.8	4.9	1.4	2.2	3.2	2.4	1.3	1.9
	Week	27.9	41.2	39.2	36.6	26.4	34.4	10.1	15.2	22.3	16.7	9.2	13.1
SLACKEST WEEKS[5]	Day	3.8	5.5	5.3	4.4	2.7	4.4	1.1	1.9	3.0	2.4	1.2	1.7
	Week	26.7	38.4	37.3	30.9	19.1	30.8	8.0	13.2	20.9	16.6	8.3	12.1
N		9	13	8	6	10	46	17	13	4	11	7	52

[1] Total refers to the entire period of observation, i.e. 30 weeks from May 21, 1976 to December 16, 1976.
[2] Busy period refers to 14 weeks out of 30 weeks of observation, when both males and females were relatively busy.
[3] Busiest weeks refers to 2 weeks of observation when both males and females had spent more time on directly productive activities than during other weeks.
[4] Slack period refers to 16 weeks of observation when both males and females were relatively less busy.
[5] Slackest weeks refers to 2 weeks of observation when both males and females had spent the least amount of time on directly productive activities than during other weeks.

number of hours spent per day was around 12 hours (during the busiest weeks). The other interesting point to note from the table is that the minimum amount of time spent by the servants on DPA was more than the maximum amount of time spent on it by the others, with the exception of the sons. Sons spent, on average, eight hours per day during the busiest weeks and this comes close to the minimum amount of time spent by the servants during the slack period. Servants are hired on wage payment in addition to free food and lodging and are not employed unless they are prepared to work long hours. This is expected of them since, while an unattached agricultural wage labourer gets Tk.10.0 per day and works about eight hours a day, the daily wage rate (in cash and kind) of a servant comes to Tk.14.0 per day and, hence, they have to work at least two to three hours more than an unattached agricultural wage labourer to justify the wages received by them.

Servants were followed by sons in respect of time spent on DPA. On average, they spent over half-an-hour a day more than the heads of households.

A breakdown of heads of households and sons by age (not shown here) shows that the average number of hours spent on DPA by heads of households under 55 years of age was 41.4 hours a week and 29.8 hours a week in the case of those aged 55 years and above. Among sons the average number of hours spent on DPA was 39.7 per week and 42.0 per week in the case of those aged 15-19 years and 20 years and above respectively. In other words, sons aged 15-19 years spent almost one-and-a-half hours more per day in comparison to heads of households aged 55 years and above. That is, after a son reaches 15 years of age he works almost as much as his father if the latter is under 55 years of age and more if the latter is 55 years or more.

If we compare the housewives[1] and the daughters we notice a small differential. During the busy period daughters spent 0.6 hours more per day on DPA than mothers, while mothers spent an hour more per day than daughters during the slack period and the difference was even more pronounced for the slackest and the busiest weeks. This shows that while mothers continue to spend about two hours a day irrespective of the busyness or otherwise of the season, the daughters' contribution to DPA was quite minimal during the slackest weeks. Mothers and daughters, especially those aged 15 years and above, are usually engaged in the same types of activities.

A comparison of heads of households and housewives shows that heads of households spent twice as much time on DPA than housewives. Sons spent over two-and-a-half times as much time on DPA than daughters. The differential between sons and daughters was much sharper during the slack period. While sons, on average, spent over five hours per day during the slack period and almost five hours a day during the slackest weeks, the daughters spent just over an hour and less than one hour during the slack period and the slackest weeks respectively. This indicates that the contribution of male children was much more significant than that of female children in respect of DPA, especially during the slack period.

The category "others" includes mostly dependent relations. Of the 16 belonging to this category there was one male and the rest consisted of dependent female relations. Of these 15, seven were in age group 15-24

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1. There were two female heads of households. They have been grouped together under "housewives", since there was no difference between the two heads of households and the housewives in respect of time spent on directly productive activities. These female heads of households had their husbands working at Dacca, who visited the households only occasionally. These women were, therefore, for all practical purposes, the heads of households.

years and the rest were aged 50 years and above. The dependent male spent 43.3 hours weekly which is comparable to the time spent by sons. The dependent females spent less time on DPA than all others. This was true for the entire period of observation as well as for the busy period and the busiest weeks. However, during the slack period and the slackest weeks the dependent females spent more time on DPA than the daughters.

A comparable study by Farouk and Ali shows that heads of households spent between 8 and 10 hours a day on cash earning and self-employed income-earning activities, whereas wives ranged between 0.07 hour to 6.08 hours per day in the different unions in their study.[1] While the number of hours spent on DPA by the heads of households in Farouk's study was higher than in Barkait, in the case of females it was lower in most unions, about the same in Belkuchi union and higher in Maichchari union as compared to Barkait.

As already noted in Chapter 1, Farouk and Ali's methodology suffers from serious limitation. Farmers were asked to report the number of hours worked on a normal day. (Except for Azimpur union at Dacca the other unions were in rural areas). Since farmers keep no record of their daily activities, it is likely that their data suffers from over-reporting of time spent on such work. Moreover, since data was collected only for the heads of households and their wives and not for other members of the household, it is likely that heads of households reported more time spent by them and their wives than was, perhaps, the case.

Evenson found that husbands spent between 19.2 hours and 28.4 hours a week on total market work and wives spent between 5.9 hours and 8.6

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1. A. Farouk and Muhammad Ali, The Hardworking Poor , Bureau of Economic Research, University of Dacca, Dacca, 1977 (Tables 3.1 and 3.3; pp.37 and 43).

hours a week, depending on the size of landholding. The number of hours spent on total market work was smaller compared to that of Barkait. Evenson himself observed, "these data suggest less market work than other samples in the Laguna project".[1]

Table 6.16

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Role in the Household

Period		Head of Household	House-wife	Son	Daugh-ters	Others	Ser-vants
TOTAL							
	Day	5.4	2.7	6.2	2.4	2.1	8.6
	Week	37.8	18.9	43.7	16.7	14.5	60.0
BUSY							
	Day	6.1	3.2	7.5	3.8	2.4	9.7
	Week	42.7	22.5	52.5	26.6	16.5	68.0
BUSIEST WEEKS							
	Day	6.7	3.8	8.0	5.0	3.0	11.8
	Week	46.8	26.5	55.8	34.7	21.2	82.5
SLACK							
	Day	4.8	2.3	5.2	1.2	1.8	7.7
	Week	33.5	15.8	36.2	8.1	12.8	53.8
SLACKEST WEEKS							
	Day	4.2	1.9	4.9	0.7	1.6	8.5
	Week	29.4	13.4	34.6	5.2	11.2	59.5
N		32	34	11	3	16	2

Part (a) of Table 6.17 shows that males belonging to households having land areas ranging between 0.01-1.0 acre spent more time on DPA than others. This is because most of them cultivated others' land in addition to cultivating their own land. Besides, since such households rarely employ

1. Evenson, R.E., "Time Allocation in Rural Philippine Households", American Journal of Agricultural Economics, Vol.60, No.2, May 1978, pp.322-330.

outside labour their members have to spend more time on the farm. This is consistent with the data from the labour utilization survey insofar as males belonging to other landed households are concerned. However, the labour utilization survey data shows that persons belonging to landless households worked more than those belonging to households having land areas ranging between 0.01-1.0 acre. Using time-budget data we find that this was not the case.

Males belonging to households with over two acres of land spent more time on DPA than those belonging to landless households and to households possessing land areas ranging between 1.01-2.0 acres. In fact, males belonging to landless households and to households with land areas ranging between 1.01-2.0 acres spent virtually the same amount of time on DPA.

If we look at the busy and slack periods we find that the extent of seasonal variation was lowest among the landless. This is because during slack periods when there is little demand for their labour on the farm they participate in non-farming activities, such as handicraft production, spinning yarn, weaving fishing nets, etc. They spent, on average, 1.2 hours more per day on DPA during the busy period than during the slack period, while males belonging to landed households spent 1.5 hours more per day during the busy period in comparison to the slack period. There was no differential by size of landholding, although if we look at the busiest and the slackest weeks we find that males belonging to households with over two acres of cultivable land had a wider differential in work input that did those with less land, and those belonging to landless households have the least variation.

Part (b) of the table shows that among females the number of hours spent on DPA increases with the size of land area and then declines as the size of land area exceeds 2.0 acres. Those belonging to landless households spent the least amount of time, while those belonging to house-

holds with land areas ranging between 1.01-2.0 acres spent more time on DPA than others.

Data from the labour utilization survey shows that those who belonged to landless households worked more than the others, while those who belonged to households with land areas ranging between 0.01-1.0 acres and 1.01-2.0 acres spent the same amount of time on DPA and those belonging to households with over two acres of land spent the least amount of time. The time-budget data shows that this was not the case.

The extent of seasonal variation was least pronounced in the case of females belonging to households having land areas ranging between 1.01-2.0 acres and most pronounced in the case of females belonging to households with land areas ranging between 0.01-1.0 acre. However, if we look at the busiest and the slackest weeks we find that the extent of seasonal variation was most pronounced in the case of those belonging to households having land areas in excess of two acres of cultivable land.

A comparison of males and females shows that though males belonging to households having land areas ranging between 0.01-1.0 acre spent considerably more time on DPA than other males, in the case of females this was true of those who belonged to households possessing land areas ranging between 1.01-2.0 acres.

Table 6.18 shows that owner-cultivators cum sharecroppers spent more time on DPA than others (one hour more per day). Interestingly, unpaid family members spent more time on DPA than owner-cultivators (18 minutes more per day). Thus, the notion that the contribution of unpaid family workers, at least those aged 15 years and above, is not significant, does not hold good.[1] Unpaid family workers worked more than owner-cultivators during

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1. Since most of the females were unpaid family workers no attempt is made to show the differential in the case of females by employment status. One of the males aged 15-19 years was a student and has been excluded from this analysis.

Table 6.17

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Landholding Groups (in acres)

Period		(a) Males					(b) Females				
		Landless	0.01-1.0	1.01-2.0	>2.0 acres	Total	Landless	0.01-1.0	1.01-2.0	>2.0 acres	Total
TOTAL	Day	4.7	6.6	4.7	5.3	5.6	1.6	2.3	3.3	2.8	2.4
	Week	32.7	46.3	32.9	37.2	39.2	11.3	16.2	23.4	19.9	16.8
BUSY	Day	5.3	7.4	5.5	6.1	6.4	2.3	3.3	3.9	3.7	3.3
	Week	37.2	52.0	38.5	42.7	44.8	15.8	23.1	27.1	26.1	23.3
BUSIEST WEEKS	Day	5.8	7.9	5.8	7.2	7.0	2.7	3.4	4.2	4.8	3.6
	Week	40.3	55.4	40.9	50.3	48.6	19.2	24.0	29.3	33.9	25.0
SLACK	Day	4.1	5.9	4.0	4.6	4.9	1.1	1.3	2.9	2.1	1.8
	Week	28.8	41.2	28.0	32.3	34.4	7.4	9.4	20.2	14.6	12.9
SLACKEST WEEKS	Day	4.0	5.4	3.2	4.1	4.4	1.0	1.7	2.7	1.8	1.8
	Week	28.2	37.6	22.7	28.4	30.8	6.9	12.2	19.2	12.5	12.7
N		6	19	12	9	46	9	28	6	9	52

both busy periods and slack periods. The self-employed and owner-cultivators spent the same amount of time on DPA. The extent of seasonal variation was lowest among the self-employed, since their activities are less seasonal in nature.

Table 6.18

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities (Males) According to Employment Status

Period		Owner cultivators[1]	Owner cultivators cum sharecroppers	Wage employment[2]	Unpaid family workers[3]	Independent/ self-employed
TOTAL						
	Day	5.4	6.5	5.7	5.7	5.4
	Week	37.7	45.2	39.8	40.1	38.0
BUSY						
	Day	6.2	7.4	6.1	6.9	5.6
	Week	43.9	51.8	42.7	48.1	38.9
BUSIEST WEEKS						
	Day	7.1	7.9	6.6	7.3	6.2
	Week	49.4	55.4	46.2	51.2	43.1
SLACK						
	Day	4.6	5.6	5.3	4.7	5.3
	Week	32.3	39.5	37.1	33.2	37.3
SLACKEST WEEKS						
	Day	4.1	4.2	4.9	4.5	5.1
	Week	28.9	29.6	34.2	31.7	35.8
N		12	8	9	12	4

[1] Within the category of 'owner-cultivators' there were 10 owner-cultivators and 2 owner-cultivators cum agricultural labourers.

[2] 'Wage employment' consisted of 5 agricultural wage labourers and 4 employees in non-farming sector.

[3] Within the category of 'unpaid family workers' there were 11 unpaid family workers and 1 unpaid family worker cum agricultural wage labourer.

Table 6.19

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities for Males by Broad Educational Levels[1]

Period		No schooling[2]	Primary schooling only[3]	Secondary schooling[4]	Schooling[5]
TOTAL					
	Day	6.3	4.9	5.2	5.0
	Week	44.0	34.6	36.5	35.2
BUSY					
	Day	7.0	5.8	6.1	5.9
	Week	49.0	40.7	42.3	41.2
SLACK					
	Day	5.7	4.2	4.5	4.3
	Week	39.7	29.3	31.5	30.0
N		21	17	8	25

1 The analysis is restricted to males only, since there were very few females in educational levels other than that of 'no schooling'.

2 'No schooling' includes all those who cannot read and write plus all those who can read Holy Koran only.

3 'Primary schooling' includes all those who had either some primary schooling or had completed primary schooling.

4 'Secondary schooling' includes all those who had either some secondary schooling or had completed secondary schooling plus all those who had matriculated or had higher education.

5 'Schooling' is a total of all those under 'primary schooling' and all those under 'secondary schooling'.

Table 6.19 shows that those with no schooling spent more time on DPA than those who had schooling (over one hour more per day). Again, we see that those with secondary schooling spent a little more time on DPA than those with primary schooling only.[1]

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1. It may be pointed out that males with secondary schooling tend to be drawn more from households with over 2 acres of land, while those with primary schooling tend to be drawn more from households having land areas ranging between 1.01 and 2.0 acres. Those with no schooling tend to be drawn more from households with little or no land. In fact, it is just not the level of education but the land-holding group to which they belong that provides the explanation of their work patterns (see Table 6.17).

If we look at the busy and the slack periods we find that the difference in the number of hours spent on DPA between those with no schooling and those with schooling was greater during the slack periods than during busy periods. The extent of seasonal variation was more pronounced in the case of those who had schooling than those without schooling.

Let us examine whether marital status and number of children born to a woman affect her participation in DPA. Tables 6.20 and 6.21 present average number of hours spent on DPA by females according to their marital status and number of children born.

Table 6.20

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Marital Status of Females

Period		Currently married	Never married	Separated, divorced & widowed	Not currently married[1]
TOTAL					
	Day	2.6	2.1	1.9	1.9
	Week	18.0	14.9	13.0	13.3
BUSY					
	Day	3.0	3.0	2.6	2.6
	Week	21.3	20.9	18.1	18.5
SLACK					
	Day	2.2	1.4	1.2	1.3
	Week	15.2	9.7	8.6	8.8
N		39	2	11	13

[1] 'Not currently married' is the total of those never married plus all those whose marriages were dissolved.

Currently married women spent more time on DPA (40 minutes more per day) than those who were not currently married. This is in line with the findings of the labour utilization survey (see Table 5.22). The difference

was greater during the slack period than the busy period. During the busy period currently married women spent less than half-an-hour more per day, while during the slack period they spent about an hour more per day in comparison to women not currently married.

Table 6.21

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Number of Children Born to Married Females

Period		0-1 child	2-3 children	4-5 children	6 or more children
TOTAL					
	Day	1.7	2.3	2.5	2.6
	Week	11.7	15.9	17.5	18.5
BUSY					
	Day	2.1	2.7	3.0	3.2
	Week	14.7	18.9	20.9	22.4
SLACK					
	Day	1.3	1.9	2.1	2.2
	Week	9.0	13.3	14.4	15.1
N		9	10	12	19

Table 6.21 shows that women who had given birth to more children spent more time on DPA than those with none or fewer children. This is in line with the findings from the labour utilization survey (see Table 5.23). This is true for the entire period of observation as well as for the busy and slack periods. However, the difference becomes more marked if we compare those with none or one child and those with two or more children. Women having two or more children spent about 40 minutes more per day on DPA than those with none or one child. In the case of a mother with only one child, the child was usually a young baby and she had to devote more time on childcare, while in the case of a mother with four or more children most of the responsibility of childcare was entrusted to

older siblings and thereby freeing the mother to devote more time to DPA. Thus, we see that if a woman has more children she spends more time on DPA than if she has fewer children.

Part (a) of Table 6.22 shows that those who pulled rickshaws spent more time on DPA than the cultivators and those in the category of 'others'. Rickshaw-pullers spent over half-an-hour more per day than cultivators and over one hour more per day than the 'others'. But one of the 'others', a barber, was found to spend more time on DPA than everybody else (8.2 hours per day).

If we look at the breakdown by busy and slack periods we find that the extent of seasonal variation was most pronounced in the case of cultivators. This is on account of the seasonality in agriculture. The difference was more pronounced still if we compare the busiest and the slackest weeks.

Out of 52 females aged 15 years and above 35 were reported as working in agriculture and 17 were reported as engaged in purely household work only on the basis of data obtained using the 'gainful worker approach'.

Part (b) of the table shows that those in agriculture spent, on average, 24 minutes more per day on DPA than those engaged in household work only. The difference was slightly more during the slack period and the slackest weeks than during the busy period and the busiest weeks. However, an important point that emerges from the table is that the contribution of those reported as engaged in household work only was, although lower than those in agriculture, yet was not significantly too low to be reported as engaged in household work only. This clearly points out the limitation of enumerating labour force, especially in the case of females in rural agricultural societies, on the basis of the cenus approach.

Table 6.22

Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Main Occupation

Period		(a) Males[1]			(b) Females	
		Agri-culture	Rickshaw-pullers	Others	Agri-culture	Household work only
TOTAL						
	Day	5.6	6.2	5.1	2.5	2.1
	Week	39.1	43.6	35.7	17.8	14.8
BUSY						
	Day	6.5	6.6	5.6	3.0	2.7
	Week	45.7	45.9	38.9	21.4	19.0
BUSIEST WEEKS	Day	7.1	6.7	6.2	3.6	3.5
	Week	50.0	46.8	43.2	25.4	24.2
SLACKEST WEEKS	Day	4.7	5.9	4.7	2.1	1.6
	Week	33.2	41.5	33.0	14.7	11.2
SLACKEST						
	Day	4.2	5.5	5.7	1.9	1.4
	Week	29.5	38.6	40.1	13.2	10.0
N		36	4	5	35	17

[1] There was one full-time student in age group 15-19 years. He spent just over one hour a day on DPA.

6.2.2. Time Spent on Household Maintenance Activities

This section deals with the amount of time spent on HHMA. As already noted, such activities are extremely important if a household is to maintain itself and enable its members to contribute time to DPA.

Table 6.23 gives a breakdown of the proportion of time devoted among various categories of HHMA. The table shows that among males three-quarters of the time spent on HHMA was spent on

marketing for household consumption.[1] At least once a week and sometimes more often male members of the household go to market to buy certain items of household consumption such as oil, salt, flour, spices, vegetables, fish, etc. The other household maintenance activity on which males contributed some time worth noting is in looking after children. From the table it becomes quite clear that males spend only very little time on such activities as washing and cleaning, bringing water and cooking. They engage in such activities only when the female members are either away or sick or pre-occupied with DPA. Such activities belong to the domain of female workers. Over half the time spent on HHMA by females was devoted to

Table 6.23

Proportion of Time Spent Daily Among Various Household Maintenance Activities by Sex

Household Maintenance Activities	Male	Female
1. Food preparation and cooking	1.3%	52.4%
2. Washing and cleaning	2.7%	9.8%
3. Child care	8.6%	14.8%
4. Bringing water	2.2%	9.8%
5. Marketing for household consumption	75.0%	0
6. Others	10.2%	13.2%
Total	100.0%	100.0%

food preparation and cooking.[2] It involves a considerable amount of time on the part of women. The next important item in the case of females

1. Men do the shopping since it is a Muslim cultural pattern to confine women at home. In other societies, women would normally do the marketing

2. Food preparation and cooking involve such tasks as setting the stove, cutting and washing vegetables, grinding spices (a time-consuming job), and the amount of time spent in actual cooking.

was child care. Women spent about one-seventh of their time devoted to household maintenance activities on child care. It is usually the mother and other female members of the household who are primarily entrusted to bathe, feed, clothe and put children to bed. Next in importance come washing and cleaning and bringing water. On average, a woman spent 40 minutes per day on washing and cleaning. Housewives spent, on average, about 45 minutes per day on washing and cleaning, compared to half-an-hour by daughters and other dependent female relations. Most of the households in Barkait have no water connection. Women have to go to the nearby tanks and tubewells to fetch water. On average, a woman spent about 40 minutes per day in bringing water.

Table 6.24

Average Number of Hours Spent Daily and Weekly on Household Maintenance Activities by Age and Sex

	Male						Female					
Period	15-24	25-34	35-44	45-54	55+	Total	15-24	25-34	35-44	45-54	55+	Total
TOTAL												
Day	0.5	1.0	0.9	0.9	1.0	0.9	5.9	6.8	5.7	5.6	5.8	6.0
Week	3.7	7.3	6.4	6.1	7.3	6.2	41.1	47.5	40.2	39.0	40.6	42.2
BUSY												
Day	0.4	0.8	0.7	0.9	1.0	0.8	5.8	6.6	5.5	5.4	5.3	5.9
Week	2.9	5.7	5.2	6.1	7.0	5.4	40.8	46.3	38.1	38.0	37.4	41.0
SLACK												
Day	0.6	1.2	1.1	0.9	1.1	1.0	5.9	6.9	6.0	5.7	6.2	6.2
Week	4.4	8.7	7.5	6.1	7.5	7.1	41.4	48.5	41.9	39.9	43.4	43.2
N	9	13	8	6	10	46	17	13	4	11	7	52

As already observed, males contribute little time to HHMA. It comes to about one hour per day per person, whereas females devote six times more time than this to HHMA than males. This is understandable in the traditional village setting of Bangladesh, where males are primarily engaged in DPA

while females are entrusted with the responsibility of discharging household duties.

Among both males and females the number of hours spent on household maintenance activities rises with age to 25-34 years after which it remains, more or less, constant (see Table 6.24 and Appendix III - Figs 1 & 2)

Mead Cain reported that males aged 16-21 years and those aged 22-59 years spent 0.7 hours and 1.1 hours per day respectively on housework. In the case of females aged 16-21 years and 22-59 years, he reported 7.8 hours and 7.5 hours per day respectively.[1] While his figures for males are quite close to those of Barkait, in the case of females he reported about 1.5 hours more being spent per day. This seems possible in view of the fact that he collected data for 24 hours of the day, while in Barkait it was collected for 14 hours of the day.

A breakdown of the number of hours spent on HHMA by busy and slack periods shows that the extent of seasonal variation on the whole was not very pronounced. During busy periods males and females, on average, spent 12 minutes and 18 minutes less per day respectively on HHMA than during the slack period. In the case of males the extent of seasonal variation was more pronounced among those in age group 25-44 years. This is the most productive age group and, therefore, males in this age group economise time on household maintenance activities during the busy period. In the case of females the extent of seasonal variation was more pronounced among those aged 45 years and above. In fact, among females the extent of seasonal variation rises with age.

The number of hours spent on HHMA was higher in the case of females

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1. Mead Cain, "The Economic Activities of Children in a Village in Bangladesh", op.cit.

belonging to households with up to six persons compared to those belonging to households with seven or more members (see Table 6.25) (half-an-hour a day more). The extent of seasonal variation was lower among women belonging to smaller households than those belonging to larger households. All these indicate that work-sharing is more prevalent among larger households than among smaller households. Larger households are able to share among many persons the amount of work available so that each person belonging to such households works less than those belonging to smaller households.

Table 6.25

Average Number of Hours Spent Daily and Weekly on Household Maintenance Activities by Females According to Size of Household

Period		1-6 persons	7 or more persons
TOTAL			
	Day	6.2	5.7
	Week	43.7	40.1
BUSY			
	Day	6.2	5.5
	Week	43.2	38.2
SLACK			
	Day	6.3	5.9
	Week	44.2	41.3
N		29	23

Table 6.26 shows that daughters spent more time on HHMA than housewives and the 'others'. Daughters spent 12 per cent and 29 per cent more time per day on HHMA than housewives and the 'others' respectively. During busy period the difference narrows down. Five per cent and 25 per cent more time was being spent on HHMA per day by daughters compared to housewives and the 'others' respectively, while during the slack period the difference

Table 6.26

Average Number of Hours Spent Daily and Weekly on Household Maintenance Activities by Females According to Relationship to the Head of Household

Period		Housewives	Daughters	'Others'
TOTAL				
	Day	6.4	7.2	5.6
	Week	44.9	50.7	39.4
BUSY				
	Day	6.3	6.6	5.3
	Week	44.4	46.2	36.8
SLACK				
	Day	6.5	7.8	5.9
	Week	45.3	54.5	41.6
N		34	3	15

goes up to 20 per cent and 32 per cent respectively. Thus, we can say that daughters (though the total number of daughters is very small) spent more time on HHMA than housewives and the 'others'. In fact, the minimum amount of time spent by daughters was greater than the maximum amount of time spent on HHMA by all the others, especially if compared with those belonging to the category of 'others'.

A comparison of housewives and the 'others' shows that housewives spent 14 per cent more time per day on HHMA compared to the 'others'. This goes up to 19 per cent during busy periods and narrows down to 10 per cent during slack periods.

The extent of seasonal variation was most pronounced in the case of daughters, followed by the 'others'. Daughters and 'others' spent 18 per cent and 11 per cent more time on HHMA during the slack period as compared to the busy period. In the case of housewives the difference was very small. The housewives spent only 3 per cent more time during slack periods than during busy periods.

Farouk reported in his study that housewives spent between 5.1 and

11.5 hours per day on household maintenance activities.[1] In Barkait housewives spent 6.4 hours per day on such work. This was lower than the data presented by Farouk for most unions and higher in comparison in the case of only one union. Farouk collected data for 24 hours of the day rather than for 14 hours of the day as was done in Barkait. While this may have depressed the figure as far as Barkait is concerned, nevertheless over-reporting in the case of Farouk's study cannot be ruled out. Since the data were collected only for heads of households and their wives, it is possible that time spent on HHMA by them has been over-reported.

Evenson found that wives spent between 42.4 hours and 48.2 hours per week on total home time (consisting of food preparation and childcare), depending on size of landholding. His estimate is close to that of Barkait.[2]

6.2.3. Total Work:

This section presents a sum-total of the number of hours spent on DPA and HHMA. In line with the broader definition of work to include HHMA the purpose of this section is to analyze the total number of hours of work.

Part (a) of Table 6.27 shows that the average number of hours spent daily and weekly on total work rises with age, then falls at age group 35-44 years and remains constant till 54 years of age after which it falls again.[3] Males aged 15-24 years worked, on average, 12 minutes more per

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1. A. Farouk, The Hardworking Poor, op.cit.

2. Evenson, R.E., 1978. op.cit.

3. This is in line with our previous findings relating to directly productive activities (see Table 6.15).

day than those aged 55 years and above but worked over two hours less than those in age group 25-34 years. Males aged 25-34 years worked over two hours more per day than those aged 15-24 years and those aged 55 years and above and 48 minutes more per day compared to those in age group 35-44 years.

A comparison of the busy and the slack periods shows that, on average, a male worked an extra hour and eighteen minutes per day during the busy period than during the slack period. The extent of seasonal variation was most pronounced among those aged 15-24 years. They worked almost two hours more per day during the busy period than during the slack period. While in the case of the total period of observation there was no difference in the number of hours worked by those in age groups 35-44 years and 45-54 years, a differential by age can be detected if we look at the busy and slack periods. During the busy period males aged 45-54 years worked half an hour more per day than those in age group 35-44 years, while during the slack period those in age group 35-44 years worked over half-an-hour more per day than those aged 45-54 years.

Part (b) of the table shows that among females the average number of hours worked rises with age and then starts declining at age 45 years. As in the case of males, females aged 15-24 years worked more than those aged 55 years and above (over half-an-hour a day more). Females in age group 35-44 years worked more than the others. They worked about nine-and-a-half hours a day.

A comparison of the busy and slack periods shows that, on average, a female worked 1.2 hours more per day during the busy period than during the slack period. The extent of seasonal variation was most pronounced among those in age group 15-24 years. On average, they worked 1.3 hours more daily during the busy period than during the slack period.

A comparison of males and females shows that, on average, a female worked about two hours a day, or 29 per cent, more than a male. In fact, in each age group females worked more than males. Females aged 15-24 years and 35-44 years worked, on average, two-and-a-half hours more per day than males in those age groups. The difference was 1.5 hours in age groups 25-34 years and 45-54 years and 2.1 hours in the case of those aged 55 years and above. The extent of seasonal variation was about the same among females and males.

Thus, the table shows that if the concept of work is broadly defined to include HHMA, females worked 29 per cent more than males. In fact, if we consider only DPA as constituting work, females worked about 57 per cent less than males (see Table 6.17). This clearly underestimates the overall contribution of females. Hence, the table clearly points out the need to consider HHMA within the concept of work.

Mead Cain, in a study of a Bangladesh village, found that males and females aged 16-21 years worked 9.5 hours and 9.4 hours a day respectively. He found that males and females aged 22-59 years worked 9.1 hours and 9.3 hours a day respectively. In Barkait the number of hours worked by both males and females was less than reported by Cain. In fact, although the data from Barkait shows the existence of a sharp sex differential, this was not observed by Cain.[1] Estimates presented by White and Peet are also higher than what we find in Barkait.[2] The problems in comparing those studies with the present

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1. Mead Cain, 1977, op.cit.

2. Nag, Peet and White, 1977, op.cit.

study have already been discussed.

Table 6.28 shows that daughters worked more than all the others. On average, they worked over nine-and-a half- hours a day. Although daughters spent less time per day on DPA than all the others, with the exception of those in the category of 'others', they spent more time on HHMA than all the others. Daughters worked 50 per cent, 6 per cent, 37 per cent, 30 per cent and 4 per cent more per day than heads of households, houswives, sons, 'others' and servants respectively. Although the differential was not so great compared to housewives and servants, it was very pronounced in comparison to heads of household, sons and 'others'.

Daughters were closely followed in total hours worked by housewives and servants. We have seen in Table 6.16 that servants spent considerably more time on DPA than daughters and that housewives spent 0.3 hours a day more than daughters. However, servants spent only 0.6 hours daily on HHMA, while daughters and housewives spent 7.2 hours and 6.4 hours per day respectively. This explains why the average number of hours worked was higher among daughters than among servants and housewives.

The table shows that heads of households worked less than all the others. A comparison of heads of households and housewives shows that heads of households worked, on average, 2.7 hours less daily than housewives. The difference is due to the fact that while heads of households spent 5.4 hours a day on DPA compared to 2.7 hours in the case of housewives, housewives spent over five hours more on HHMA than heads of households. On average, heads of households worked about 30 per cent less than housewives and 9 per cent less than sons.

Sons worked 2.6 hours less per day than daughters. While sons spent 3.8 hours more per day on DPA than daughters, they spent over six hours

Table 6.27

Average Number of Hours Spent Daily and Weekly on Total Work by Age and Sex

Period		(a) Males						(b) Females					
		15-24	25-34	35-44	45-54	55+	All Ages, 15+	15-24	25-34	35-44	45-54	55+	All Ages, 15+
TOTAL													
	Day	5.5	7.7	6.9	6.9	5.3	6.5	8.0	9.2	9.4	8.4	7.4	8.4
	Week	38.5	53.9	48.4	48.0	37.1	45.4	56.0	64.7	66.1	58.8	51.8	59.0
BUSY													
	Day	6.5	8.4	7.2	7.7	5.8	7.2	8.7	9.4	9.7	8.8	7.5	9.2
	Week	45.6	58.5	50.5	54.0	40.7	50.2	61.1	65.8	68.2	61.3	52.6	64.3
SLACK													
	Day	4.6	7.1	6.7	6.1	4.8	5.9	7.4	9.1	9.2	8.1	7.3	8.0
	Week	32.3	49.9	46.7	42.7	33.9	41.5	51.5	63.7	64.2	56.6	51.0	56.3
N		9	13	8	6	10	46	17	13	4	11	7	52

less per day on HHMA than daughters. Sons worked about 27 per cent less than daughters and about 23 per cent less than housewives.

Interestingly, those in the category of 'others' worked an hour more than heads of households and 24 minutes more per day than sons. Again, the difference arises from the fact that though those in the category of 'others' spent much less time on DPA than heads of households and sons, they spent more time on HHMA compared to heads of households and sons. However, compared to housewives, daughters and servants, those in the category of 'others' worked 19 per cent, 23 per cent and 20 per cent less per day respectively.

Farouk reported in his study that housewives worked between 9.7 hours and 19.4 hours a day and heads of households worked between 9.1 to 10.7 hours a day.[1] In Barkait the number of hours worked by heads of households and housewives was less than reported by Farouk. The problems in comparing Farouk's study with the present study have already been discussed.

Table 6.28

Average Number of Hours Spent Daily and Weekly on Total Work by Relationship to Head of Household

Period		Heads of Households	Housewives	Sons	Daughters	Others	Servants
TOTAL							
	Day	6.4	9.1	7.0	9.6	7.4	9.2
	Week	44.7	63.8	49.2	67.4	52.0	64.5
BUSY							
	Day	7.0	9.6	8.2	10.4	7.3	10.1
	Week	49.1	66.9	57.1	72.8	51.2	70.8
SLACK							
	Day	5.8	8.7	6.0	8.9	7.4	8.5
	Week	40.9	61.1	42.3	62.6	52.2	59.5
N		32	34	11	3	16	2

1. Farook, The Hardworking Poor, op.cit.

Part (a) of Table 6.29 shows that males belonging to households possessing land areas ranging between 0.01-1.0 acres worked more than the others. This corresponds to our earlier findings, which show that males belonging to such households spent more time on DPA than the others (see Table 6.17). Males belonging to households with up to 1.0 acre of land worked over two hours a day more than those belonging to landless households and to households with land areas ranging between 1.01-2.0 acres and worked over an hour more than those belonging to households with over two acres of land area. In other words, males belonging to households with up to 1.0 acre of land worked about 43 per cent, 45 per cent and 22 per cent more than those belonging to landless households, households with land areas ranging between 1.01-2.0 acres and those with over two acres of land respectively.

Table 6.29

Average Number of Hours Spent Daily and Weekly on Total Work by Sex and Landholding

Period		(a) Males				(b) Females			
		Land-less	0.01-1.0	1.01-2.0	>2 acres	Land-less	0.01-1.0	1.01-2.0	>2 acres
TOTAL									
	Day	5.4	7.7	5.3	6.3	7.8	8.3	8.7	9.4
	Week	37.5	53.8	37.3	44.2	54.5	57.9	60.7	65.8
BUSY									
	Day	6.0	8.4	6.1	7.0	8.0	8.6	9.1	10.1
	Week	41.9	58.6	42.6	49.1	55.7	60.0	63.5	70.6
SLACK									
	Day	4.8	7.1	4.7	5.7	7.6	8.0	8.3	8.8
	Week	33.7	49.7	32.6	40.0	53.5	56.0	58.0	61.6
N		6	19	12	9	9	28	6	9

Part (b) of the table shows that among females the number of hours worked was positively related to size of landholding. Females belonging to households with over two acres of land worked about nine-and-a-half hours a day, while those belonging to households with up to 2.0 acres of land worked less than nine hours a day and those belonging to landless households worked less than eight hours a day. The extent of seasonal variation was lowest among females belonging to landless households and highest among those belonging to households with over two acres of land.

Table 6.30 shows that owner-cultivators cum sharecroppers worked approximately 20 per cent (over one hour) more per day than all the other groups, among which the differential was not very pronounced. Owner-cultivators worked 12 minutes more per day than those on wage employment and the self-employed, and six minutes more per day than unpaid family workers.

The extent of seasonal variation was lowest among the self-employed since their activities are less seasonal in nature. The extent of seasonal variation was most pronounced in the case of unpaid family workers. On average, they worked two hours less per day during the slack period than during the busy period.

Table 6.31 shows that males belonging to households with up to six persons worked two hours more per day than those belonging to households with seven or more persons. We find that females belonging to smaller households worked, on average, over half-an-hour a day more than those belonging to larger households. Both among males and females the difference

Table 6.30

Average Number of Hours Spent Daily and Weekly on Total Work by Employment Status (Males)

Period		Owner cultivators	Owner cultivators cum sharecroppers	Wage employment	Unpaid family workers	Independent/ self-employed
TOTAL						
	Day	6.5	7.7	6.3	6.4	6.3
	Week	45.6	54.2	43.9	45.1	44.3
BUSY						
	Day	7.3	8.6	7.2	7.5	6.4
	Week	51.0	60.2	50.5	52.4	44.6
SLACK						
	Day	5.8	7.0	5.4	5.5	6.3
	Week	40.9	48.9	38.1	38.7	44.0
N		12	8	9	12	4

Table 6.31

Average Number of Hours Spent Daily and Weekly on Total Work by Sex and Size of Household

		Males		Females	
Period		1-6 persons	7 or more persons	1-6 persons	7 or more persons
TOTAL					
	Day	7.6	5.6	8.7	8.1
	Week	53.2	39.0	60.6	57.0
BUSY					
	Day	8.4	6.2	9.1	8.4
	Week	58.6	43.5	63.5	59.1
SLACK					
	Day	6.9	5.0	8.3	7.9
	Week	48.6	35.1	58.0	55.1
N		21	25	29	23

was greater during the busy period than during the slack period. The findings of the table suggest that work-sharing is more prevalent among persons belonging to larger households than among persons belonging to smaller households. Sahlins observed, "The greater the relative working capacity of the household the less its members work".[1]

Another interesting point that emerges from the table is that work-sharing was more prevalent among males than among females. This indicates the greater scope of sharing work in respect of DPA than HHMA.

6.2.4. Time Spent on Personal Care and Needs:

This section deals with the amount of time spent on personal care and needs. As already noted, time spent on personal care and needs includes activities that are essential to keep one physically fit to undertake other kinds of activities and those devoted to religious purposes.

Part (a) of Table 6.32 shows that among males the number of hours spent on personal care and needs was highest among those in age group 15-24 years (over one hour more daily than others). The number of hours spent on personal care and needs was virtually the same for those in age group 25-54 years, after which it rose at ages 55 years and above.[2]

The breakdown of the table by busy and slack periods shows that there was some seasonal variation in the number of hours spent on personal care and needs and the difference was even more pronounced for the slackest and busiest weeks. This was true especially of those aged 15-24 years.

Part (b) of the table shows that the number of hours spent on personal care and needs by females rises with age, then falls at age group 45-54 years, after which it rises again.[3] We find that there was consider-

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1. Marshall D. Sahlins, Stone Age Economics, Tavistock Publications, Great Britain, 1974, p.87.
2. See also Appendix III - Figure 1.
3. See also Appendix III - Figure 2.

Table 6.32

Average Number of Hours Spent Daily and Weekly on Personal Care and Needs by Age Groups and Sex

Period		(a) Males						(b) Females					
		15-24	25-34	35-44	45-54	55+	Total	15-24	25-34	35-44	45-54	55+	Total
TOTAL													
	Day	5.2	3.9	3.6	3.7	4.1	4.1	3.0	3.3	3.9	3.3	3.9	3.2
	Week	36.3	27.6	25.1	26.2	29.0	29.0	20.7	22.9	27.3	23.1	27.4	22.4
BUSY													
	Day	5.0	3.8	3.5	3.6	4.1	4.0	2.9	3.0	3.6	3.3	2.4	3.0
	Week	35.0	26.6	24.3	25.5	28.5	28.1	20.5	21.1	25.1	23.4	17.1	21.2
BUSIEST WEEKS													
	Day	4.2	3.4	3.3	3.4	3.8	3.6	2.9	3.0	3.6	3.3	2.4	3.0
	Week	29.5	24.0	23.1	23.6	26.8	25.5	20.4	21.0	25.0	23.2	17.1	21.0
SLACK													
	Day	5.3	4.1	3.7	3.8	4.2	4.2	3.0	3.5	4.2	4.6	5.2	3.6
	Week	37.4	28.5	25.8	26.5	29.5	29.7	21.0	24.3	29.3	22.8	36.5	25.2
SLACKEST WEEKS													
	Day	5.9	4.1	3.3	3.9	4.5	4.4	3.4	3.6	4.4	4.1	4.9	3.9
	Week	41.2	29.0	23.4	27.1	31.2	30.7	23.8	25.4	31.0	28.8	34.2	27.3
N		9	13	8	6	10	46	17	13	4	11	7	52

able seasonal variation in the amount of time spent on personal care and needs by the females. Females spent over half-an-hour more daily on personal care and needs during the slack period than during the busy period. The extent of seasonal variation was most pronounced in the case of females aged 55 years and above, while it was least pronounced in the case of those aged 15-24 years. During the slack period a female aged 55 years and above spent considerably more time on praying than during the busy period.

A comparison of males and females shows that, on average, a male spent over 50 minutes more per day on personal care and needs compared to a female. While males aged 15-24 years spent more time on personal care and needs than males in other age groups, females aged 15-24 years spent less time on personal care and needs than females belonging to other age groups. The extent of seasonal variation was lower among males than among females.

Farouk reported that a household head spent between 3.6 and 6.1 hours daily on personal care and needs and religious activities, while a housewife spent between 3.1 and 5.3 hours per day.[1] In Barkait it was found that a household head spent 3.8 hours per day, while a housewife spent 3.3 hours daily on personal care and needs.

Table 6.33 presents the average number of hours spent on personal care and needs by males by landholding groups. No differential had been found among females belonging to different landholding groups. We find that the number of hours spent on personal care and needs was lowest in the case of males belonging to landless households, then rose as the

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1. A. Farouk, The Hardworking Poor, op.cit.

size of landholding increased and then declined slightly in the case of males belonging to households with over two acres of cultivable land area. In fact, the difference between the minimum and the maximum number of hours spent daily on personal care and needs among males belonging to different landholding groups was over one hour.

Table 6.33

Average Number of Hours Spent Daily and Weekly on Personal Care and Needs Among Males Belonging to Different Landholding Groups

Period		Landless	0.01-1.0 acre	1.01-2.0 acres	>2.0 acres
TOTAL					
	Day	3.3	4.2	4.4	3.9
	Week	23.2	29.5	31.1	27.4
BUSY					
	Day	3.5	4.1	4.4	3.5
	Week	24.5	28.8	30.9	24.8
BUSIEST WEEKS	Day	3.2	3.9	3.7	2.5
	Week	22.3	27.1	25.7	17.2
SLACK					
	Day	3.2	4.3	4.5	4.2
	Week	22.1	30.2	31.2	29.6
SLACKEST WEEKS	Day	3.9	4.5	4.5	4.6
	Week	27.0	31.3	31.5	32.5
N		6	19	12	9

If we look at the busy and the slack periods we see that males belonging to landless households spent about 20 minutes more per day on personal care and needs during the busy period as compared to the slack period. In the case of males belonging to landed households the number of hours spent on personal care and needs was less during busy periods as compared to the slack periods. However, if we look at the busiest and

the slackest weeks we find that the number of hours spent on personal care and needs was lower during the busiest weeks than during the slackest weeks. This was true of all males, irrespective of landholding group.

The extent of seasonal variation was highest in the case of males belonging to households possessing over two acres of land. They spent over 40 minutes more per day on personal care and needs during the slack period than during the busy period, and the difference was even more pronounced for the slackest and busiest weeks.

Table 6.34 shows that owner-cultivators, owner-cultivators cum share-croppers and unpaid family workers spent four hours or more daily on personal care and needs, while those on wage employment and the independent/self-employed workers spent just over three hours a day. In fact, those in the first three columns spent over one hour more per day on personal care and needs than those in the last two columns.

Table 6.34

Average Number of Hours Spent Daily and Weekly on Personal Care and Needs by Males According to Employment Status

Period		Owner cultiv-ators	Owner cultiv-ators cum sharecroppers	Unpaid family workers	Wage employ-ment	Independent/ self-employed
TOTAL						
	Day	4.0	4.9	4.4	3.2	3.3
	Week	28.0	34.2	31.0	22.5	22.8
BUSY						
	Day	3.9	4.8	4.6	2.5	3.1
	Week	27.5	33.6	31.9	17.5	21.8
SLACK						
	Day	4.1	5.0	4.3	3.8	3.4
	Week	28.5	34.8	30.2	26.9	23.8
N		12	8	13	9	4

We also find that the extent of seasonal variation was most pronounced in the case of those on wage employment. They spent 1.3 hours more per day during the slack period as compared to the busy period. In the case of males belonging to the other employment status categories it ranged between 12 to 18 minutes more per day during the slack period than during the busy period.

6.2.5. Time Spent on Social Needs

This section examines the amount of time spent on social needs. As already noted, a person spends some of his/her time on meeting social needs and obligations.

Table 6.35 shows that both males and females spent, on average, just over one hour a day meeting social needs. Males aged 15-34 years spent more time on social needs in comparison to males belonging to other age groups.[1] However, we can see a sharper differential by age in the case of the females. Females aged 15-24 years spent twice as much time on social needs than those in age group 25-54 years.[2] Most of the females in age group 15-24 years were newly married and they often visited parents in the same village or outside the village. Females aged 55 years and over spent considerably more time on social needs than the others. This is because women in this age group often visit other children and grandchildren and spend a considerable amount of time in the process.

Table 6.36 shows daughters spent less time on social needs than all others. This is understandable since they were unmarried and there is strong restriction on the movement of such unmarried girls. They go out to visit others quite rarely and are always accompanied by other members of the household. The heads of households spent less time on social needs than housewives. Housewives often visit neighbours more frequently than heads of households. Sons and those belonging to the category of 'others'

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1. See also Appendix III - Figure 1.
2. See also Appendix III - Figure 2.

Table 6.35

Average Number of Hours Spent Daily and Weekly on Social Needs by Age and Sex

Day/Week	Males						Females					
	15-24	25-34	35-44	45-54	55+	Total	15-24	25-34	35-44	45-54	55+	Total
Per day	1.2	1.2	1.0	1.0	0.9	1.1	1.4	0.6	0.4	0.8	2.4	1.1
Per week	8.7	8.4	6.7	7.0	6.3	7.5	9.5	4.5	3.2	5.5	16.7	7.9
N	9	13	8	6	10	46	17	13	4	11	7	52

spent the same amount of time on social needs. Four of the sons were married and were often seen accompanying their wives to their parents' house spending a few hours on each visit. The other sons had friends both inside and outside the village and often spent time with them. The 'others' consisted of the newly-married wives of sons and mothers of heads of households and other dependent relations, etc. They visit relations more often than housewives and daughters.

Table 6.36

Average Number of Hours Spent Daily and Weekly on Social Needs by Role in the Household

Day/Week	Heads of Household	Housewives	Sons	Daughters	Others	Servants
Per day	0.8	1.0	1.6	0.5	1.6	1.1
Per week	5.6	7.2	10.9	3.4	10.9	7.5
N	32	34	11	3	16	2

6.2.6. Time Spent on Idleness

This section examines the amount of time individuals spent doing practically nothing. Sitting idle, moving about aimlessly, gossiping, relaxing or sleeping for longer hours than is reasonable is time recorded as spent in idleness.

It is quite clear from Table 6.37 that males spent more time in idleness than females: over twice as much (Appendix III - Figures 1 and 2).

Among males we find that the number of hours spent in idleness was lowest among those in age group 15-24 years and highest among those aged 55 years and above. In fact, males aged 55 years and above spent one hour

Table 6.37

Average Number of Hours Spent Daily and Weekly in Idleness by Age and Sex

Period		Males						Females					
		15-24	25-34	35-44	45-54	55+	Total	15-24	25-34	35-44	45-54	55+	Total
TOTAL													
	Day	2.0	2.5	2.5	2.2	3.3	2.5	1.1	1.0	1.0	1.7	0.9	1.1
	Week	14.3	17.9	17.4	15.2	22.9	17.9	7.6	6.6	7.5	11.8	6.5	7.9
BUSY													
	Day	1.6	2.2	2.2	1.7	3.0	2.2	1.1	0.9	0.7	1.5	0.8	1.0
	Week	11.3	15.2	15.7	12.0	21.1	15.4	7.5	6.3	5.1	10.8	5.6	7.3
SLACK													
	Day	2.4	2.9	2.7	2.6	3.5	2.9	1.1	1.0	0.9	1.8	1.0	1.2
	Week	17.1	20.2	18.9	17.9	24.5	20.0	7.8	6.8	6.2	12.7	7.0	8.4
N		9	13	8	6	10	46	17	13	4	11	7	52

and 18 minutes more per day in idleness than those aged 15-24 years and spent about 40 minutes more in idleness than those aged 25-54 years.

A comparison of busy and slack periods shows that, on average, a male spent over 40 minutes more in idleness during the slack period than during the busy period. The important point to note from the table is that even during the busy period a male spent over two hours in idleness. Assuming that a considerable part of this is involuntary idleness this indicates the lack of enough work opportunities available even during the busy period.[1]

Among females the amount of time spent in idleness was similar for most age groups with the exception of those aged 45-54 years. It may be pointed out that women aged 55 years and above spent more time on social needs and, hence, idleness was less than for those in age group 45-54 years. Among females the extent of seasonal variation was lower than that among males. Even during the busy period a female spent one hour a day in idleness. This suggests that as in the case of males there are not enough work opportunities available to women even during the busy period.

Table 3.68 shows that contrary to most beliefs that the heads of households spend less time in idleness compared to all others in the households, they, in fact, spent more time in idleness than everybody else. They spent 24 minutes more per day in idleness than sons and over one-and-a-half hours more than housewives. Daughters and servants spent the least amount of time in idleness. They spent roughly 40 minutes each day in idleness. The housewives and those in the category of 'others' virtually spent the same amount of time in idleness.

Farouk reported that a household head spent between 0 to 0.47 hours

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1. Assuming that time spent in idleness by servants (see Table 6.38) represents time spent in voluntary idleness, males spent 1.7 hours per day in involuntary idleness.

Table 6.38

Average Number of Hours Spent Daily and Weekly on Idleness by Role in the Household

Day/Week	Heads of Households	Housewives	Sons	Daughters	Others	Servants
Day	2.8	1.1	2.4	0.8	1.2	0.8
Week	19.8	7.9	16.9	5.3	8.2	5.5
N	32	34	11	3	16	2

per day doing nothing, while a housewife spent between 0 to 0.42 hours per day doing practically nothing.[1] Farouk's estimation of time unused was substantially low compared to the data from Barkait. As it seems the amount of time spent on DPA and HHMA was over-reported by Farouk, thus leading to an underestimation of time unused.

1. A. Farouk, The Hardworking Poor, op.cit., (Tables 3.3 and 4.3, p.43 and p.54).

CHAPTER 7. THE USE OF CHILD LABOUR[1]

Child labour remains prevalent in most Third World countries though statistical data on the real extent of such labour are scanty. It has been found that, on the whole, the greater is the importance of agriculture and related activities, the greater is the use of child labour.[2] In the rural areas of most Third World countries agriculture and plantation work offer the chief sources of employment. "While working conditions in agriculture and related activities permit the employment of children at an early age, there are fewer such opportunities in urban industries".[3] Besides agriculture, village industries, small industries and handicrafts provide sources of employment for children at an early age. These are not generally covered by minimum age or other protective legislation for young people. Even in urban areas in most of these countries children are employed in activities such as construction, restaurants, shoe-shining, shops, as domestic servants, and in hawking and peddling and other related activities.

The key factors favouring child labour in most of these countries is the high rate of population growth and poverty. A large proportion of population in most of these countries lie below subsistence level and

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1. See also: Barkat-e-Khuda, "The Importance of Work Done by Children in a Bangladesh Village", paper presented at the Workshop on Pilot Projects in Integrated Rural Development (Bangladesh/ESCAP/Interagency), Held at Bangladesh Academy for Rural Development, Comilla, Bangladesh, November, 1976, and
Barkat-e-Khuda, "Value of Children in a Bangladesh Village", in J.C.Caldwell (ed.), The Persistence of High Fertility, Australian National University, Canberra, 1977.

2. International Labour Office, "Employment Prospects of Children and Young People in Asia," International Labour Review, Vol.88, 1963, pp.94-106.

3. U.N. Demographic Aspects of Manpower, Report I, p.12.

earnings of the children are often required to make ends meet in the family. Besides, the continued existence of child labour is also due partly to the inadequacies of educational opportunities. "The economically advanced nations can afford greater investment in education for their youth and can keep them in schools for a greater number of years."[1] Though education up to primary level is free in most less developed countries, this is not sufficient to bring it within the reach of the poorest families. About 80% of respondents in the Value of Children Survey in Barkait said that sending children to school was the most serious economic problem.

This chapter examines the work input of children aged 5-14 years. The ages at which children begin productive work, the types of activities they are commonly engaged in, the number of hours devoted to various types of activities and the attitudes of parents towards the work done by children are analysed in this chapter. Besides, time spent by children on other activities are also analysed in this chapter.

The chapter utilizes the following types of data:

(a) Relevant data from the Attitudinal Survey on the Value of Children;

(b) Labour Force data for children aged 10-14 years obtained on the basis of the census approach;

(c) Labour utilization data for children aged 10-14 years obtained on the basis of the labour utilization survey conducted in the village, and

(d) Time-budget data for a period of approximately seven months covering children aged 5-14 years (the data for seven months refer to the same weeks as that for adults).

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1. Ibid., p.12.

7.1 Value of Children Survey

Parents were asked a variety of questions relating to the ages at which children begin productive work, types of activities in which children aged 5-14 years are commonly engaged and the importance of work done by children. The responses to such questions are analysed in this section.

7.1.1. Ages at which Children Begin Productive Work:[1]

A casual observer is often left with the impression that in rural agricultural societies children often begin serious and purposeful activity at quite an early age. In this connection the productive life cycle of a child in a traditional village of Bangladesh may be considered as having three phases. During the initial few years a child is completely dependent and then with a rise in age becomes economically active, although producing less than he or she consumes. The third phase is reached when a child (in fact, usually a boy aged 13-14 years) produces more than he consumes. At this stage productivity of a child (a boy of 13-14 years) comes close to that of an adult, 15 years and above.[2]

The ages at which children begin productive work depend on the physical maturity and strength of the child, the skill required to perform the activity and the culturally prescribed division of labour.

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1. The term 'productive work' was not very clearly understood by the respondents. During the course of interview they were told what it exactly means, according to our definition. (see Chapter 2 for our definition)..

2. In fact, compared to adults aged 55 years and above, a child aged 10-14 years works longer hours.

Parents in Barkait were asked to say at which ages their children begin productive work; the responses are presented in table 7.1.

Table 7.1. Ages at which Children Begin Productive Work in Barkait - responses of parents (% distribution).[1]

a) Boys:

Responses	Males (Fathers)	Females (Mothers)	Both Sexes
5- 7 years	19.6	27.2	23.4
8-10 years	72.7	61.2	66.9
11-14 years	2.9	5.8	4.4
Don't know	4.8	5.8	5.3
N	146	146	292

Source: Value of Children Survey.

Parents reported that their sons begin productive work quite early. About one fourth of all parents reported that their sons begin productive work around 5-7 years of age. Males reported under one-fifth while females reported over one-fourth. The difference is due to the fact that at this age a mother normally receives assistance from her son in activities such as drying paddy straw, scaring birds, etc., and are, therefore, likely to know better what boys at this age do. Mothers, thus, report that a higher proportion of sons aged 5-7 years begin productive work at that age. However, most of the sons begin productive work around 8-10 years of age. Over two-thirds of all parents reported that their sons begin productive work around 8-10 years of age. Thus, over 90% of all parents reported that their sons begin productive work by the time they reach ten years of age. The median age at which sons begin productive work was 8.9 years.

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1. Fathers and mothers were asked to supply information on both sons and daughters.

Table 7.1. Ages at which Children Begin Productive Work in Barkait - responses of parents (% distribution).

b) Girls:

Responses	Males (Fathers)	Females (Mothers)	Both Sexes
5- 7 years	27.9	31.7	29.8
8-10 years	69.3	65.5	67.4
11-14 years	0.9	0.9	0.9
Don't Know	1.9	1.9	1.9
N	146	146	292

About three-tenths of all parents reported that their daughters begin productive work around 5-7 years of age, while over two-thirds reported that their daughters begin productive work around 8-10 years of age. Less than one percent reported that their daughters begin productive work around 11-14 years of age. Thus, over 97% reported that their daughters begin productive work by the time they reach ten years of age. The median age at which daughters begin productive work is 8.2 years.

A comparison of boys and girls shows that girls start work at an earlier age. While less than one-fourth of the parents reported that their sons begin productive work around 5-7 years of age, over one-fourth of the parents reported that their daughters begin productive work at this age. The median age shows that girls begin productive work 0.7 years before boys.

Caldwell observed that children among rural Yorubas in Nigeria begin work at an early age of around 5 years. This was also observed among Dagomba children in Ghana by Oppong: "children begin to learn to help in the house and farm at a comparatively early age, from five years onwards, tasks usually being commensurate with their ability and size".[1] Cain found that the youngest age at which boys and girls begin participating in any

1. Caldwell, J.C. - The Socio-Economic Explanation of High Fertility, Changing African Family Project, Monograph No.1, Canberra, 1976, p.51.

productive activity was 5 years. In the case of boys the median age varied between 8.3 to 14.1 years and in the case of girls it varied between 3.1 to 9.3 years depending on the type of activity.[1] Naverra found that in rural Philippines even at age 3-5 years a child starts contributing some economic time to the household, though in negligible amounts.[2] Galal el Din reported that as soon as a child reaches the age of 6 or 7 years, he starts to contribute to production.[3] Salamet estimated that children in Java by the age of eight years have begun to join in all the subsistence activities and daily work of parents.[4] Gille and Pardoko observed "As soon as he reaches school age (which is normally 5 to 7 years: author) every child born into a farmer's family is put to work on the land during the peak periods of planting and harvesting."[6] White found that the

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1. Cain, Mead T.- "The Economic Activities of Children in a Village in Bangladesh," Population Development Review,No.3,September 1977.

2. Naverra, E.R. - The Allocation of Household Time Associated with Children in Rural Philippines in Laguna, Philippines,preliminary draft prepared for the Symposium on Household Economics sponsored by the Philippine Economics Society, The Philippine Agricultural Economics Association, The Center for Policy and Development Studies, and the Agricultural Development Council, May 27-28, 1977.

3. Mohamed El Awad Galal el Din - The Economic Activities of Children in Rural Sudan in J.C.Caldwell (ed.), The Persistence of High Fertility Department of Demography, Australian National University, Canberra, 1977.

4. cited in Benjamin White - "The Economic Importance of Children in a Javanese Village," Moni Nag, (ed.), Population and Social Organisation, The Hague (1975).

5. Gille, H. and R.H.Pardoko - "A Family Life Study of East Java: Preliminary Findings," in Bernard Berelson, (ed.), Family Planning and Population Programs, Chicago, University of Chicago Press, 1965.

youngest age at which a child begins directly productive activity was 5 years and the average age of beginning directly productive activity varied between 8.0 years to 13.1 years. The median age at which boys begin productive work was 10.4 years and the median age of girls was 6.2.[1]

Parents were asked to say whether they felt that boys of ten years of age do more productive work or girls of the same age. The responses are tabulated in Table 7.2. 45% of respondents had either sons or daughters or had no child aged ten years and above and were, therefore, ineligible since they could not draw a comparison. Just under half of the eligible respondents reported that boys do more productive work, while two-fifths of them reported that girls do more productive work. The finding points to strong sex differentials. More than half of the mothers reported that daughters do more productive work, while over two-thirds of the fathers reported that sons do more productive work. This is because fathers receive more assistance from their sons and mothers from their daughters and, therefore, reported accordingly. Fathers viewed the assistance rendered by sons as more relevant, while mothers viewed the same in case of daughters. The same sort of finding has been established among the rural Ibos. Among the rural Ibos 51% of male respondents reported that boys do more productive work and 35% reported the same for daughters, while 41% of female respondents reported that boys do more productive work and 46% reported the same for daughters.[2]

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1. White, Benjamin, 1975, op.cit. [Table I,p.18].

2. Okore, A., The Value of Children Among Ibo Households in Nigeria, Department of Demography, Australian National University, Canberra, 1975.

Table 7.2 Percentage Response to Question: Who does more productive work - boys or girls (of ten years of age)?

Responses	Males	Females	Both Sexes
1. Boys	67.5	30.0	48.8
2. Girls	23.8	56.3	40.0
3. About the same	6.2	0	3.1
4. Don't know	2.5	13.7	8.1

Parents were also asked to say whether school-going children do more productive work or non-school-going children. The question was asked of parents with at least one school-going and another non-school-going child in order to be able to draw comparison. Two-fifths of respondents did not fulfil this condition and, therefore, the question was applicable in case of three-fifths of respondents.

Table 7.3 gives percentage responses of parents to this question. It is quite clear from the table that about four-fifths of respondents reported that their non-school-going children did more productive work, while one-tenth reported the same for school-going children. The finding bears close similarity to a study conducted among the rural Ibos in Nigeria. Among the rural Ibos 82% of males and 79% of females reported that non-school-going children did more productive work.[1] However, when using the time-budget data we find that among boys aged 10-14 years those who were "working" (not going to school) spent 4.0 hours daily on directly productive activities and household maintenance activities compared to 3.3 hours a day in case of "dependants" (those going to school).[2] Among girls in the same

1. Okore, A., The Value of Children among Ibo Households in Nigeria, Department of Demography, Australian National University, Canberra, 1975.

2. The terms "working" and "dependant" are based on census approaches to the measurement of labour force.

age-group those "working" spent 4.8 hours a day in comparison to 5.5 hours in case of the "dependants". Thus, we can say that the responses of parents to this question so far as sons are concerned correspond to our findings from time-budget data but not so in case of girls.

Table 7.3. Percentage Responses to Question: Who does more productive work - school-going children or children not going to school?

Responses	Males	Females	Both Sexes
1. School-going children	5.6	14.0	9.8
2. Children not going to school	84.3	75.1	79.7
3. About the same	2.2	2.0	2.1
4. Don't know	7.9	8.9	8.4

7.1.2 Activities in which Children aged 5-14 years are commonly engaged

Parents were asked to say what types of activities children aged 5-14 years are commonly engaged in. It should be pointed out that children participate in other activities as well as the activities they are commonly engaged in. The responses are tabulated in Table 7.4. Data on the common activities of 115 boys and 112 girls aged 5-14 years have been tabulated. It represented over two-fifths of children aged 5-14 years in the village.

The table shows that two-fifths of boys were commonly engaged in tending animals and one-quarter of boys were commonly engaged in running errands.[1] 12% and 10% of boys were commonly engaged in agricultural activities and child care respectively.

If we look at differential by age we find that among boys aged 5-7 years three-fifths were commonly engaged in running errands, compared to

1. "Running errands" include such activities as carrying messages, food items to and from neighbours.

11% in the case of boys in age-group 8-10 years while none in age-group 11-14 years were commonly engaged in running errands. Two-thirds of boys aged 8-10 years were commonly engaged in tending animals, while one-fifth of those in age-group 5-7 years and over one-third of those aged 11-14 years were usually engaged in such activity. Just under half of the boys aged 11-14 years were commonly engaged in agricultural activities, compared to just over 2% in the case of boys aged 5-7 years and 8-10 years. Thus, it is clear from the table that with an increase in age boys take up more strenuous activity.

Out of 115 boys, 61 were currently studying while the remaining 54 were not going to school. If we look at the differential by school attendance we find that 40% of non-school-going boys were commonly engaged in running errands compared to 12% among school-going boys. Among school-going boys 65% were engaged in tending animals while the proportion was 12% among non-school-going boys. 17% of non-school-going boys were commonly engaged in agricultural activities compared to only 7% among school-going boys. 8% of school-going boys were commonly engaged in child care and the proportion was 11% in the case of non-school-going boys. Thus, it becomes clear that among school-going boys tending animals was the common activity in the case of majority of them, followed by running errands, while in the case of non-school-going boys running errands was the common activity of two-fifths, followed by those engaged in agricultural activities.

The table shows that among girls one-third were commonly engaged in looking after younger siblings; 17% were usually engaged in food preparation and cooking; while 14% were engaged in agricultural activities and tending animals.

If we look at the differential by age we find that among girls aged 5-7 years over two-thirds were commonly engaged in running errands compared

to only 8% in the case of those aged 8-10 years while none of the girls in age-group 11-14 years was commonly engaged in this activity. One-third of those aged 5-7 years were commonly engaged in child care compared to over 50% and 7% in case of those aged 8-10 years and 11-14 years respectively. Only 9% of girls aged 5-7 years and 8-10 years were commonly engaged in agricultural activities. In contrast, over one-quarter of girls aged 11-14 years were commonly engaged in agricultural activities. Two-fifths of girls in age-group 11-14 years were commonly engaged in food preparation and cooking compared to only 9% in case of those aged 8-10 years. Thus, as in the case of boys, with a rise in age girls participate in more strenuous activity.

Out of 112 girls there were 55 school-going and 57 non-school-going girls. If we look at the differential by school attendance we find that over one-third of school-going girls were commonly engaged in child care compared to 29% in case of non-school-going girls. One-fifth of school-going girls were usually engaged in tending animals and food preparation and cooking each while the proportion was 8% and 14% respectively in case of non-school-going girls. 18% of non-school-going girls were commonly engaged in agricultural activities, compared to 11% in case of school-going girls. One-quarter of non-school-going girls were engaged in running errands, while only 6% of school-going girls were engaged in such activities. Thus, while three-fourths of school-going girls were commonly engaged in child care, tending animals and food preparation and cooking, only half of non-school-going girls were commonly involved in such activities. Instead, about three-fourths of non-school-going girls were engaged in child care, running errands and agricultural activities.

A comparison of boys and girls show that 12% and 14% of boys and girls respectively were engaged in agricultural activities. Compared to boys,

more girls were engaged in scaring birds. The usual agricultural activities of boys were ploughing and weeding, while in the case of girls these were threshing paddy and husking grain. Over two-fifths of boys were engaged in tending animals compared with only 14% in the case of girls. Just under one-third of girls were commonly engaged in child care, while only 1o% of boys were engaged in this activity. One-quarter of boys were usually engaged in running errands compared to one-sixth among girls. While one-sixth of girls were commonly engaged in food preparation and cooking, none of the boys was reported engaged in it. Thus, the table shows that boys were more frequently engaged in activities outside the homestead (bari) while girls were more often engaged in activities inside the homestead. This is in line with the culturally prescribed division of labour.

A Yoruba respondent in Caldwell's study observed, "Some encourage daddy by going on errands willingly; [they] buy clothes, [palm] wine, medicine and bring clothes when needed, and send firewood. [They] help mother bring vegetables from the farm, fetch firewood, and bring water when she needs it. Daughters can help father carry yams from the farm and they are usually helpful during the cocoa season in removing beans from the cocoa pods and in drawing water for spraying Gamalin 20. [They] help mother in the kitchen and help her sell things in the market."[1]

Slamet observed that children in Java by the age of eight years participate in all subsistence activities and daily work of their parents.[2] Koentjaraningrat found that in Tjelapar (South Central Java) girls were engaged in household work: cooking, pounding paddy and childcare, while

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1. Caldwell, J.C.,1977, page 51. op.cit.

2. White, Benjamin, 1975. op.cit.

Table 7.4. Major Activities in which Young Boys and Young Girls of various ages (school-going and non-school-going) are commonly engaged (Value of Children Survey)

Sex	Age	School or non-school-going	Ploughing	Nursery work	Weeding	Collecting firewood	Bringing water	Tending animals	Marketing	Child care	Taking food to field	Errands	Cooking	Handloom	Handicraft	Hawking	Boiling grain	Husking	Others
M	5- 7	School N=14			1	1		5		1	1	4							1 (scaring birds)
M	5- 7	Non-school N=27				1	1	2		4		17							1 (scaring birds), 1 (fishing)
M	8-10	School N=32			1	1		22	1	4	1	2							
M	8-10	Non-school N=15				1	1	6	1	3		1			1				1 (fishing)
M	11-14	School N=15		1	3	1		8			1	1							
M	11-14	Non-school N=12	8		1			1								1			1 (milling)
F	5- 7	School N=12				1	1	3		4		1	1						1 (scaring birds)
F	5- 7	Non-school N=24					1	1		7		13							2 (scaring birds)
F	8-10	School N=26					1	5		14		1	2					2	1 (scaring birds)
F	8-10	Non-school N=14						2		8		1	1	1					1 (scaring birds)
F	11-14	School N=17					2	3		1			8					2	1 (fishing)
F	11-14	Non-school					2	2		1			6				2	3	3 (threshing paddy)

boys were engaged in collecting firewood. He pointed out that a majority of boys and girls also earned wages herding animals.[1] Jay observed that children in rural Madjokuto (East Java) were industrious. Even at an early age they were engaged in hulling peanuts or sorting or bundling onions. With an increase in age girls carried out much of the load of household work in addition to earning wages by working in the fields. With a rise in age boys began to earn money by farm-work, as labourers in a cigarette making shop, as apprentice to a tailor or carpenter, etc.[2] White found that children in Java were engaged in childcare, household work, collecting firewood, tending animals, agricultural activities and production outside agriculture.[3]

7.1.3. Attitudes of Parents Towards the Work done by Children

Parents were asked a variety of questions relating to their attitude towards the work done by children. The responses are tabulated in Table 7.5.

Table 7.5. The Importance of Children's Work (Response - % distribution)

Question	Response	Male	Female	Both Sexes
a) Small children save adults from menial tasks and help at home.	Agree	84.9	88.4	86.6
	Disagree	1.4	7.5	4.5
	No Opinion	13.7	2.7	8.2
	Not Relevant	0	1.4	0.7

Over four-fifths of all respondents agreed with the statement. Among rural Yorubas the proportion agreeing to such a statement was almost the same.[4]

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1. White, Benjamin, 1975. op.cit.

2. Ibid.

3. Ibid.

4. Caldwell, J.C., 1977, op.cit. (Table 6; p.33).

Less than 5% of respondents disagreed with the statement while just over 8% expressed no opinion when asked this question. There exists a sex differential in the proportion disagreeing and having no opinion when asked this question. Five times as many females disagreed with the statement as males, while five times as many males as females had no opinion when asked this question. Fewer females had no opinion than males since children of younger ages are normally engaged in various household maintenance activities. The mothers are aware of their contribution while the fathers may not be and, therefore, offered no opinion when asked this question. Again, more females disagreed with the statement than males, since as noted above, it is often the mothers who are able to know more precisely than fathers the contribution of young children. Besides, some women feel that they themselves do menial jobs and hence are not saved from them. Therefore, in the opinion of more mothers than fathers small children did not do anything worthwhile to save adults from menial tasks and in the way of helping at home.

Table 7.5. The Importance of Children's Work (Response - % distribution)

Question	Response	Male	Female	Both Sexes
b) Labour provided by children mainly frees other members of the household for more productive work.	Agree	83.6	91.8	87.7
	Disagree	0.7	3.4	2.1
	No opinion	15.8	4.1	9.9
	Not Relevant	0	0.7	0.3

The table shows that over four-fifths of respondents agreed with the statement, while just over 2% and just under 10% of respondents disagreed with the statement or had no opinion when asked this question respectively. There exists a sex differential in the proportion disagreeing with the statement and offering no opinion when asked this question. This is due to the

same reasons as in the case of statement (a).

Table 7.5. The Importance of Children's Work (Response - % distribution)

Question	Response	Male	Female	Both Sexes
c) Children are important because of the help they give in the home.	Agree	98.6	98.6	98.6
	Disagree	0.7	0.7	0.7
	No opinion	0.7	0.7	0.7

Nearly all respondents agreed with the statement: over 98% of both males and females. Over 90% of respondents among rural Yorubas agreed with the statement.[1]

Question	Response	Male	Female	Both Sexes
d) When people are old do they require their own grown-up children to do hard physical work for them, or will others help just as well?	1. Own children	93.8	99.3	96.6
	2. Blood relations	2.7	0	1.4
	3. Relations by marriage	3.4	0.7	2.1

The table shows that almost all female respondents and over 90% of male respondents reported that during old age people require their own grown-up children to do hard physical work for them. This indicates that in a traditional society people place more reliance and have more confidence in their own children to carry out hard physical work for them when they are old.

The reactions of parents to the survey show clearly that parents feel the importance of work done by children.

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1. Caldwell, J.C., 1977, op.cit. (Table 6; p.33)

7.2. Labour Force Data Using the Census Approaches.

This section examines the labour force data of children aged 10-14 years obtained on the basis of the "gainful worker approach" and the "labour force approach".[1] Table 7.6 provides data on labour force participation rates for boys and girls aged 10-14 years on the basis of the approaches mentioned above. Out of 96 boys and 102 girls in age-group 10-14 years in the village 36 boys and 36 girls were enumerated as members of the labour force on the basis of the "gainful worker approach". On the basis of the "labour force approach" 36 boys and only 9 girls were enumerated as members of the labour force. The labour force participation rates among boys aged 10-14 years was just under 40%, while in the case of girls it was 35% and 9% under "gainful worker approach" and "labour force approach" respectively. As already observed, this points to the limited value of the "labour force approach" in the measurement of female labour force in rural agricultural areas.

The labour force participation rate of boys in Barkait was slightly lower than the average of Bangladesh, though higher than that found in industrialized, semi-industrialized and agricultural countries.[2] The labour force participation rate of girls in Barkait on the basis of the "gainful worker approach" was higher than the average of Bangladesh and that of industrialized and agricultural countries. However, the rate on the basis of the "labour force approach" was slightly lower than the average for Bangladesh and that of agricultural countries, but higher compared to industrialized countries.

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1. A discussion on the "gainful worker approach' and "labour force approach" is contained in Chapter 1.

2. The Bangladesh rate is treated separately, though it is an agricultural country. This, in itself, indicates the variation in labour force participation rates among agricultural countries.

Agriculture was the predominant occupation of over four-fifths of children aged 10-14 years in Barkait. The proportion was slightly higher in the case of girls. There were only five boys and one girl aged 10-14 years engaged in non-agricultural activities. Among boys there were two hawkers of vegetables and grain, one was a barber (belonging to a Hindu household), one worked at a tea-stall in the village and the other worked at a rice mill, partly owned by his father. The only girl engaged in non-agricultural activity spun yarn. Most of the children engaged in non-agricultural activities belonged to landless or near landless households. Compared to other areas in the less developed countries the proportion engaged in non-agricultural activity was quite small. In Sri Lanka 40% of children in the rural labour force in 1951 were employed in small-scale industries. They helped with weaving, extracted and span coconut coir, took part in pot-making and woodwork; little girls particularly were employed in basketware and handmade lace and in Negombo district made fire-works at home. In India many children are engaged in weaving at home or work in match factories, tanning, coir industry and in making beedis (indigenous cigarettes), shoes, toys, candles, etc. According to a study undertaken in 1952 in two main centres of the match industry in south India, 25% of all those employed were children; 73% of them were girls most of whom were in age-group 8-10 years. A large number of children between the ages of 5 and 8 years worked at home in frame filling and box making. In Bangladesh children begin to work at five years of age in the coir industry, where they are employed in turning the wheel for spinning. They are given the tasks of sizing and reeling thread in home weaving and keep the silk worms. On the coast, particularly around Chittagong, they make salt. In Singapore they are employed in making wooden boxes, noodles and rubber shoes,

Table 7.6. Labour Force by Sex in the Age-Group, 10-14, according to the "Gainful Worker Approach" and "Labour Force Approach"

Approach	In the Labour Force	Household work	Students	Dependents	Total	% of age-group in the labour force	% of labour force in agricultural sector.
Gainful worker approach: boys 10-14 years	36	-	54	6	96	38	86
Gainful worker approach: girls 10-14 years	36	15	48	3	102	35	97
Labour force approach: boys 10-14 years	36	-	54	6	96	38	86
Labour force approach: girls 10-14 years	9	42	48	3	102	9	89

and in bookbinding, carpentry and tailoring.[1]

Table 7.7 presents data on agricultural labour force by sex and status. Over four-fifths of children aged 10-14 years were unpaid family workers. The proportion was slightly higher in the case of girls than boys. In rural agricultural areas where the household is the primary unit of employment a vast proportion of women and children consist of unpaid family workers.

On the basis of the "gainful worker approach" and "labour force approach" 16% and 26% of boys aged 10-14 years were agricultural wage labourers, while 11% and 13% of girls were agricultural wage labourers on the basis of the "gainful worker approach" and the "labour force approach" respectively. This shows that at least one-sixth of boys aged 10-14 years and one-ninth among girls in the same age-group worked for wage payment. Among those who are paid wages the boys were engaged in every kind of agricultural work, including ploughing. This has also been observed among boys in West Bengal. Girls were mainly employed to do threshing of paddy and husking of grain. Sometimes they were also employed for boiling and drying grain as well as winnowing chaff after husking.[2]

7.3. Labour Utilization Survey

Data were collected on the number of hours devoted to directly productive activities over the week preceding the survey for all persons aged ten years and above in the village.[3] Data from this source are presented in Table 7.8.

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1. For a more detailed account of employment of children see: "Employment prospects of Children and Young People in Asia", The International Labour Review, vol.88, 1963, pp.564-95.

2. Ibid, p.567.

3. A discussion on the labour utilization survey is contained in Chapter 1.

Table 7.7. Agricultural Labour Force by Sex and Status, Age-Group 10-14 years, according to the "gainful worker approach" and "labour force approach"

Approach	Agricultural wage labour	Family help	Total	% working as agricultural wage labour	% working as family help
Gainful worker approach: Boys 10-14 years	5	26	31	16	84
Gainful worker approach: Girls 10-14 years	4	31	35	11	89
Labour force approach Boys 10-14 years	8	23	31	26	74
Labour force approach Girls 10-14 years	1	7	8	13	87

As many as 43 boys and 47 girls aged 10-14 years participated in various productive activities. The labour force participation rates were 44.8% and 46.1% for boys and girls aged 10-14 years respectively. These rates were higher than those obtained employing the census approaches. This is true of both boys and girls. In fact, the labour force participation rate among girls was higher than among boys employing the labour utilization survey.

The participation rates for boys aged 10-12 years and 13-14 years were 38.2% and 60.7% respectively, and the rates for girls aged 10-12 years and 13-14 years were 40.9% and 55.6% respectively.

Girls aged 10-12 years participated slightly more than boys in the same age-group, while boys aged 13-14 years participated slightly more than girls in the same age-group. The participation rate of children aged 13-14 years was 50% higher than those in age-group 10-12 years.

The table shows that, among boys aged 10-12 years, 70%, 27% and over 15% worked two hours, three hours and four hours or more per day respectively. Among boys aged 13-14 years 94%, 59% and 41% worked two hours, three hours and four hours or more per day respectively. Among girls aged 10-12 years 81%, 59% and 37% worked two hours, three hours and four hours or more respectively. 90%, 75% and 40% of girls aged 13-14 years worked two, three and four hours or more daily respectively. Thus, it becomes clear from the table that over four-fifths of children aged 10-14 years contributed at least two hours a day, while over 30% worked four hours or more daily.

The average number of hours worked per week among "working" children comes to 25.7 hours and 21.9 hours for boys and girls aged 10-14 years

Table 7.8. Number of Hours Worked in One Week on Productive Activities, by Age and Sex
(Labour Utilization Survey)

Sex	Age Groups	Number of Hours Worked										Total no. of workers	Non-workers	Total no. of persons in age-group
		Under 10	10-14	15-21	22-27	28-34	35-41	42-48	49-55	56-62	63+			
M	10-12	3	5	11	4	2	-	-	-	1	-	26	42	68
M	13-14	-	1	6	3	4	3	-	-	-	-	17	11	28
F	10-12	1	4	6	6	7	2	1	-	-	-	27	39	66
F	13-14	1	1	3	7	5	1	1	1	-	-	20	16	36

respectively.[1] However, if we include all children in the age-group 10-14 years irrespective of whether they worked or not, girls and boys worked 11.9 hours and 9.8 hours a week respectively.

Boys in productive work were engaged in the following types of activities: ploughing and harrowing, nursery work, transplanting, manuring and fertilizing, weeding, harvesting, maintenance and repairs on farm and farm equipment, marketing, scaring birds, taking food to the field, fishing, tending animals, hawking, manual irrigation, hair-cutting (barber), etc. Girls were engaged in the following types of activities: growing vegetables, threshing, boiling and drying grain, scaring birds, husking, winnowing, fishing, tending animals, spinning yarn, making handicrafts, collecting firewood, etc.

7.4. Use of Time

After having analysed data on labour force and its utilization among children aged 10-14 years on the basis of census approaches and labour utilization survey, let us now examine how children aged 5-14 years make use of their time divided between different categories of time outlined in Chapter 2 of the thesis, on the basis of time - budget data.

For the sample there were six boys aged 5-7 years and 8-9 years each. There were nine boys aged 10-12 years and four boys aged 13-14 years. There were nine girls in age-group 5-7 years and four aged 8-9 years.[2] In age-groups 10-12 years there were five girls. For the first five weeks

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1. 'Working' here refers to those who worked a minimum of seven hours during the reference period adopted for the labour utilization survey.

2. For the first two weeks there were ten and five girls aged 5-7 years and 8-9 years respectively. Since the third week the number was reduced to nine and four respectively, since the household to which they belonged migrated from the village. They have been excluded from the analysis.

there were four girls aged 13-14 years. After the sixth week the number was reduced to three, as one of the girls got married and left her household. It may be pointed out that because of the small numbers, the findings are suggestive of patterns rather than statistically reliable universal truths.

7.4.1. Directly productive Activities

Table 7.9 gives a breakdown of the proportion of total time spent among various broad categories of DPA among children aged 5-14 years. The table shows that both boys and girls spent over 90% of their time devoted to DPA inside the family farm or business. That is, the household is the primary unit of employment to a vast majority of children in rural areas of Bangladesh. This is, in fact, in line with the findings of Table 6.14 (Chapter 6) which shows that the household is the primary unit of employment for the vast majority of men and women aged 15 years and above.

Over two-fifths of time devoted to DPA by boys was spent on agricultural activities. While just over one-fourth of time spent by boys aged 5-7 years was spent on agricultural activities it was about 50% in case of those aged 13-14 years. In the case of girls over half the total time was spent on agricultural activities. Just over half the time spent on DPA by girls aged 5-12 years was devoted to agricultural activities, while the proportion was almost 70% in the case of those aged 13-14 years. In other words, in the case of both boys and girls, the proportion of time devoted to agricultural activities rises with age.

Over half the total time expended by boys on DPA was devoted to non-farming activities, tending animals and fishing. Among activities other than agriculture, tending animals was most important. Over one-quarter of all time devoted to DPA by boys was spent looking after animals. The proportion of time spent looking after animals decreases with an increase

in age. Just over one-fifth of time spent on DPA by girls was devoted to tending animals. On the whole, the proportion of time expended tending animals decreases with an increase in age. Girls aged 13-14 years, in fact, spent a very small proportion of this time looking after animals. While boys aged 13-14 years spent one-fifth of their time looking after animals, girls in the same age group spent only one-fourteenth of their time on this activity.

The period June to September is the rainy season in Bangladesh and is the peak period of fishing. About four-fifths of all time spent on fishing was spent during the period June to September. From October the time spent on fishing starts declining and in November very little time was spent on fishing. Thus, fishing is a seasonal activity and mainly dependent on the monsoon. This is the time when men and children are busy catching fish from ponds, paddy fields, etc. It may be pointed out that fishing is not a hobby or pastime activity. Rather, it is considered a productive activity, in the sense that fish caught definitely add to the household economy and contribute to the protein intake of household members.

Part (a) of Table 7.10 shows that the average number of hours spent daily and weekly on DPA rises with age.[1] The differential by age is quite pronounced. While boys aged 5-7 years spent less than half an hour a day, those aged 8-9 years worked over one hour a day. Boys aged 10-12 years worked about two hours a day, compared to about five hours a day by boys in age-group 13-14 years.

A breakdown by busy and slack periods shows that, on average, a boy aged 5-9 years spent twice as much time on DPA during the busy season compared to the slack season and the differential was even more pronounced for slackest and busiest weeks.

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1. See also Appendix III - Figure 1.

Table 7.9. Proportion of Time Spent Daily Among Various Categories of Directly Productive Activities By Age and Sex

		BOYS					GIRLS				
		5-7	8-9	10-12	13-14	All Ages 5-14	5-7	8-9	10-12	13-14	All Ages 5-14
	Total Productive Work.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1)	a) Inside Family Farm or Business	100.0	98.2	98.8	91.8	95.7	93.8	99.3	93.4	89.2	93.4
	b) Outside Family Farm or Business	0	1.2	1.2	8.2	4.3	6.2	0.7	6.6	10.8	6.6
2)	Agricultural Activities	28.3	39.3	36.4	49.0	42.0	51.4	52.2	50.9	69.4	55.7
	a) Agr.Activities Inside	28.3	39.3	36.4	42.0	38.9	50.2	52.2	48.4	61.8	52.6
	b) Agr. Activities Outside	0	0	0	7.0	3.1	1.2	0	2.5	7.6	3.1
3)	Non-Farming Activities	0	1.8	13.3	22.6	15.1	6.9	1.1	14.3	12.1	10.5
4)	Tending Animals	51.2	40.8	28.8	19.3	27.4	24.6	36.3	22.4	7.7	21.3
5)	Fishing	20.5	18.1	21.5	9.1	15.5	17.1	10.4	12.4	10.8	12.5
	N	6	6	9	4	25	9	4	5	4	22

Table 7.10. Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Age and Sex

Period		BOYS 5-7	8-9	10-12	13-14	All Ages, 5-14	GIRLS 5-7	8-9	10-12	13-14	All Ages, 5-14
TOTAL	Day	0.3	1.1	1.8	4.8	1.8	0.5	1.1	2.4	2.0	1.3
	Week	2.2	7.6	12.8	33.3	12.3	3.2	7.5	16.7	14.0	8.8
BUSY	Day	0.5	1.5	2.3	5.1	2.1	0.6	1.4	3.1	2.9	1.7
	Week	3.3	10.2	16.1	35.7	14.7	4.1	10.1	21.7	19.5	11.7
BUSIEST WEEKS	Day	0.7	1.8	3.3	5.6	2.7	1.0	1.9	4.4	4.1	2.3
	Week	5.1	12.2	23.4	39.3	18.9	6.9	13.3	30.5	28.6	16.1
SLACK	Day	0.2	0.8	1.4	4.5	1.4	0.3	0.7	1.8	1.3	0.9
	Week	1.2	5.3	9.8	31.3	10.1	2.3	5.2	12.4	9.3	6.3
SLACKEST WEEKS	Day	0.1	0.4	1.0	3.9	1.1	0.2	0.9	1.1	0.9	0.7
	Week	0.5	3.0	6.9	27.5	7.7	1.4	6.0	7.9	6.6	4.6
N		6	6	9	4	25	9	4	5	4	22

Part (b) of the table shows that the number of hours spent on DPA by girls rises with age, till 12 years of age and then drops at age 13 years. That is, girls aged 10-12 years spent more time on DPA than those in age-group 13-14 years. This is due to the fact that girls aged 10-12 years belonged to households with fewer children compared to those in age-group 13-14 years and consequently had to spend more time. Besides, girls aged 13-14 years belonged to households with less land area per household as well as per person than girls aged 10-12 years.

A comparison of busy and slack periods shows that, on average, a girl spent twice as much time on DPA during busy periods compared to slack periods and difference was even more pronounced for slackest and busiest weeks.

A comparison of boys and girls shows that girls aged 5-7 years spent more time on DPA than boys of the same age. Girls aged 5-7 years spent twice as much time on DPA as boys in the same age-group. Boys and girls aged 8-9 years devoted the same amount of time to DPA. In age-group 10-12 years girls spent over 30% more time on DPA compared to boys in the same age-group. Boys aged 13-14 years spent over twice as much time on DPA as girls in the same age group. Thus, we can say that at younger ages up to 12 years, a girl spends more time on DPA than a boy but at older ages of 13 years and above a boy spends considerably more time on DPA than a girl of the same age.

The average number of hours spent on DPA by boys and girls of various age-groups have been reported in several studies.[1] The figures

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1. See: Mead T.Cain, "The Economic Altivities of Children in a Village in Bangladesh". op.cit.

   Nag, Peet and White, "Economic Value of Children in Two Peasant Societies", op.cit.

   Naverra, E.R.,"The Allocation of Household Time Associated with Children in Rural Philippines in Laguna,Philippines,op.cit.

reported in those studies are higher than those recorded for Barkait, giving rise to the suspicion that some of those studies, which were not determined by continuous observation, may have been overestimates. Besides the patterns may have been different in Barkait from the villages reported in other studies, due to differences in soil conditions, cropping pattern and intensity and different agricultural practices, which may also account for some of the differences.

Part (a) of Table 7.11 shows that the number of hours spent on DPA daily was the same for boys aged 5-9 years belonging to landless households and households with up to 1.0 acre of cultivable land area. But, the number of hours spent on DPA by boys aged 5-9 years increases as the size of land area increases further. For example, those belonging to households having land areas ranging between 1.01-2.0 acres spent just under one hour a day, compared to over one hour a day by those belonging to households in excess of two acres of land. In the case of boys aged 10-14 years those belonging to households with land areas ranging between 0.01-1.0 acre spent more time on DPA than the others. This is in line with the findings of Table 6.17 (see chapter 6) which shows that males aged 15 years and over belonging to such households spent more time on DPA than those belonging to other landholding groups. As already noted, this is because most of them cultivated others' land in addition to cultivating their own land. Besides, such households rarely employ outside labour and persons belonging to such households have to spend more time on farming.

A comparison of busy and slack periods shows that for boys aged 5-9 years the extent of seasonal variation was virtually the same in case of those belonging to landed households. Those belonging to landless households had the lowest seasonal variation. The reason is that boys aged 5-9 years belonging to landless households spent more time on non-farming activities such as handicrafts, weaving fishing nets, etc., and very little time on agricultrual activities. If we look at the busiest and the

Table 7.11. Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Age, Sex and Landholding Groups.

	BOYS								GIRLS							
	Landless		0.01-1.0 acre		1.01-2.0 acre		>2 acres		Landless		0.01-1.0 acre		1.01-2.0 acres		>2 acres	
Period	5-9	10-14	5-9	10-14	5-9	10-14	5-9	10-14	5-9	10-14	5-9	10-14	5-9	10-14	5-9	10-14
TOTAL																
Day	0.5	2.9	0.5	4.3	0.9	2.0	1.2	2.5	0.2		0.6	1.8	1.3	2.6	0.6	2.5
Week	3.7	20.5	3.2	29.8	6.3	14.1	8.4	17.7	1.5		4.4	12.8	9.2	18.1	4.3	17.2
BUSY																
Day	0.6	3.3	0.6	4.7	1.3	2.4	1.8	3.1	0.3		0.8	2.4	1.8	3.3	1.0	3.5
Week	4.1	23.0	4.2	32.8	9.1	16.6	12.6	21.8	2.1		5.5	17.0	12.4	23.0	7.1	24.6
BUSIEST WEEKS																
Day	0.6	5.5	0.8	4.6	1.8	3.2	2.3	3.5	0.5		1.3	3.5	2.1	4.3	1.2	4.3
Week	4.1	38.3	5.7	32.5	12.8	22.3	16.0	24.8	3.3		9.1	24.8	14.5	29.9	8.5	29.8
SLACK																
Day	0.5	2.6	0.3	3.9	0.6	1.7	0.7	2.0	0.2		0.5	1.3	0.9	2.0	0.3	1.5
Week	3.3	18.3	2.4	27.2	3.9	11.8	4.8	14.2	1.4		3.5	9.2	6.4	13.8	1.8	10.8
SLACKEST WEEKS																
Day	0.2	2.3	0.3	3.1	0	1.8	0.3	1.3	0		0.4	0.9	1.2	1.0	0.3	1.1
Week	1.6	16.2	1.9	21.8	0	12.6	2.1	9.4	0		2.8	6.1	8.3	7.3	1.8	8.0
N	2	3	6	2	1	4	3	4	3	0	6	6	2	2	2	1

slackest weeks we find that boys aged 5-9 years, belonging to households with land area ranging between 1.01-2.0 acres, did not spend any time at all on DPA during the slackest weeks, though they spent about two hours a day during the busiest weeks. Boys belonging to households with over two acres of land spent over two hours a day during the busiest weeks but only 18 minutes a day during the slackest weeks. In fact, the number of hours spent daily during the busiest weeks was greater than the number of hours spent weekly during the slackest weeks.

With respect to boys aged 10-14 years the extent of seasonal variation was least pronounced in the case of those belonging to households possessing land areas ranging between 1.01-2.0 acres and was most pronounced in the case of those belonging to households with over two acres of land. However, for busiest and slackest weeks the extent of variation was most pronounced in the case of those belonging to landless households. They worked five and a half hours a day during the busiest weeks and only two hours and eighteen minutes during the slackest weeks.

Girls aged 5-9 years and 10-14 years belonging to households with land area ranging between 1.01-2.0 acres spent more time on DPA than girls belonging to other landholding groups [see Table 7.11,part(b)]. This is in line with the findings of Table 6.17 which indicates that females belonging to households with land areas ranging between 1.01-2.0 acres spent more time on DPA than females belonging to other landholding groups.

Among landed households the extent of seasonal variation was most pronounced in the case of girls belonging to households with over two acres of land.

If we lump 5-14 years together we find that boys belonging to landless households and to households in excess of two acres of land spent more time on DPA than others (see Table 7.12). Girls belonging to households

possessing land areas ranging between 1.01-2.0 acres spent more time on DPA than others.

Table 7.12. Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Landholding Groups and Sex.

Sex		Landless	0.01-1.0 acre	1.01-2.0 acres	>2 acres
BOYS					
	Day	2.0	1.4	1.8	2.0
	Week	13.8	9.9	12.5	13.7
	N	5	8	5	7
GIRLS					
	Day	0.2	1.2	2.0	1.2
	Week	1.5	8.6	13.7	8.6
	N	3	12	4	3

Naverra observed that children from poorer households allocate more time to productive work.[1] Data from Barkait show that this was true of boys belonging to landless households but was not so in the case of girls, although among landless households there was no girl in age-group 10-14 years. Cain reported that males aged ten years and above from landless households do considerably more work than those from the landed households. He observed that females aged ten years and over in economically better-off households spend as much or more time working than poor women.[2] Data from

1. Naverra, 1977. op.cit.

2. Mead T.Cain, 1977. op.cit.

Barkait show that girls aged 10-14 years belonging to households with over one acre of land spent more time on DPA than those belonging to households with up to 1.0 acre of land.

Among 13 boys aged 10-14 years 4 were reported as "working" under the "gainful worker approach" and 9 were students and, therefore, fall under the category of "dependent" population. Among girls aged 10-14 years five were reported as "working" and four as "dependent" (see Table 7.13).

Boys reported as "working" spent more time on DPA than those shown as "dependent" (36 minutes more per day). The differential was stronger during the slack period in comparison to the busy period. However, if we look at the busiest and the slackest weeks we find that during the busiest weeks "dependent" boys worked more than the "working" boys.

Interestingly, among girls those in the category of "dependants" spent more time on DPA than those "working". It is only during the busiest weeks that the "working" girls spent more time on DPA than the "dependent" girls.

Thus, the findings of Table 7.13 point to the limited value of the "gainful worker approach" in the enumeration of labour force in rural agricultural areas in the young age-group of 10-14 years, especially in the case of girls.

Among "working" boys aged 10-14 years there were two unpaid family workers, one was an agricultural wage labourer and another was an unpaid family worker-cum-agricultural wage labourer. The unpaid family worker-cum-agricultural wage labourer worked considerably more than the others. On average, he worked 6.2 hours a day compared to 2.2 hours and 2.1 hours per day in the case of agricultural wage labourer and unpaid family workers respectively.

Among "working" girls aged 10-14 years there were four unpaid

family workers and an agricultural wage labourer. The unpaid family workers worked over twice as much as the agricultural wage labourer. On average unpaid family workers spent 2.4 hours a day on DPA compared to only 1.1 hours a day in the case of the agricultural wage labourers. This was basically because of two reasons: a) lack of work opportunities, and b) social values placing a restriction on the movement of girls of this age. It was found that she worked for others often if her mother was also employed, or if she was employed by one of her close neighbours. She never accepted work out of the village nor at a great distance within the village itself.

Table 7.13. Average Number of Hours Spent Daily and Weekly on Directly Productive Activities by Children Aged 10-14 years According to Their Work Status (on the basis of the "gainful worker approach")

	BOYS		GIRLS	
Period	Working	Dependent	Working	Dependent
TOTAL				
Day	3.1	2.5	2.2	2.3
Week	22.0	17.8	15.2	16.2
BUSY				
Day	3.4	3.1	2.9	3.1
Week	23.6	21.5	20.4	21.6
BUSIEST WEEKS				
Day	2.7	3.6	3.8	3.4
Week	19.2	25.5	26.4	23.9
SLACK				
Day	2.7	2.1	1.5	1.7
Week	19.2	14.6	10.7	11.6
SLACKEST WEEKS				
Day	2.5	1.5	0.7	0.9
Week	17.3	10.4	4.8	6.6
N	4	9	5	4

7.4.2. Time Spent on Household Maintenance Activities

This section deals with the amount of time spent on household maintenance activities by children aged 5-14 years.

One-third of the total time spent on HHMA by boys was devoted to child-care (see Table 7.14). The proportion of such time spent on child-care decreases with age: from half by boys aged 5-7 years to just over one-quarter by boys aged 13-14 years. Just over one-fifth of such time was spent on marketing for household consumption as well as on collecting firewood. Time spent on marketing for household consumption rises with age: from less than 6% by boys aged 5-7 years to over two-fifths by boys aged 13-14 years. Boys aged 5-7 years spent three-tenths of their time in collecting firewood and dry leaves; among boys aged 8-12 years it was over one-fifth, while for those aged 13-14 years it was less than 6%. It is, thus, clear from the table that with an increase in age boys spend a higher proportion of their time on the more important types of HHMA.

About two-fifths of time spent on HHMA by girls was devoted to looking after younger siblings. While girls aged 5-9 years spent about three-fifths of their time on child care, girls aged 10-14 years spent just over one-fifth of their time on this activity. Girls spent just over one-sixth of their time on food preparation and cooking as well as on collecting firewood. The proportion of time spent on food preparation and cooking increases with age. While less than 2% of time was spent on it by girls aged 5-9 years, about three-tenths of total time was spent on it by girls aged 10-14 years. Just over one-sixth of total time was spent in bringing water and washing and cleaning. Time spent in bringing water and washing and cleaning increases with rising age. While less than 4% of time was spent in bringing water by

Table 7.14. Proportion of Time Spent Daily among Various Household Maintenance Activities by Age and Sex

	Household Maintenance Activities	BOYS 5-7	8-9	10-12	13-14	All Ages, 5-14	GIRLS 5-7	8-9	10-12	13-14	All Ages, 5-14
1.	Food Preparation and cooking	0	*	0	*	*	1.7	2.4	29.8	30.8	17.2
2.	Child care	50.6	33.8	27.9	26.9	33.7	57.2	61.7	22.5	18.8	38.2
3.	Collecting firewood	30.8	22.8	23.0	5.9	21.4	24.0	19.8	13.5	16.1	18.2
4.	Marketing for household consumption	5.6	14.0	26.3	41.9	22.0	*	0	*	*	*
5.	Bringing water	0.7	2.6	1.8	1.7	1.8	3.3	4.2	16.2	17.4	10.7
6.	Washing and cleaning	0	0	3.2	2.1	1.6	1.8	2.9	11.8	11.8	7.4
7.	Other	12.3	26.8	17.8	21.5	19.5	12.0	9.0	6.2	5.1	8.3
	N	6	6	9	4	25	9	4	5	4	22

* insignigicant

girls aged 5-9 years, one-sixth of time was spent on it by girls aged 10-14 years. 2% of time was spent on washing and cleaning by girls aged 5-9 years compared to about 12% by those aged 10-14 years. It is, therefore, clear from the table that, as in the case of boys, with a rise in age, girls spend a higher proportion of their time on more important HHMA.

The table brings out the differential by sex. Boys devoted very little time to bringing water, washing and cleaning and practically no time to food preparation and cooking, while girls spent over one-third of their time on those activities. Boys spent over one-fifth of their time on marketing for household consumption, while girls spent practically no time on it. Girls spent more time on child care and less time on collecting fire-wood compared to boys.

As already observed, males contribute little time to HHMA. Boys aged 5-14 years spent 40 minutes per day on HHMA compared to over two hours a day in the case of girls (see Table 7.15).

Among boys the number of hours spent on HHMA rises with age to 8-9 years after which it remains constant till 12 years of age and then rises again slightly. Boys aged 5-7 years spent 12 minutes less per day compared to boys aged 8-12 years and 18 minutes less per day compared to those in age-group 13-14 years (see also Appendix III - Figure 1).

Among girls the number of hours spent on HHMA rises with age and then drops at 13-14 years. Girls aged 10-12 years spent 24 minutes more per day than girls aged 13-14 years. As already observed, girls aged 10-12 years had fewer younger siblings to help them compared to those in age-group 13-14 years. Girls aged 10-14 years spent almost twice as much time on HHMA compared to girls aged 5-9 years (see also Appendix III - Figure 2).

Table 7.15. Average Number of Hours Spent Daily and Weekly on Household Maintenance Activities by Age and Sex

	Period	BOYS 5-7	8-9	10-12	13-14	All Ages, 5-14	GIRLS 5-7	8-9	10-12	13-14	All Ages, 5-14
TOTAL	Day	0.6	0.8	0.8	0.9	0.8	1.5	1.5	3.0	2.6	2.1
	Week	4.5	5.9	5.7	6.3	5.6	10.7	10.8	21.0	18.5	14.4
BUSY	Day	0.8	0.9	0.8	0.9	0.8	1.6	1.6	2.9	2.6	2.1
	Week	5.3	6.0	5.6	6.1	5.7	11.0	11.4	20.1	18.6	14.4
BUSIEST WEEKS	Day	0.9	0.9	0.8	0.9	0.8	1.4	1.7	2.5	2.1	1.8
	Week	6.2	6.4	5.3	6.3	5.9	9.9	12.1	17.4	14.4	12.8
SLACK	Day	0.6	0.8	0.8	0.9	0.8	1.5	1.5	3.1	2.6	2.0
	Week	3.9	5.7	5.8	6.4	5.4	10.4	10.3	21.7	18.4	14.2
SLACKEST WEEKS	Day	0.2	0.7	0.7	0.8	0.6	0.3	1.5	3.6	3.3	1.7
	Week	1.5	5.1	5.1	5.7	4.3	2.1	10.4	25.0	22.9	12.1
N		6	6	9	4	25	9	4	5	4	22

If we lump 5-14 years together we find that the extent of seasonal variation was little. Among both boys and girls the extent of seasonal variation was more pronounced in the case of those aged 5-7.

Cain reported that boys aged 4-6 years, 7-9 years, 10-12 years and 13-15 years spent 0.9 hour per day, 1.1 hours, 0.6 hour and 0.7 hour respectively.[1] White found that boys aged 6-8 years, 9-11 years and 12-14 years spent 1.9 hours, 1.4 hours and 1.5 hours per day respectively on household maintenance activities and Peet found that boys in the same age groups as under White's study spent 0.7 hours, 1.7 hours and 1.8 hours per day respectively.[2] In Barkait boys in younger age groups spent less time and those in older age groups spent more time than the estimates of Cain suggests. White's and Peet's estimates of the number of hours spent on household maintenance activities were higher compared to the position we find in Barkait.

Cain found that girls aged 4-6 years, 7-9 years, 10-12 years and 13-15 years spent 1.2 hours, 3.7 hours, 5.4 hours and 7.0 hours per day respectively. White reported that girls aged 6-8 years, 9-11 years and 12-14 years spent 2.3 hours, 2.4 hours and 4.0 hours per day respectively on household maintenance activities and Peet reported 2.4 hours, 2.6 hours and 3.3 hours among girls aged 6-8 years, 9-11 years and 12-14 years respectively. Compared to what we observed in Barkait most of these estimates seem to be biased upwards. The problems in comparing those studies with the present study have already been discussed.

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1. Cain, Mead T.,1977, op.cit.

2. Nag, Peet and White, 1977, op.cit.

Children belonging to households with seven or more persons spent less time on HHMA than those belonging to households with less than seven persons (see Table 7.16). Children belonging to larger households have more people available in the household to share the available quantum of work and, therefore, such children spent less time on HHMA than children belonging to smaller households.

The difference was greater in the case of girls than boys. Girls belonging to larger households spent an hour less per day on HHMA than those belonging to smaller households. The differential was higher during the busy period when girls belonging to larger households spent an hour and twelve minutes less per day on HHMA than those belonging to smaller households. Boys belonging to larger households spent twelve minutes less per day on HHMA compared to those belonging to smaller households.

Table 7.17 shows that "working" boys spent 6 minutes more per day on HHMA than "dependent" boys. This was true of the entire period of observation as well as for busy and slack periods. We have seen earlier that "working" boys spent 0.6 hours more per day on DPA than "dependent" boys. That is, "working" boys spent over 40 minutes more per day on DPA and HHMA compared to "dependent" boys.

Compared to "working" girls, "dependent" girls spent over half an hour more per day on HHMA. We have seen earlier that they spent 6 minutes more per day on DPA than "working" girls. In other words, "dependent" girls spent over 40 minutes more per day on HHMA and DPA than "working" girls. Thus, the Western concepts of "working" and "dependent", so often used in the rural agricultural areas of less developed countries, hardly make much sense in the context of such societies, especially when talking of women and girls.

Table 7.16. Average Number of Hours Spent Daily and Weekly on Household Maintenance

Activities According to Size of Household

Period	BOYS		GIRLS	
	1-6 persons	7 or more persons	1-6 persons	7 or more persons
TOTAL				
Day	0.9	0.7	2.5	1.5
Week	6.1	5.0	17.6	10.2
BUSY				
Day	0.9	0.7	2.6	1.4
Week	6.4	5.1	17.9	9.8
SLACK				
Day	0.8	0.7	2.5	1.5
Week	5.9	4.9	17.3	10.6
N	12	13	12	10

Table 7.17. Average Number of Hours Spent Daily and Weekly on Household Maintenance Activities by Children aged 10-14 years According to their Work Status (on the basis of "Gainful Worker Approach")

	BOYS		GIRLS	
Period	Working	Dependent	Working	Dependent
TOTAL				
Day	0.9	0.8	2.6	3.2
Week	6.1	5.8	18.3	22.6
BUSY				
Day	0.9	0.8	2.5	3.1
Week	6.1	5.6	17.6	21.5
SLACK				
Day	0.9	0.8	2.7	3.4
Week	6.2	5.9	18.9	23.5
N	4	9	5	4

7.4.3. Total Work

This section examines the total number of hours worked, i.e.number of hours spent on DPA and number of hours spent on HHMA.

Table 7.18 presents total number of hours worked by age and sex. In both age-groups girls worked more than boys. Girls aged 5-9 years worked over 45 minutes more per day than boys in the same age-groups and girls aged 10-14 years worked one and a half an hour more per day than boys in the same age-group. The difference is mainly due to the fact that girls spent more time on HHMA compared to boys.

Estimates of the total number of hours worked by children presented by Cain, White and Peet are higher than those recorded for Barkait giving rise to the suspicion that some of those estimates, which were not determined by continuous observation, may have been over-estimates.[1] However, the patterns may have been different in Barkait from the villages that they studied, which may also account for some of the differences.

Table 7.18. Average Number of Hours Spent Daily and Weekly on Total Work by Age and Sex

		BOYS		GIRLS	
Period		5-9 years	10-14 years	5-9 years	10-14 years
TOTAL	Day	1.4	3.6	2.2	5.1
	Week	10.1	25.0	15.2	35.7
BUSY	Day	1.8	4.0	2.4	5.8
	Week	12.4	27.9	17.1	40.3
SLACK	Day	1.1	3.2	1.7	4.5
	Week	8.0	22.4	11.7	31.6
N		12	13	13	9

1. Cain Mead T. 1977, op.cit. and
Nag, Peet and White, 1977. op.cit.

Boys aged 5-9 years belonging to landless households worked more than others in the same age-group (see Table 7.19). Table 7.11 shows that boys aged 5-9 years belonging to landless households spent less time on DPA than boys in the same age-group belonging to households with over one acre of land. This means that boys aged 5-9 years belonging to landless households spent more time on HHMA compared to boys in the same age-group belonging to landed households. Boys aged 10-14 years belonging to households with up to 1.0 acre of land worked more than others. Table 7.11 shows that they also contributed more time to DPA than others. As already observed, such households rent in land from others and only rarely employ outside labour. Thus, boys aged 10-14 years belonging to such households have to work longer hours. Boys aged 10-14 years belonging to households with over one acre of land worked shorter hours since such households are relatively rich and can afford to employ outside labour. Thus, we see that boys belonging to landless or near landless households worked more than those belonging to households with relatively more land.

Girls aged 5-9 years belonging to households with over two acres of land worked less than the others and girls aged 10-14 years belonging to households with up to 1.0 acre of land worked less than others. This is because girls aged 5-9 years belonging to households with over two acres of land spent less time on HHMA compared with girls in the same age-group belonging to other land-holding groups. Girls aged 10-14 years belonging to households with up to 1.0 acre of land spent less time on DPA and HHMA than girls in the same age-group belonging to households with over one acre of land.

Table 7.19. Average Number of Hours Spent Daily and Weekly on Total Work by Age, Sex and Size of Landholding

Period	BOYS								GIRLS							
	Landless		0-01-10 acre		1.01-2.0acres		>2.0 acres		Landless[1]	01-1.0acre		1.01-2.0 acre		>2 acres		
	5-9	10-14	5-9	10-14	5-9	10-14	5-9	10-14	5-9	5-9	10-14	5-9	10-14	5-9	10-14	
TOTAL																
Day	2.6	4.1	0.9	5.4	2.0	2.7	1.6	3.1	2.0	2.4	3.8	2.5	6.7	1.5	6.4	
Week	18.0	28.7	6.2	38.0	14.2	19.1	11.2	21.5	13.8	16.7	26.4	17.6	46.8	10.7	45.1	
BUSY																
Day	3.1	4.4	1.0	5.9	2.3	3.1	2.3	3.7	2.1	2.6	4.2	2.9	7.6	2.1	7.4	
Week	21.5	30.5	7.0	41.4	15.9	21.4	15.9	25.6	14.5	18.2	29.4	20.3	53.0	14.4	51.6	
SLACK																
Day	2.1	3.9	0.8	5.0	1.8	2.4	1.0	2.6	1.9	2.2	3.4	2.2	5.9	1.1	5.6	
Week	15.0	27.1	5.4	35.0	12.8	17.1	7.1	18.0	13.1	15.3	23.8	15.3	41.3	7.4	39.4	
N	2	3	6	2	1	4	3	4	3	6	6	2	2	2	1	

[1] There are no girls aged 10-14 years belonging to landless households.

It is difficult to estimate precisely the productivity of children's labour in the non-monetized sector of the economy. A large part of the economy in rural Bangladesh is based on non-monetized transactions. Family labour is the predominant form of labour available and utilized. However, an attempt is made to examine the productivity of children's labour by looking at the wage rate of those who work for money. The daily wage rate varies between Tk.4-6/-(25-40 U.S.cents) depending on the demand for labour, plus about the same value of wages paid in kind[1]. With regard to those boys aged 10-14 years who worked for others most of them earned roughly the same wage as adults. However, there were a few who received less than adult wage rate, roughly about 70 to 80% of adult wages. The position was similar for girls aged 10-14 years, although it should be noted that women normally are paid in kind. The average female wage rate was equivalent of Taka 4/-. In agriculture, a boy of 10-14 years can do practically all the tasks involved in preparing a rice field with almost the same skill as an adult after about one year's experience. A comparison of Table 7.10 of this chapter with Table 6.15 (chapter 6) shows that boys aged 13-14 years spent 4.8 hours a day on DPA compared to 5.0 hours, 6.0 hours or over and 4.3 hours in case of those aged 15-24, 25-54 years and 55 years and over respectively. In other words, a boy of 13-14 years worked more than a male aged 55 years and above, slightly less than those in age-group 15-24 years and over one hour less than those in age-group 25-54 years. A girl aged 10-14 years spent 2.2 hours daily on DPA compared to 2.1 hours, about 3.0 hours and 1.6 hours in case of those aged 15-24 years, 25-54 years and 55 years and above respectively. That is, a girl aged 10-14 years worked more than those in age-groups 15-24 years and 55 years and above and about 40 minutes less per day than those aged 25-54 years.

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[1] Please also see pp.122-23 for a discussion on wage payment.

With regard to activities such as collecting firewood, carrying water, tending animals, washing and cleaning, child care, and scaring birds, it is difficult to estimate the productivity of children's labour. It might be correct to say that the productivity of those below ten years of age may be somewhat lower than that of grown-up children and adults. The tasks in themselves may not be directly productive but they are essential if households are to keep animals, save the rice from being eaten away by birds, ducks and chicken, and so on. The entire village owns and cares for the following number of animals: 123 cows, 148 bulls, 117 goats, 734 chicken and 196 ducks. Chicken generally find their own food, but all other animals require a substantial amount of time and labour in care and feed. Ducks must be fed and taken to water each day. Goats, bulls and cows all require fodder which is generally cut and brought to them from gardens and the edges of rice-fields. In addition, cows and bulls have to be taken to water daily. For the care of animals, children are important. We have already seen that boys aged 5-14 years spent 27.4% of their total time devoted to DPA in looking after animals and the proportion was 21.3% in the case of girls aged 5-14 years (see Table 7.9). Thus, by looking after these animals, young children free older children and adult members of the household for more productive work. There is not much evidence to suggest that these tasks could be performed faster or better by an adult or grown-up children, as compared to younger boys and girls.

7.4.4 Time Spent on Personal Care and Needs

This section deals with the amount of time spent on personal care and needs. Time spent on eating, bathing, toilet and praying have been

included under the category of "personal care and needs".

Boys and girls aged 10-14 years spent about 40 minutes more per day on personal care and needs than those aged 5-9 years (see Table 7.20).[1] The difference is mainly due to the time spent on praying. Children aged 10-14 years were often observed offering their daily prayers, while those in age-group 5-9 years were seldom found praying. It may be pointed out that, according to religious injunctions, as soon as a child reaches 12 years of age it becomes obligatory on his or her part to offer daily prayers. The other interesting point that emerges from the table is that there was no sex differential in the amount of time spent on personal care and needs by children aged 5-14 years, although there was a differential in the case of males and females aged 15 years and above (see chapter 6, Table 6.27).

A breakdown by busy and slack periods shows that there was no seasonal variation in the amount of time spent on personal care and needs by children, although we found that seasonal variation existed among males and females aged 15 years and above.

7.4.5. Time Spent in Studying

This section examines the amount of time spent in school (both formal and religious) and with books at home. Those who go to primary school spend four hours per day at school for six days of the week, while those who go to the religious school spend about two hours a day for six days of the week. In age-group 5-9 years there were twelve boys and thirteen girls. All of them were studying at the primary school in the village. Besides, all of them spent about an hour every day at the religious school. In age-group 10-14 years, out of thirteen boys nine were students and six of them also went to the religious school. In age-group 10-14 years there were nine girls, of whom four were studying. One of them went to the primary school only while three others went to both the religious school and the primary school. The

1. See also Appendix III - Figures 1 and 2.

Table 7.20. Average Number of Hours Spent Daily and Weekly on Personal Care and Needs by Age and Sex

		BOYS			GIRLS		
PERIOD		5-9	10-14	TOTAL	5-9	10-14	TOTAL
TOTAL							
	Day	1.9	2.5	2.2	1.9	2.5	2.2
	Week	13.2	17.2	15.3	13.2	17.2	15.2
BUSY							
	Day	1.9	2.4	2.2	1.9	2.5	2.2
	Week	13.2	17.0	15.2	13.4	17.2	15.2
SLACK							
	Day	1.9	2.5	2.2	1.9	2.5	2.2
	Week	13.2	17.3	15.3	13.0	17.2	15.2
	N	12	13	25	13	9	22

Table 7.21. Average Number of Hours Spent Daily and Weekly on Studying by Age and Sex (School-going children)

PERIOD		BOYS			GIRLS		
		5-9	10-14	TOTAL	5-9	10-14	TOTAL
TOTAL							
	Day	5.3	6.3	5.7	4.9	5.8	5.1
	Week	37.3	44.1	40.2	34.2	40.7	35.7
BUSY							
	Day	5.2	6.0	5.5	4.7	5.4	4.9
	Week	36.6	41.8	38.8	33.2	37.6	34.2
SLACK							
	Day	5.4	6.6	5.9	5.0	6.2	5.3
	Week	37.9	46.1	41.4	35.1	43.4	37.0
	N	12	9	21	13	4	17

fact that the village has both a primary school and a religious school makes it possible on the part of most of the children to attend both of these schools.

Table 7.21 shows that in both age-groups boys spent more time on studying than girls. Boys aged 5-9 years spent 24 minutes more per day on studying than girls in the same age-group, while boys aged 10-14 years spent half an hour a day more than girls in the same age group. The differential is basically due to the fact that boys spend more time studying at home than girls.

A breakdown by busy and slack periods shows that the extent of seasonal variation was more pronounced among those aged 10-14 years. Girls aged 10-14 years spent 48 minutes more per day on studying during the slack period than during the busy period, while boys aged 10-14 years spent 36 minutes more during the slack period. Boys and girls aged 5-9 years spent 12 minutes and 18 minutes more per day respectively during the slack period compared to the busy periods. This shows that during busy seasons when the demand for family labour is high, children spend less time on studying and contribute most of this time to DPA.

7.4.6. Time Spent in Playing

This section examines the amount of time children spent playing. In Bangladesh villages boys often play hide and seek, hadu-du,[1] football and spend time in flying kites, while girls play hide and seek and play with their dolls. These are often home-made dolls made by the girls themselves and their elder sisters and mothers.

Children in age-group 5-9 years spent more time playing than those in age-group 10-14 years (see Table 7.22). The younger the child the more is the time spent on playing. Boys aged 5-9 years spent 54 minutes more than boys aged 10-14 years, while girls aged 5-9 years spent one hour and twelve

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1. Hadu-du is a local game often played in Bangladesh villages.

Table 7.22. Average Number of Hours Spent Daily and Weekly on Playing by Age and Sex.

PERIOD		BOYS 5-9	BOYS 10-14	BOYS TOTAL	GIRLS 5-9	GIRLS 10-14	GIRLS TOTAL
TOTAL							
	Day	2.5	1.6	2.0	2.7	1.5	2.2
	Week	17.8	11.1	14.3	19.2	10.3	15.7
BUSY							
	Day	2.4	1.6	2.0	2.7	1.3	2.2
	Week	17.1	10.9	13.9	19.4	9.3	15.6
SLACK							
	Day	2.6	1.6	2.1	2.7	1.6	2.3
	Week	18.3	11.1	14.6	19.2	11.1	15.8
	N	12	13	25	13	9	22

minutes more per day on playing than girls in age-group 10-14 years.

A breakdown by busy and slack periods shows that if we do not control for age, there was practically no seasonal variation. However, if we look at the different age-groups, we find that girls aged 10-14 years spent 18 minutes more per day on playing during slack season compared to busy season. Boys aged 5-9 years spent 12 minutes more per day on playing during slack season compared to busy season.

7.47 Time Spent in Social Needs

This section examines the amount of time spent on social needs by children aged 5-14 years. Children, especially in the younger ages of 5-9 years and more so in the case of girls than boys, often accompany parents, grandparents and other older members of the household to neighbours and relations. Rarely do they visit relations, especially if living outside the village, on their own.

Table 7.23 shows that girls spent a little more time on social needs than boys.[1] Girls aged 5-9 years spent 12 minutes more per day on social needs than boys in the same age-group. Boys and girls in age-group 10-14 years spent the same amount of time on social needs. Boys aged 10-14 years spent 6 minutes less per day on social needs than boys aged 5-9 years, while girls aged 10-14 years spent 18 minutes less per day on social needs than girls in age-group 5-9 years. The reason why children aged 5-9 years spent more time than those in age-group 10-14 years is that, as noted above, when parents or other members of the household visit friends and relations, it is more common for them to take children aged 5-9 years with them than those in age-group 10-14 years.

The extent of seasonal variation was stronger in the case of girls. On average, they spent 24 minutes less per day on social needs during busy period compared to slack period while boys spent 18 minutes less during busy

1. See also Appendix III - Figures 1 and 2.

Table 7.23. Average Number of Hours Spent Daily and Weekly on Social Needs by Age and Sex

		BOYS			GIRLS		
	PERIOD	5-9	10-14	TOTAL	5-9	10-14	TOTAL
TOTAL							
	Day	0.6	0.5	0.6	0.8	0.5	0.7
	Week	4.3	3.5	3.9	5.6	3.4	4.7
BUSY							
	Day	0.5	0.4	0.4	0.6	0.3	0.5
	Week	3.3	2.8	3.1	3.9	2.2	3.2
SLACK							
	Day	0.7	0.6	0.7	1.0	0.6	0.9
	Week	5.2	4.1	4.6	7.0	4.4	6.0
	N	12	13	25	13	9	22

period than during slack period.

7.4.8. Time Spent in Idleness

This section examines the amount of time children aged 5-14 years spent sleeping during the daytime and in doing practically nothing.

Boys spent 6 minutes more per day in idleness than girls (see Table 7.24).[1] Males aged 15 years and above spent more time in idleness than females in the same age-group as well (see Chapter 6, table 6.32). The table shows that children aged 5-9 years spent more time in idleness than those in age-group 10-14 years. Boys aged 5-9 years spent half an hour a day more than boys aged 10-14 years, while girls aged 5-9 years spent 6 minutes more a day in idleness than girls in age-group 10-14 years.

The extent of seasonal variation was very low. In the case of both boys and girls it amounted to 6 minutes less per day being spent in idleness during busy season than during slack season.

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1. See also Appendix III - Figures 1 and 2.

Table 7.24. Average Number of Hours Spent Daily and Weekly on Idleness by Age and Sex.

		BOYS			GIRLS		
		5-9	10-14	TOTAL	5-9	10-14	TOTAL
TOTAL							
	Day	2.1	1.6	1.8	1.8	1.7	1.7
	Week	14.8	10.9	12.9	12.7	11.7	12.2
BUSY							
	Day	2.1	1.5	1.8	1.8	1.6	1.7
	Week	14.6	10.6	12.6	12.4	11.0	11.7
SLACK							
	Day	2.1	1.6	1.9	1.9	1.8	1.8
	Week	15.0	11.1	13.1	13.1	12.3	12.7
	N	12	13	25	13	9	22

CHAPTER 8. UNEMPLOYMENT AND UNDEREMPLOYMENT

We review in Appendix I the various interpretations of underemployment and the approaches adopted so far in measuring the extent of underemployment. We find that with the exception of visible underemployment the other concepts are either not very suitable for measuring the amount of surplus labour or not very helpful as a means of distinguishing underemployment in less developed countries or their empirical calculations depend on so many assumptions that the results obtained would hardly serve any useful purpose. We have, therefore, decided to measure the extent of visible underemployment in Barkait.

We have indicated in Appendix I the need for a somewhat different approach to the measurement of underemployment. The proposed approach takes into account a) time spent on all directly productive activities by persons aged ten years and above (belonging to the sampled households selected for time-budget data), whether engaged primarily in agricultural activities or in non-farming activities or in both types of activities and b) time spent on total work (i.e. DPA and HHMA) by such persons. In measuring underemployment the procedure followed is on the one hand the number of hours spent on DPA and total work, and on the other hand the number of hours potentially available for DPA and total work.[1] The difference between the two gives us the measure of visible underemployment in the village.

This chapter is based on time-budget data collected over a period of seven months for a sample of thirty-four households in the village.

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1. The procedure used in estimating the numbers of hours potentially available for DPA and total work is contained in Chapter 2.

The chapter consists of two sections. The first section examines the extent of unemployment[1] and the second section looks at employment and underemployment.

8.1. Unemployment

If we consider DPA only, the overall unemployment rate over the period of investigation among males aged ten years and above was 6.3 per cent per week. Among females in the same age group the rate was 14.3 per cent per week.[2] The rate was 10.8 per cent, 3.3 per cent and 11.3 per cent among males aged 10-14 years, 15-54 years and those aged 55 years and above respectively. The rate was 11.1 per cent, 14.1 per cent and 21 per cent among females aged 10-14 years, 15-54 years and 55 years and above respectively. The unemployment rate among females was more than twice that among males. While males in age group 15-54 years had very low unemployment figures, one-seventh of females in this age group were unemployed. Roughly twice as many females as males aged 55 years and above were out of work. The sex differential in the unemployment rate is explained by the fact that males are the breadwinners of the family and, hence, cannot afford to remain out of work for a long period of time. Besides, women are usually engaged in post-harvest operations only, while men are engaged in pre-harvest, harvest and post-harvest operations. That is, employment opportunities are higher for men than for women.

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1. Unemployment, here, is defined to mean that a person spent no time at all on DPA/total work during the week. This is not the usual definition, since it implies that everybody is potentially available for DPA/total work. However, such a definition of unemployment has been used because of weaknesses in the usual approach, discussed earlier.

2. This gives us higher rates of unemployment than those obtained using the census approaches and the labour utilization survey. This appears to be more in line with the reality of the situation.

However, if we consider total work, the unemployment rate was considerably lower both among males and females. The overall rate was 2.0 per cent per week among males and 5.4 per cent among females. This is because even when opportunities for participation in DPA are not available, people have to attend to various HHMA.

A breakdown of the unemployment figure (DPA only) by landholding groups shows that both among males and females the rate was the highest among those belonging to landless households (males - 22.2 per cent and females - 35.6 per cent). This is because the demand for their labour does not exist at all times of the year. Among males the lowest unemployment rate (1.6 per cent) was recorded in the case of those belonging to households with up to 1.0 acre of land. Males belonging to such households had the lowest unemployment figure, since such households rarely employ outside labour. Besides, such households normally rent in land from others and males belonging to such households have to work longer hours. Males belonging to households having land areas ranging between 1.01 and 2.0 acres had 5.4 per cent unemployment and the rate was 4.1 per cent in the case of those belonging to households with over two acres of land. Among females the lowest rate (4.2 per cent) was found in the case of those belonging to households having land areas ranging between 1.01 and 2.0 acres. The rates were 13.7 per cent and 5.3 per cent in the case of those belonging to households with up to 1.0 acre of land and those in excess of two acres of land respectively. Households in excess of one acre of land have a greater total output compared to households with up to 1.0 acre of land and, hence, women belonging to such households had lower unemployment than those belonging to households with up to 1.0 acre of land.

A breakdown of unemployment figures (DPA only) by employment status

among males shows that the lowest unemployment rate (0.6 per cent) was recorded among owner-cultivators, while the rate was highest among the self-employed (20 per cent). The rate was 5 per cent, 1.8 per cent and 15.3 per cent among owner-cultivators cum sharecroppers, unpaid family workers and wage earners respectively. If we group owner-cultivators, unpaid family workers and owner-cultivators cum sharecroppers together, we find that the overall unemployment rate among them was 2.1 per cent. The sharp differential in the unemployment rate among males by their employment status is because the demand for the labour of wage-earners and the self-employed is lower than others and, therefore, they had higher unemployment rates.

A breakdown of unemployment figures (DPA only) by main occupation shows that among males the lowest unemployment rate (5.3 per cent) was recorded among those in the agricultural sector. The rate was 10 per cent among non-agriculturists and 6.7 per cent among students. The rate of unemployment was lower among agriculturists than among non-agriculturists, since although there are slack periods in agriculture, farm work demands attention for a considerable period of time. There may be the need to weed shrubs and grass from time to time, manure the field, repair the bunds and, indeed, overall supervision to see whether plants are growing properly or not. Besides, the fact that agriculture is basically a family business means that family members have to attend to work on the farm as and when required. Among females those whose main occupation was reported as engaged in agricultural work had an unemployment rate of 7.5 per cent. The rate was 27.1 per cent and 35 per cent in the case of those reported as engaged primarily in household work and the students respectively.

If we look at the unemployment figures (DPA only) by relationship to

head of household we find that the lowest rate (4.8 per cent) was recorded among heads of households. This is because heads of households are responsible for the overall functioning and supervision of the household economy. Sons had an unemployment rate of 6.1 per cent, housewives 12.4 per cent, daughters 13.9 per cent and those in the category of 'others' had 16.9 per cent.

8.2. Employment and Underemployment

In this section we will first look at the overall level of employment and underemployment (i.e. the level for the entire period of observation) and then examine seasonal variation.

8.2.1 Overall Employment and Underemployment:

The available supply of labour is set against actual working time to calculate the extent of employment and underemployment over the entire period of observation.

Table 8.1 shows that among males aged ten years and above the overall rate of underemployment was just under one-quarter.[1] However, Table 8.1A shows that underemployment was just over one-fifth. The rate was the lowest among those aged 25-34 years, then starts rising at age 35 years and remains, more or less, constant till 54 years of age, after

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1. If the number of hours potentially available for DPA for males aged ten years and above was assumed to be 40 hours per week (as is assumed in many studies), there would be 13 per cent underemployment for the entire period of observation and 0.4 per cent and 23.5 per cent during busy and slack seasons respectively. Such a cut-off point gives lower rates of underemployment than those obtained using the cut-off points calculated in Table 2.1 (see Chapter 2). Moreover, if such a cut-off point is used in the case of females it would give us much higher rates of underemployment (58 per cent, 49 per cent and 67 per cent during overall, busy and slack periods respectively). However, as we have seen in Chapter 1, such a cut-off point of 40 hours or some other figure per week is quite arbitrary in rural agrarian areas.

which it rises again. The most productive age group among males was 25-34 years and the least productive age group was 55 years and above. By the time a person reaches 55 years of age, two-fifths and over one-third of his potential labour time available for DPA and total work respectively remain underemployed.[1] At older ages one restricts oneself to supervisory tasks and other lighter jobs and is normally not engaged in much of the land preparation activities, unless one has no grown-up sons to carry out such activities, or is unable to pay for wage labour.

Table 8.1 shows that among females the overall underemployment rate was roughly one-third, and Table 8.1A shows that the rate drops to only one-tenth. Females aged 35-44 years had 5 per cent over-employment[2] (DPA) and full employment (total work). The rate of underemployment was lowest among females aged 45-54 years and highest among women aged 55 years and above (DPA only). Roughly half the potential labour time available for DPA was underemployed. However, if we consider total work, we find that the rate of underemployment was highest among girls aged 10-14 years. This is because while females aged 55 years and above spent about half-an-hour less per day on DPA than girls aged 10-14 years, females aged 55 years and above spent considerably more time on HHMA than females aged 10-14 years. Women aged 45-54 years spent more time on DPA than those aged 25-34 years, although the reverse was true in respect of HHMA. This explains why the rate of underemployment was lower among females aged 45-54 years than those aged 25-34 years if we consider DPA only, while the reverse is true if we consider total work (see also Appendix III - Figures 4 and 6).

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1. See also Appendix III - Figures 3 and 6.
2. Overemployment is defined as the number of hours worked in excess of the number of hours potentially available for DPA and total work.

Table 8.1

Employment and Underemployment by Age and Sex (Directly Productive Activities)

Period	MALES							FEMALES						
	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+
TOTAL														
1. Total no. hrs.worked[1]	3726	4703	9093	5042	3769	4471.5	30804.5	1952.5	3789	3356.5	1556.5	3263.5	1181.5	15099.5
2. Hrs. worked as % of time available for DPA	71.8	67.2	90.0	81.1	80.9	60.0	75.8	57.2	60.8	70.2	105.7	80.8	52.1	68.0
3. Total no.hrs. underemplyd.	1461	2295	1014	1176	891	2985	9822	1460	2448	1424	84[4]	776	1092	7116
4. % under-employment	28.2	32.8	10.0	18.9	19.1	40.0	24.2	42.8	39.2	29.8	5.7[4]	19.2	47.9	32.0
BUSY														
1. Total no. hrs.worked[2]	2014	2690	4805	2537	2012	2359	16417	1208	2416	1775	843	1794	665	8700
2. Hrs. worked as % of time available for DPA	83.2	82.4	102	87.5	92.5	67.8	86.6	62.3	82.9	80.5	122.9	95.1	62.5	81.2
3. Total no.hrs. underemplyd.	407	573	91[4]	364	164	1120	2537	730	500	455	157[4]	93	399	2020
4. % under-employment	16.8	17.6	2.0[4]	12.5	7.5	32.2	13.4	37.7	17.1	19.5	22.9[4]	4.9	37.5	18.8

continued

Table 8.1 (continued)

Period	MALES							FEMALES						
	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+	10-14	15-24	25-34	35-44	45-54		All ages 10+
SLACK														
1. Total no. hrs.worked[3]	1712	2013	4288	2505	1757	2112.5	14387.5	744.5	1373	1581.5	713.5	1469.5	516.5	6398.5
2. Hrs. worked as % of time available for DPA	61.9	53.8	79.5	75.5	70.8	53.1	66.4	50.5	41.5	62.0	90.7	68.3	43.0	55.7
3. Total no.hrs. underemplyd.	1054	1722	1105	812	727	1865	7285	730	1948	969	73	683	693	5096
4. % under-employment	38.1	46.2	20.5	24.5	29.2	46.9	33.6	49.5	58.5	38.0	9.3	31.7	57.0	44.3
N	13	9	13	8	6	10	59	9	17	13	4	11	7	61

[1] It is the sum of all hours worked over the 7 months period of observation by persons aged ten years and above.

[2] It is the sum of all hours worked during the busy season over the period of observation by persons aged ten years and above.

[3] It is the sum of all hours worked during the slack season over the period of observation by persons aged ten years and above.

[4] Over-employment.

Table 8.1A

Employment and Underemployment by Age and Sex (Total Work)

Period	MALES							FEMALES						
	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+
TOTAL														
1. Total no. hrs. worked	4875	5198	10510	5808	4320	5565	36276	4820	14280	12617	3966	9702	5450	50835
2. Hrs. worked as % of time available for Total Work	76.0	67.1	94.0	84.3	83.6	65.4	79.0	76.1	85.1	98.3	100.5	89.4	88.3	89.3
3. Total no.hrs. underemplyd.	1540	2551	678	1080	846	2940	9635	1511	2499	214	18[1]	1155	724	6085
4. % under-employment	24.0	32.9	6.0	15.7	16.4	34.6	21.0	23.9	14.9	1.7	0.5[1]	10.6	11.7	10.7
BUSY														
1. Total no. hrs. worked	2539	2873	5324	2829	2268	2849	18682	2538	7271	5988	1910	4720	2951	25378
2. Hrs. worked as % of time available for Total Work	84.8	79.7	102.0	88.0	94.1	71.8	87.2	85.9	92.9	100.0	103.6	93.2	89.6	93.8
3. Total no.hrs. underemplyd.	455	743	101[1]	386	143	1120	2746	416	559	0	68[1]	347	342	1596
4. % under-employment	15.2	20.3	2.0[1]	12.0	5.9	28.2	12.8	14.1	7.1	0	3.6[1]	6.8	10.4	6.2

continued

Table 8.1A (Continued)

Period	MALES							FEMALES						
	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+	10-14	15-24	25-34	35-44	45-54	55+	All ages 10+
SLACK														
1. Total no. hrs. worked	2336	2325	5186	2979	2052	2716	17594	2282	7009	6629	2056	4982	2499	25457
2. Hrs. worked as % of time available for Total Work	68.3	56.3	86.9	81.1	74.5	59.9	71.9	67.6	78.3	96.9	97.6	86.0	86.7	85.3
3. Total no.hrs. underemplyd.	1085	1808	779	694	703	1820	6889	1095	1940	214	50	808	382	4489
4. % under-employment	31.7	43.7	13.1	18.9	25.5	40.1	28.1	32.4	21.7	3.1	2.4	14.0	13.3	14.7
N	13	9	13	8	6	10	59	9	17	13	4	11	7	61

[1] Over-employment

A comparison of males and females shows that if we consider DPA only the underemployment rate was higher among females than among males. This is since, as already noted, women are basically engaged in post-harvest operations, which account for about one-third of total time spent on all agricultural operations. The work opportunities of women being less than those of men explains why underemployment was higher among females than among males. However, if we consider total work, the under-employment rate among males was twice that among females. This is because females spent six times more time on HHMA than males.

A comparison of the data from Barkait with other studies carried out in Bangladesh to measure the extent of underemployment is made here. We focus our attention first on estimates made at the national level and then look at certain surveys carried out at regional or village levels to determine the magnitude of underemployment.

According to the Bangladesh Planning Commission estimate agricultural unemployment and underemployment in 1972-73 was 36.8 per cent.[1] The Bangladesh Planning Commission assumed a working day of eight hours and a working year of 240 days, i.e. 1,920 man-hours per year. It estimated the extent of underemployment by expressing the labour force in man-year units and then examined the man-years of employment that can be provided in cultivating the available land and in livestock, forestry, processing and marketing activities. It did not consider the number of hours spent on non-agricultural activities. Moreover, it concerned itself with the agricultural labour force only and, hence, does not provide a complete picture of rural unemployment and underemployment. The estimate, therefore,

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1. Government of the Peoples' Republic of Bangladesh, The First Five-Year Plan, 1973-78, Dacca, November 1973.

seems biased upwards. Moreover, nothing is known about the magnitude of underemployment by sex and age groups.

On the basis of cropping pattern and required man-hours per acre derived from farm management studies it has been estimated that the average man-hours per cropped acre was 650, 728 and 775 in 1960-61, 1964-65 and 1969-70 respectively. In addition, labour force employed in animal husbandry and fisheries was assumed to be one-third of the man-hours employed on crops. A man-year was assumed to consist of 2,200 man-hours. On the basis of these assumptions it has been estimated by Stern that agricultural underemployment was 34 per cent, 30.8 per cent and 32.4 per cent in 1960-61, 1964-65 and 1969-70 respectively.[1] It needs to be pointed out that average man-hours required per cropped acre varies from crop to crop, the type of soil, accessibility to water, etc., and, hence, the extent of underemployment depends on these factors. Stern's estimate of the average man-hours available per year is not disaggregated by age and sex. Data from Barkait shows that the potential supply of labour varies considerably by age and sex. Stern estimated underemployment for agricultural labour force only and not for those engaged in non-agricultural occupations in the rural areas of the country. He considered time spent on crop production, animal husbandry and fisheries to constitute his measure of underemployment. It needs to be pointed out that even those who are primarily engaged in agricultural activities also devote a considerable proportion of their time to non-agricultural activities. Thus, his estimates are biased upwards.

Rabbani estimated that 38.2 per cent of the labour force in rice

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1. Cited in Ahmed, I., "Unemployment and Underemployment in Bangladesh Agriculture", The Dacca University Studies, Vol. XXII (Part A): 1974.

cultivation in Bangladesh was underemployed.[1] His estimate is based on the difference between the actual number of man-days employed per acre of rice crop and the optimum number of man-days thus obtained. Time spent on the cultivation of paddy does not constitute total time spent on all productive activities. Besides, the study concerned itself with males only and did not take into account time spent on post-harvest operations.

Using data on output and workers per acre and cropped acreage, Robinson estimated that in Bangladesh between 1951 and 1961 the degree of "disguised" unemployment increased sharply, amounting to some 20 per cent of the 1961 labour force. However, Robinson himself observed that his analysis was based on many rough estimates.[2]

Besides estimates of agricultural underemployment obtained indirectly from aggregate data some information on rural employment is available from surveys carried out at the village or wider level.[3] In 1956 a sample survey was conducted in four different regions of Bangladesh (Narayanganj, Rangpur, Rajbari and Feni) to examine the extent of rural unemployment and underemployment.[4] Visible unemployment was estimated at 41.3% (Narayanganj), 45.2% (Feni), 26.1% (Rajbari) and 11.5% (Rangpur). It was contended that the larger extent of underemployment in Narayanganj

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1. A.K.M. Ghulam Rabbani, "Measurement of Unemployment in Rural Households: A Case Study of Rice Cultivation in East Pakistan", CENTO Symposium on Household Survey, 1967.

2. W.C. Robinson, "Disguised Unemployment Once Again: East Pakistan, 1951-1961", American Journal of Agricultural Economics, vol.51, 1969, pp.592-604.

3. Some of the weaknesses of surveys referred to below have been analysed in Chapter 1 of the thesis.

4. Dacca University Socio-Economic Board, Rural Credit and Unemployment in East Pakistan, 1956.

and Feni was associated with smaller cultivated acre per active male in those regions.

A survey was carried out in Noakhali District of Bangladesh in 1961-62.[1] It found that for the year as a whole rural households were without any work for 25 per cent of the total supply of man-days and this may be taken as an index of visible unemployment. The percentage of unemployed man-days varied widely at different seasons of the year. Just over 6 per cent of the total supply of man-days were not available for work on account of illness, bad weather, social obligations, etc. The rate of underemployment ranged between 9 per cent and 52.2 per cent depending on the season. The overall rate of underemployment for the period of investigation was 31.7 per cent. Agricultural work provided employment to about 50 per cent of the total supply of man-days. It was found that there was considerable seasonable variation in the amount of work provided by the agricultural sector. It ranged between 24 per cent and 81 per cent depending on the demand for labour in the agricultural sector.

In 1963 a survey was carried out covering twelve villages in the northern region of Bangladesh.[2] The active adult male was found without work for 62.7 working days. The average number of working days per active male was assumed to be 270 and a working day was defined as consisting of eight hours. The days lost through lack of work in a year 23.3 per cent of the total man-days available in a year, excluding days lost through rain, sickness and social functions.

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1. M. Habibullah, The Pattern of Agricultural Unemployment in East Pakistan, Dacca, 1962.

2 Nurul Islam, "Concepts and Measurement of Unemployment and Underemployment in Developing Countries", International Labour Review 89, March 1964, pp. 244-255.

It was found that in some seasons time spent on agricultural work was 48 per cent below the average hours of work throughout the year while in some seasons it was 54 per cent above the average. It was found that employment in non-agricultural activities tended to partly offset the seasonal variations in agricultural employment.

Servants utilized 16 per cent more time than was potentially available for DPA and 12 per cent more time than was potentially available for total work (see Tables 8.2 and 8.2A). Servants were attached to households with relatively more land. They would not have been employed unless they were prepared to work longer hours. Besides, wages paid to them were higher than those paid to agricultural wage labourers and, therefore, they had to work longer hours to justify the higher wages paid to them. If we consider DPA only, the lowest underemployment was recorded among sons, and the highest rate among daughters and 'others'. Among sons there were 11 aged 15 years and above and 13 aged 10-14 years, and among daughters there were only 3 aged 15 years and above and 8 in age group 10-14 years. The difference between sons and daughters is partly a function of age and partly explained by the fact that daughters are engaged in agricultural activities only after harvest while sons are engaged in agricultural activities at other times as well. Interestingly, sons had lower underemployment than heads of households. This is explained by the fact that very few heads of households spent time on threshing paddy, while sons spent considerable time on threshing. Besides, it was also observed that sons were often entrusted to carry out some of the activities considered less important by heads of households. These include manuring, drying and heaping straw, spraying pesticides etc. Housewives had lower underemployment compared to daughters, because housewives had the overall responsibility of ensuring that the post-harvest operations are carried

Table 8.2

Employment and Underemployment by Relationship to Head of Household (Directly Productive Activities)

Period	Heads of Households	Housewives	Sons	Daughters	Others	Servants
TOTAL						
1. Total no. hours worked	18144	9639	10936.5	2704	3697	1800
2. Hrs. worked as % of time available for DPA	73.0	77.1	79.6	59.9	59.2	115.8
3. Total no. hrs. underemployed	6720	2856	2797.5	1811	2550	246[1]
4. % underemployment	27.0	22.9	20.4	40.1	40.8	15.8[1]
BUSY						
1. Total no. hours worked	9565	5355	6056.5	1767	1964	952
2. Hrs. worked as % of time available for DPA	82.4	91.8	94.5	84.2	67.4	131.3
3. Total no. hrs. underemployed	2038	476	352.5	331	952	227[1]
4. % underemployment	17.6	8.2	5.5	15.8	32.6	31.3[1]
SLACK						
1. Total no. hours worked	8579	4284	4880	937	1733	848
2. Hrs. worked as % of time available for DPA	64.7	64.3	66.6	38.8	52.0	102.4
3. Total no. hrs underemployed	4682	2380	2445	1480	1598	20[1]
4. % underemployment	35.3	35.7	33.4	61.2	48.0	2.4[1]
N	32	34	24	11	17	2

[1] Over-employment

Table 8.2A

Employment and Underemployment by Relationship to Head of Household (Total Work)

Period	Head of Household	Housewife	Sons	Daughters	Others	Servants
TOTAL						
1. Total no.hours worked	21456	32538	12993	7317	13015.5	1935
2. Hrs. worked as % of time available for Total Work	77.9	97.0	81.8	85.2	78.9	112.4
3. Total no. hours underemployed	6096	1020	2894	1272	3480	213[1]
4. % underemployment	22.1	3.0	18.2	14.8	21.1	12.4[1]
BUSY						
1. Total no.hours worked	10998	15922	6936	3786	6016.5	991
2. Hrs. worked as % of time available for Total Work	85.5	101.7	93.6	94.5	78.2	123.3
3. Total no. hours underemployed	1860	262[1]	478	222	1681.5	187[1]
4. % underemployment	14.5	1.7[1]	6.4	5.5	21.8	23.3[1]
SLACK						
1. Total no.hours worked	10458	16616	6057	3531	6999	944
2. Hrs. worked as % of time available for Total Work	71.2	92.8	71.5	77.1	79.6	102.8
3. Total no. hours underemployed	4236	1282	2416	1050	1798.5	26[1]
4. % underemployment	28.8	7.2	28.5	22.9	20.4	2.8[1]
N	32	34	24	11	17	2

[1] Over-employment

out. In discharging their responsibilities they had to work longer hours than daughters. Besides by attending to HHMA daughters often released mothers to devote more time to DPA. The category 'others' consisted of dependent relations and some other persons unrelated to the household. Among 'others' there were three daughters-in-law.

Table 8.2A shows that the underemployment rate was lowest among housewives and highest among heads of households. Heads of households spent very little time on HHMA compared to housewives. Similarly, we find that underemployment was lower among daughters than among sons. Thus, if we consider total work we find that the rate of labour utilization was higher among housewives and daughters than among heads of households and sons. The findings suggest that the work contribution of women in rural Bangladesh is not negligible, rather it is of significant importance.

The underemployment rate was highest among males belonging to households possessing land areas ranging between 1.01 and 2.0 acres and lowest among those belonging to households with up to 1.0 acre of land (see Tables 8.3 and 8.3A). As already pointed out, households with up to 1.0 acre of land usually rent in land from others. Besides, such households rarely employ outside labour. In fact, we also found that unemployment was lowest among males belonging to households with up to 1.0 acre of land. It has also been established in several studies that households possessing relatively little land use their land more intensively than those possessing relatively more land.[1] Hossain found that the cropping intensity was higher among farmers with relatively less land compared to those with

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1. See, for example, Mahbub Hossain, "Farm Size and Productivity in Bangladesh Agriculture: A Case Study of Phulpur Farms", The Bangladesh Economic Review, vol.II, January, 1974, no.1.

relatively more land. The underemployment rate among landless males was somewhat higher than those belonging to households with over two acres of land and lower than those belonging to households having land areas ranging between 1.01 and 2.0 acres. This is explained by the fact that underemployment among landless males results basically from lack of enough work opportunities available to them, while in the case of those with land it means that such households can afford greater leisure time for their male members. Males belonging to households with over two acres of land, perhaps, enjoy greater leisure time, but since more work opportunities are available to them than those belonging to households having land areas ranging between 1.01 and 2.0 acres, they tend to work longer hours.

Part (b) of Table 8.3 shows that the lowest underemployment was recorded among females belonging to households possessing land areas ranging between 1.01 and 2.0 acres and the rate was highest among females belonging to landless households. This results basically from lack of enough work opportunities available to females belonging to landless households. While the underemployment rate was the lowest among males belonging to households with up to 1.0 acre of land, the rate was considerably higher among females belonging to such households. This is because such households rent in land from others. Males are required to work on rented in plots in addition to their own land. The paddy is divided on a 50/50 basis between the sharecropper and the owner of the land. Females belonging to such households, therefore, have 50 per cent of harvested paddy available from rented in plots for post-harvest operations. Females belonging to households in excess of two acres of land had higher underemployment than those belonging to households having land areas ranging between 1.01-2.0 acres. This is because women belonging to relatively

Table 8.3

Employment and Underemployment by Sex and Landholding Groups (Directly Productive Activities)

Period	Males(a)				Females(b)			
	Landless	0.01-1.0 acre	1.01-2.0 acres	>2.0 acres	Landless	0.01-1.0 acre	1.01-2.0 acres	>2.0 acres
TOTAL								
1. Total no. hrs. worked	3865.0	14090	6768	6084	1528.5	7956	2649	2944
2. Hrs. worked as % of time available for DPA	66.0	98.5	62.0	70.8	46.1	62.4	86.7	79.2
3. Total no. hrs. underemployed	1993.5	1471	4152	2505	1782	4791	375	773
4. % underemployment	34.0	9.5	38.0	29.2	53.9	37.6	12.4	20.8
BUSY								
1. Total no. hrs. worked	2045	7375	3699	3300	995.5	5418	1460	1817
2. Hrs. worked as % of time available for DPA	74.8	101.6	82.6	82.3	64.5	74.6	103.5	104.7
3. Total no. hrs. underemployed	689	113[1]	1397	708	548	1841	49[1]	82.5[1]
4. % underemployment	25.2	1.6[1]	27.4	17.7	35.5	25.4	3.5[1]	4.7[1]
SLACK								
1. Total no. hrs. worked	1820.0	6715	3069	2784	533.5	2538	1189	1127
2. Hrs. worked as % of time available for DPA	58.3	80.9	52.7	60.8	30.1	46.2	73.7	56.9
3. Total no. hrs. underemployed	1304.5	1584	2755	1797	1234	2950	424	855
4. % underemployment	41.7	19.1	47.3	39.2	69.9	53.8	26.3	43.1
N	9	21	16	13	9	34	8	10

[1] Over-employment

Table 8.3A

Employment and Underemployment by Sex and Landholding Groups (Total Work)

Period	Males				Females			
	Landless	0.01-1.0 acre	1.01-2.0 acres	>2.0 acres	Landless	0.01-1.0 acre	1.01-2.0 acres	>2.0 acres
TOTAL								
1. Total no.hrs. worked	4667.0	16473	7860	7257	7357.5	26694	6867	9559.5
2. Hrs.worked as % of time available for Total Work	70.2	95.0	63.9	74.6	82.8	83.8	93.7	99.7
3. Total no.hrs. underemployed	1980	873	4446	2466	1525.5	5163	462	27
4. % underemployment	29.8	5.0	36.1	25.4	17.2	16.2	6.3	0.3
BUSY								
1. Total no.hrs. worked	2400.0	8373	4178	4841	3509	12995	3409	4809
2. Hrs. worked as % of time available for Total Work	77.4	103.4	72.7	84.3	84.7	87.4	99.7	107.5
3. Total no. hrs. underemployed	701	278[1]	1565	902	636	1872	11.0	335[1]
4. % underemployment	22.6	3.4[1]	27.3	15.7	15.3	12.6	0.3	7.5[1]
SLACK								
1. Total no.hrs. worked	2267	8100	3682	2416	3848.5	13699	3458	4750.5
2. Hrs worked as % of time available for Total Work	64.0	87.6	56.1	60.7	81.2	80.6	88.5	92.9
3. Total no. hrs. underemployed	1279	1151	2881	1564	889.5	3291	451	362
4. % underemployment	36.0	12.4	43.9	39.3	18.8	19.4	11.5	7.1
N	9	21	16	13	9	34	8	10

[1] Over-employment

richer households work shorter hours than those with relatively less land. Besides, households with over two acres of land employ more outside labour to carry out post-harvest operations. Again, females belonging to households with over two acres of land rarely engage themselves in non-farming activities, while those belonging to households having land areas ranging between 1.01-2.0 acres were found often engaged in such activities. However, females belonging to households with over two acres of land had lower underemployment than those belonging to households with up to 1.0 acre of land. Households with over two acres of land have considerably higher yields compared to households with up to 1.0 acre of land. Hence, women belonging to such households work longer hours than those belonging to households with up to 1.0 acre of land. This also more than compensates for the amount of time spent on non-farming activities by women belonging to households with up to 1.0 acre of land.

Part (b) of Table 8.3A shows that the rate of underemployment decreases as the size of landholding increases. This is due to the fact that although females belonging to households with land areas ranging between 1.01-2.0 acres spent more time on DPA than those belonging to households with over two acres of land, they, in fact, spent less time on HHMA than women belonging to households with over two acres of land. Persons belonging to relatively better-off households eat relatively better food and women belonging to such households spend more time in food preparation and cooking.

Persons belonging to smaller households had lower underemployment than those belonging to relatively larger households. If we consider DPA only, underemployment was over twice as much among males belonging to larger households than among those belonging to smaller households. The difference was negligible among females (see Table 8.4). However, if we consider total work the difference becomes larger, both among males

Table 8.4

Employment and Underemployment by Size of Household (Directly Productive Activities)

Period	Males		Females	
	1-6 persons	7+ persons	1-6 persons	7+ persons
TOTAL				
1. Total no. hrs. worked	15228.5	15576	8746.5	6353
2. Hrs. worked as % of time available for DPA	85.0	67.7	66.7	65.6
3. Total no. hrs. underemployed	2689.5	7440	4368	3327
4. % underemployment	15.0	32.3	33.3	34.4
BUSY				
1. Total no. hrs. worked	8153.5	8268.5	5069	3638.5
2. Hrs. worked as % of time available for DPA	97.5	77.0	82.8	80.6
3. Total no. hrs. underemployed	206.5	2472.5	1051	878.5
4. % underemployment	2.5	23.0	17.2	19.4
SLACK				
1. Total no. hrs. worked	7070	7307.5	3677.5	2714.5
2. Hrs. worked as % of time available for DPA	74.0	59.5	52.6	52.6
3. Total no. hrs. underemployed	2483	4967.5	3317	2448.5
4. % underemployment	26.0	40.5	47.4	47.4
N	25	34	35	26

Table 8.4A

Employment and Underemployment by Size of Household (Total Work)

Period	Males		Females	
	1-6 persons	7+ persons	1-6 persons	7+ persons
TOTAL				
1. Total no. hrs. worked	17920	18330.0	29584	20899
2. Hrs. worked as % of time available for Total Work	89.4	70.6	90.1	84.2
3. Total no. hrs. underemployed	2135	7636	3260	3912
4. % underemployment	10.6	29.4	9.9	15.8
BUSY				
1. Total no. hrs. worked	9281	9484.0	14602	10144
2. Hrs. worked as % of time available for Total Work	99.2	78.3	95.3	87.6
3. Total no. hrs. underemployed	78	2633.5	725	1435
4. % underemployment	0.8	21.7	4.7	12.4
SLACK				
1. Total no. hrs. worked	8639	8846	14982	10755
2. Hrs. worked as % of time available for Total Work	81.8	63.9	85.5	81.3
3. Total no. hrs. underemployed	2057	5002.5	2535	2477
4. % underemployment	19.2	36.1	14.5	18.7
N	25	34	35	26

and females (see Table 8.4A). That is, there is more work-sharing prevalent in respect of HHMA than DPA. Further, the difference is more pronounced during the busy season than during the slack season. If we assume that leisure has a positive value to the cultivators, given a choice of working longer or shorter hours for the same income, they would prefer shorter hours.[1] In such a situation, any increase in working population will reduce the average hours worked per week and the average product per worker, even while not affecting the average product per man-hour or per standard man-day.

However, it is also argued that when there are not enough work opportunities available and many people present, work gets shared and work which could be completed in X hours may, in fact, be completed in X + 1 hours. Because of various socio-economic factors, it is possible that an operation may be prolonged or spread over hours longer than necessary. This work spreading may make a little work go a long way.[2] That is, the intensity of work is not equal among persons belonging to larger and smaller households. This means that even "hours" actually worked may not be necessarily hours of work needed at the given level of technique. Because of this, measurement of disguised unemployment is made difficult, and this is one of the reasons why the present study measures the extent of visible underemployment rather than disguised unemployment.

Lowest underemployment was recorded among owner-cultivators cum share-croppers (see Table 8.5). All of them belonged to households with up to 1.0 acre of land. These persons cultivated others' plots of land on a

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1. Robinson, W.C., "Disguished Unemployment Once Again: East Pakistan, 1951-61", American Journal of Agricultural Economics, 51, 1969, pp.592-604.

2. Turner, H.A. "Measuring Unemployment", Journal of the Royal Statistical Society, vol.118, Part 1, p.29, 1955.

Table 8.5

Employment and Underemployment by Employment Status[1] (Directly Productive Activities)

Period	Owner cultivators	Owner cultivators cum sharecroppers	Wage employment	Unpaid family workers	Independent/ self-employed
TOTAL					
1. Total no. hrs. worked	6783.5	5424	5593.5	8341	2281.5
2. Hrs. worked as % of time available for DPA	72.8	87.3	75.7	79.3	73.4
3. Total no. hrs. underemployed	2538	792	1798.5	2180	828
4. % underemployment	27.2	12.7	24.3	20.7	26.6
BUSY					
1. Total no. hrs. worked	3688	2901	2784.5	4565	1089
2. Hrs. worked as % of time available for DPA	84.8	100.0	80.7	93.0	75.1
3. Total no. hrs. underemployed	663	0	664.5	345	361
4. % underemployment	15.2	0	19.3	7.0	24.9
SLACK					
1. Total no. hrs. worked	3095.5	2523	2809	3776	1192.5
2. Hrs. worked as % of time available for DPA	62.3	76.1	71.2	67.3	71.8
3. Total no. hrs. underemployed	1875	792	1134	1835	467
4. % underemployment	37.7	23.9	28.8	32.7	28.2
N	12	8	10	15	4

[1] Out of 59 males aged ten years and above there were 49 males reported as "working" under the "gainful worker approach" and whose employment status has been recorded.

share-cropping basis, in addition to cultivating their own plots of land. Such persons, therefore, had to work longer hours to complete work on their own farms as well as on plots of land rented in. Interestingly, contrary to commonly held views, the rate of underemployment was lower among unpaid family workers than among owner-cultivators. We have already seen that sons had lower underemployment than heads of households. In fact, the same reasons explain why unpaid family workers had lower underemployment than heads of households.

In 1965-66 a sample survey of employment, income and expenditure of rural households was conducted by the Rajshahi University in Bangladesh. Using data relating to the employment of 21 agricultural labour households, Bose calculated that the overall rate of underemployment was 13.7 per cent.[1] The rate was considerably lower than that which we found in Barkait. In contrast to all other surveys or studies of Bangladesh agriculture, this gives us figures too low to be credible.

There was not much difference in the rate of underemployment among males primarily engaged in agricultural activities and those in non-agricultural activities. Students were part-time workers. Over two-fifths of their potential labour time was underemployed (see Table 8.6). Students contribute more time to DPA when the demand for family labour is high. While just over one-quarter of their potential labour time was underemployed during busy periods, the rate of underemployment was over one-half during slack periods. Among females underemployment was lowest among those reported as having agriculture as their main occupation. Two-fifths of potential labour time available in the case of those reported as engaged

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1. Swadesh R. Bose, "Trends of Real Income of the Rural Poor in East Pakistan, 1949-66", Pakistan Development Review, Autumn, 1968, pp.452-84.

Table 8.6

Employment and Underemployment by Main Occupation[1] (Directly Productive Activities)

Period	Males			Females		
	Agriculture	Non-agriculture	Students	Agriculture	Household work only	Students
TOTAL						
1. Total no. hrs. worked	22206	5514	2516	10485	3774	972
2. Hrs. worked as % of time available for DPA	76.1	74.6	57.6	70.3	60.0	59.3
3. Total no. hrs. underemployed	6963	1878	1852	4425	2473.5	666
4. % underemployment	23.9	25.4	42.4	29.7	40.0	40.7
BUSY						
1. Total no. hrs. worked	11588	2749.5	1411	5957	2261	605
2. Hrs.worked as % of time available for DPA	85.1	79.7	72.8	85.6	77.6	79.2
3. Total no. hrs. underemployed	2025	700.5	627	1001	654.5	159
4. % underemployment	14.9	20.3	27.2	14.4	22.4	20.8
SLACK						
1. Total no. hrs.worked	10618	2764.5	1105	4528	1513	367
2. Hrs. worked as % of time available for DPA	68.3	70.1	47.4	56.9	45.4	42.0
3. Total no. hrs. underemployed	4938	1177.5	1225	3424	1819	507
4. % underemployment	31.7	29.9	52.6	43.1	54.6	58.0
N	39	10	10	40	17	4

[1] Data on main occupation is based on information obtained using the "gainful worker approach".

in household work only and students were underemployed. Most of the women reported as engaged in household work only belonged to landless households and to households with relatively more land, especially those belonging to households with three acres or more. Females belonging to such households spent less time on DPA than others.

8.2.2. Seasonal:

In this section the potential supply of labour time is set against actual working time during busy and slack periods to determine the level of employment and underemployment existing at different times of the year.

Over half the time devoted to DPA was spent on agricultural activities. Seasonality is inherent in agricultural production "where nothing is made or manufactured; everything has to grow and become".[1] The seasonal rise and fall in farm activity is a general phenomenon in agriculture. Seasonality can be traced back to the time of sowing and harvesting, to the rigid necessity of carrying out operations at the right time, and to the simultaneity of the harvest period for all the cultivators in a particular region. Howard views the problem of seasonality as "the problem of inelasticities of the time-pattern of primary production".[2] The problem of seasonality is mainly the problem of 'inelasticities' of the time-pattern of primary production. The seasonality is explained by the rhythm and vagaries of the climatological and

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1. Dantwala, M.L., "Notes on Some Aspects of Rural Employment", Indian Journal of Agricultural Economics, Vol.VIII, No.2, August 1953, p.19.

2. Louisie E. Howard, Labour in Agriculture: An International Survey, London, Oxford University Press, 1935, pp.8-9.

biological factors. This seasonality - its peak and slack seasons - vitally affects the employment pattern in agriculture. Part of this seasonality is offset by the amount of time spent on non-farming activities. During the busy period in agriculture less time is spent on non-farming activities, while during the slack period people often spend more time on non-farming activities.

Table 8.7 shows that among males aged ten years and above the rate of underemployment was 24.2 per cent for the entire period of observation, although the rate varied considerably during the various months.[1] The lowest underemployment was recorded in August, September and December. In August and September harvesting of Aus and jute is completed and transplanting of Aman takes place, and in December harvesting of Aman and land preparation for winter crops take place. During May the rate of underemployment was also quite low. In May land preparation and sowing of jute take place. During the months of May, August, September and December over four-fifths of time available was utilized. The highest underemployment was recorded in October. Over two-fifths of available time was underemployed. This is the month following the transplantation of Aman and relatively little work is left on the farm. October is closely followed by November and June. If we compare the months of June and July with the months of October and November we find that underemployment was less during June and July than during October and November. This is because very little time is spent on the weeding of the Aman crop compared to the Aus crop (see Table 3.8, Chapter 3). Besides, during July harvesting of Aus begins while only very little harvesting of Aman takes place in November.

Among females the rate of underemployment was the lowest in the months of August and September. During these months about 95 per cent

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1. See also Appendix III - Figure 5.

of time available was utilized. During August and September most of the harvesting of Aus is completed and women are busy in post-harvest operations. The rate of underemployment was the highest among females in May. Most of the harvesting of winter crops takes place in April and women are then quite busy. During May they had very little work to do. The rate of underemployment was also significantly high in June, October and November (see also Appendix III - Figure 5).

Table 8.7

Employment and Underemployment Among Males and Females during the Different Months of Observation (Directly Productive Activities)

Months	Males		Females	
	Hours worked as % of time available for DPA	Percent underemployment	Hours worked as % of time available for DPA	Percent underemployment
May	82.3	17.7	34.3	65.7
June	67.4	32.6	60.0	40.0
July	72.3	27.7	74.0	26.0
August	86.1	13.9	94.0	6.0
September	86.9	13.1	95.6	4.4
October	57.7	42.3	53.4	46.6
November	66.5	33.5	50.4	49.6
December	87.6	12.4	77.2	22.8
Total (May-December)	75.8	24.2	68.0	32.0

A comparison of males and females shows that the underemployment rate was higher among females than among males. The rate of underemployment varied much more among females than among males. The underemployment rate among females varied between 4.4 per cent and 65.7 per cent, while in the case of males it varied between 12.4 per cent and 42.3 per cent. This is understandable because, while males are usually engaged in pre-harvest,

harvest and some post-harvest operations, females are normally engaged in post-harvest operations only.

Table 8.1 shows that underemployment rate among males was around one-seventh during the busy period compared to one-third during the slack period (the rate was 20.2 per cent higher during the slack period). If we consider total work, we find that underemployment among men during the busy period was close to the figure obtained considering DPA. However, during the slack period the rate was lower than that obtained considering DPA. This is explained by the fact that during the slack period when there are not enough work opportunities available, men spend a little more time on HHMA than during the busy period.

Seasonal underemployment was more pronounced among males aged 10-14 years, 15-24 years and those aged 55 years and above. This is because most males belonging to those age groups contribute less time to DPA when the demand for family labour is not high (see also Appendix III - Figure 8).

During the busy period 2 per cent over-employment was recorded among males aged 25-34 years, although none of the other age groups even reached full employment.[1] This suggests that enough work opportunities are not available even during the busy period to ensure full employment to everybody. This is due to limited landholding per person and per household and lack of other productive avenues of employment.

Among females the rate of underemployment was under one-fifth during the busy period and over two-fifths during the slack period (the rate was 25.5 per cent higher during the slack period). However, if we consider total work, we find that underemployment was one-sixteenth during the busy period and one-seventh during the slack period. The lack of enough productive work opportunities for women account for such a high rate of seasonal underemployment. On average, a woman spent six hours daily on HHMA and

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1. See also Appendix III - Figure 7).

this helps to depress the rate so far as total work is concerned.

A comparison of males and females shows that if we consider DPA only, the rate of underemployment was higher among females than among males both during busy and slack periods. However, the reverse holds good if we consider total work. The sex differential is due to culturally prescribed division of labour.

During the busy period sons had the lowest underemployment, while those in the category of 'others' had highest underemployment. During the slack period highest underemployment was recorded among daughters and the lowest rate was recorded among sons (see Table 8.2). During the slack period sons still have to spend time on activities such as weeding shrubs and grass on field, repairing bunds, manuring, etc., but daughters, on the whole, have relatively less work available. Interestingly, even during the slack period servants had overemployment.

If we consider total work we find that during the slack period lowest underemployment was recorded among housewives (see Table 8.2A). Daughters had lower underemployment than heads of households and sons. The difference can be explained by the fact that housewives and daughters spent more time on HHMA than heads of households and sons. Thus, we find that among daughters although three-fifths of their potential labour time available for DPA was underemployed, just over one-fifth of their potential labour time available for total work was underemployed.

During the busy period over-employment was recorded among males belonging to households with up to 1.0 acres of land (see Table 8.3). The lowest underemployment was recorded among those belonging to households with over two acres of land and the rate was highest among those belonging to households having land areas ranging between 1.01 and 2.0 acres. During the slack period lowest underemployment was recorded among males

belonging to households with up to 1.0 acres of land and was highest among males belonging to households with land areas ranging between 1.01 and 2.0 acres. Table 8.3A indicates the same sort of pattern.

During the busy season over-employment was recorded among females belonging to households with over one acre of land. Over one-third of potential labour time available for DPA among landless females was under-employed. During the slack season lowest underemployment (26.3 per cent) was recorded among those belonging to households with land areas ranging between 1.01 and 2.0 acres, while considerable underemployment (about 70 per cent) was recorded among landless females. The findings of Table 8.3A broadly correspond to that of Table 8.3, with the exception that the rates of labour utilization were higher among women belonging to households in excess of 2.0 acres than those with land areas ranging between 1.01 and 2.0 acres.

During the busy season owner-cultivators cum sharecroppers had full employment. Lowest underemployment was recorded among unpaid family workers and the rate was highest among the self-employed. During the slack season lowest underemployment was recorded among owner-cultivators cum sharecroppers. The extent of seasonal variation was lowest in the case of the self-employed (see Table 8.5).

CHAPTER 9: DIVISION OF LABOUR AND ALLOCATION OF HOUSEHOLD LABOUR

This chapter analyses the division of labour by sex and broad age-groups, household allocation of labour and employment of outside labour. The chapter analyses data relating to thirty-four households (sample for time - budget study).

9.1 Division of Labour

Given the overall demand for all types of workers, in actuality the demand for male and female workers is dependent on the culturally prescribed division of labour between males and females in the traditional village setting of Bangladesh. There are usually certain activities which are specified for men only, while there are others specified for women.[1] However, the sexual division of labour varies between villages. This is due to differing cultural patterns in the sexual division of labour and to differing types of activities and other socio-economic characteristics between one village economy and another. In some areas of Bangladesh women work on the farms. This is also the case in some countries of South and South-East Asia. In Africa women work on the farms where shifting cultivation is prevalent. In most African countries women are responsible for food crops, while men take charge of commercial crops, besides participating

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1. See also Jenneke Arens and Jos Van Buerden, Jhagrapur: Poor peasants and women in a village in Bangladesh, Amersterdam, 1977.

in various non-agricultural activities inside the village or going outside the village for employment.[1]

On the whole, females are more likely to carry out lighter work and work that can be combined with HHMA. For example, ploughing, manual irrigation, and transportation, are usually considered heavy work and are almost everywhere carried out by males. In fact, one of the reasons why women are more active in agriculture in sub-Saharan Africa in comparison to most women in Asia is that in Africa animals are not so widely used for traction power and ploughing is rare. However, changes in the agrarian structure and production relations bring about changes in the sexual division of labour. The introduction of ploughing in some parts of Africa has resulted in the displacement of women from food production. Again, the availability of migrant male labour from other villages during the harvesting period has resulted in the displacement of hired female workers in several South-East Asian countries.

There exists not only a sexual division of labour but also a division of labour by age. That is, the type of activity one carries out is dependent on one's age. On the whole, the young and the old generally carry out activities which are relatively light and less skilful.

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1. See, for example, Bauman, H., "The Division of Work According to Sex in African Hoe-Culture", Africa, vol.I, No.3, 1928; Meek, C.K., A Sudanese Kingdom, London: Keegan Paul, Trench, Trubner & Co., 1931; Earthy, Dora, Valenge Women, London: Frank Cass, 1968; Achola O. Pala, African Women in Rural Development: Research Trends and Priorities, Overseas Liaison Committee, American Council on Education, O.L.C. Papers No.12, December 1976; Boserup, E., Women's Role in Economic Development, London: Allen and Unwin, 1970.

Males contributed about two-thirds of all time spent on DPA, while the contribution of females was one-third (see Table 9.1). In other words, the sexual division of labour in respect of DPA was 2.1 in favour of males. This is because, as already observed and as shown in Table 9.2, while men are engaged in pre-harvest, harvest and some post-harvest operations, women are basically engaged in post-harvest operations only. Besides, the amount of time spent by males on tending animals, fishing and non-farming activities was more than that of women. Moreover, as is shown in Table 9.3, women spent considerably more time on HHMA than men, thereby curtailing the amount of time available to them to contribute to DPA.

We also see that there exists a sharp differential by age in respect of time contributed to DPA. Both among males and females the share of the young age-group was low. However, the young contribute more time to DPA during the peak period when the demand for family labour is high than during the slack period. Among women, those aged 55 years and above contributed relatively less time to DPA than males in the same age group. This is because men are primarily the bread-winners of the family, who must continue to work as long as physical conditions permit in order either to supplement family income or bear the main burden of running the family. However, at old ages both men and women contribute less time to DPA. This is due to the fact that by the time a man reaches 55 years he normally has grown-up sons to help him, and a woman at that age receives considerable help from daughters-in-law and unmarried daughters. Both among males and females those in age-group 15-54 years bear the main load of DPA.

We find that of all time spent on agricultural work males contributed two-thirds and females one-third (see Table 9.2). This is in

Table 9.1

Proportion of Time Spent on Directly Productive Activities by Broad Age-Groups and Sex

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All ages 5yrs.+
1. Total number of hours spent on directly productive activities by each age-group.	874.0	3721.5	22607.0	4471.5	31674.0	873.0	1954.0	11965.5	1181.5	15974.0
2. Proportion of time spent on directly productive activities by each respective age-group within each sex.	2.8	11.7	71.4	14.1	- 100.0	5.5	12.2	74.9	7.4	100.0
3. Proportion of total time spent on directly productive activities by each respective age-group (i.e.males + females).	1.8	7.8	47.5	9.4	66.5	1.8	4.1	25.1	2.5	33.5
Average number of hours spent weekly on directly productive activities.	4.9	19.1	41.9	29.8	29.7	4.5	15.6	17.7	11.3	14.4

line with the sexual division of labour in respect of all DPA. The sexual division of labour in respect of agricultural work inside the family farm was roughly 3:2 in favour of males. Compared to the proportion of all time spent on agricultural work the proportion was somewhat higher for females if we consider agricultural activities inside the family farm only. However, females' share of time in respect of agricultural work outside the family farm was very small compared to that of males. Only females belonging to landless and some near-landless households work on wage employment.

A breakdown of the table by major agricultural operations demonstrates the sexual division of labour even more clearly. Only 1.5% of all time spent on pre-harvest operations was contributed by females. Among females, pre-harvest operations include mainly the preparation of cow-dung and the arranging of nursery bundles. Pre-harvest and harvesting operations involve considerable expenditures of energy and skill and are considered heavier work than most post-harvest operations, with the exception of, perhaps, husking of paddy, which also invovles considerable expenditure of energy and skill and is a heavy work. Moreover, the fact that pre-harvest and harvesting operations were carried on outside the homestead (bari) restricts female involvement in such activities. This is due to social values and 'purdah', which restrict the movement of women and their working side by side with men. This explains why men carry out all harvesting and almost all pre-harvest operations. This also explains why over four-fifths of all time spent on post-harvest operations is carried out by women. Post-harvest operations are mainly carried out inside the homestead (bari), thus allowing for female participation in such activities.

The table also shows the division of labour by age. As in the case of all DPA, the contribution of those in young and old

Table 9.2

Proportion of Time Spent on Agricultural Activities by Broad Age-Groups and Sex

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
1. Total no. of hours spent on agricultural activities.	322.0	1605.0	12885.0	2029.5	16841.5	452.0	1124.0	6093.0	778.5	8447.5
2. Proportion of time spent on all agricultural activities by each respective age-group within each sex.	1.9	9.5	76.5	12.1	100.0	5.4	13.3	72.1	9.2	100.0
3. Proportion of total time spent on all agricultural activities by each respective age-group (i.e. males and females)	1.3	6.3	51.0	8.0	66.6	1.8	4.4	24.1	3.1	33.4

Table 9.2 Continued

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
Agricultural Activities Inside Family Farm										
1. Total no. of hours spent on agricultural activities inside.	322.0	1464.0	9687.0	1980.5	13453.5	447.0	1039.5	5919.5	765.5	8171.5
2. Proportion of time spent on all agricultural activities inside by each respective age-group within each sex.	2.4	10.9	72.0	14.7	100.0	5.5	12.7	72.4	9.4	100.0
3. Proportion of total time spent on all agricultural activities inside by each respective age-group (i.e.males and females).	1.5	6.8	44.7	9.2	62.2	2.1	4.8	27.4	3.5	37.8
Agricultural Activities Outside Family Farm										
1. Total no. of hours spent on agricultural activities outside.	0	142.0	3198.0	49.0	3389.0	5.0	84.5	173.5	13.0	276.0
2. Proportion of time spent on all agricultural activities outside by each respective age-group within each sex.	0	4.2	94.4	1.4	100.0	1.8	30.6	62.9	4.7	100.0
3. Proportion of total time spent on all agricultural activities outside by each respective age-group (i.e.males and females)	0	3.9	87.3	1.3	92.5	0.1	2.3	4.7	0.4	7.5

Table 9.2 Continued

	MALES					FEMALES				
Pre-Harvest Operations	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
1. Total no. of hours spent on pre-harvest operations.	113.0	795.0	8157.0	1035.0	10100.0	9.0	19.0	105.5	17.0	150.5
2. Proportion of time spent on all pre-harvest operations by each respective age-group within each sex.	1.2	7.9	80.7	10.2	100.0	6.0	12.6	70.1	11.3	100.0
3. Proportion of total time spent on all pre-harvest operations by each respective age-group (i.e. males and females)	1.1	7.8	79.6	10.0	98.5	0.1	0.2	1.0	0.2	1.5
Harvest										
1. Total no. of hours spent on harvesting.	26.0	474.0	3601.0	321.0	4422.0	0	0	0	0	0
2. Proportion of time spent on harvesting by each respective age-group within each sex.	0.6	10.7	81.4	7.3	100.0	0	0	0	0	0
3. Proportion of total time spent on harvesting by each respective age-group (i.e. males and females)	0.6	10.7	81.4	7.3	100.0	0	0	0	0	0

Table 9.2 Continued

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
Post-Harvest Operations										
1. Total no. of hours spent on post-harvest operations.	183.0	332.0	1026.0	449.5	1990.5	443.0	1105.0	5970.5	761.5	8280.0
2. Proportion of time spent on post-harvest operations by each respective age-group within each sex.	9.2	16.7	51.5	22.6	100.0	5.4	13.3	72.1	9.2	100.0
3. Proportion of total time spent on post-harvest operations by each respective-age-group (i.e. males and females)	1.8	3.2	10.0	4.4	19.4	4.3	10.8	58.1	7.4	80.6
Average Number of Hours Spent Weekly on Agricultural Activities.	1.8	8.2	23.9	13.5	15.8	2.3	9.0	9.0	7.4	7.7

age-groups was relatively small. The share of the young and the old was relatively higher in respect of agricultural work inside the family farm than that outside the family farm. Among males those in the young and the old age-groups contributed more time to post-harvest operations than to pre-harvest and harvesting operations, while males aged 15-54 years spent less time on post-harvest operations than pre-harvest and harvesting operations. As noted earlier, pre-harvest and harvesting operations involve considerable expenditure of energy and skill and are heavier work compared to most post-harvest operations. This is why such a large differential by age exists among males in respect of pre-harvest, harvest and post-harvest operations.

Over four-fifths of all time spent on HHMA was contributed by women (see Table 9.3). Women are traditionally assigned the role of home-makers, while men are assigned the role of bread-winners. This explains the existence of such a sex differential in terms of both DPA as well as HHMA. Food preparation and cooking, washing and cleaning and bringing water are clearly women's work. The share of males in all such activities was negligible. Marketing for household consumption is clearly a responsibility of males. In rural Bangladesh, women do not go out for shopping. It is only in respect of child care and "other household maintenance activities" that we find both males and females sharing time between themselves. The "other household maintenance activities" consisted mainly of collecting firewood and dry leaves, maintenance and repair of the home and sewing and knitting at home. Males spent considerably more time in collecting firewood and dry leaves, while women, especially those aged 15 years and above, spent considerably more time in maintenance and repair of the home and sewing. Females contributed over four-fifths of all time

Table 9.3 PROPORTION OF TIME SPENT ON HOUSEHOLD MAINTENANCE ACTIVITIES BY BROAD-AGE GROUPS AND SEX

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
Household Maintenance Activities										
1. Total no. of hours spent on household maintenance activities by each age-group.	936.5	1145.5	3237.0	1087.5	6406.5	2094.5	2502.0	28597.5	4261.5	37455.5
2. Proportion of time spent on all household maintenance activities by each respective age-group within each sex	14.6	17.9	50.5	17.0	100.0	5.6	6.7	76.4	11.3	100.0
3. Proportion of total time spent on household maintenance activities by each age-group (i.e. males and females).	2.1	2.6	7.4	2.5	14.6	4.8	5.7	65.2	9.7	85.4
a) Food Preparation and Cooking										
1. Total no. of hours spent on food preparation and cooking	*	*	55.0	*	62.0	40.0	748.0	14744.5	2619.5	1815.2
2. Proportion of time spent on such activity by each age-group within each sex.	*	*	88.7	10.0	100.0	0.2	4.1	81.3	14.4	100.0
3. Proportion of total time spent on such activity by each age-group	*	*	0.3	*	0.3	0.2	4.1	81.0	14.4	99.7

Table 9.3. Continued

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
b) Washing and cleaning										
1. Total no. of hours spent on washing and cleaning.	*	32.5	108.5	*	148.5	43.5	294 5	5596.5	359.5	6294
2. Proportion of time spent on such activity by each age-group within each sex.	*	21.9	73.1	4.0	100.0	0.7	4.7	88.9	5.7	100.0
3. Proportion of total time spent on such activity by each age-group	*	0.5	1.7	*	2 3	0.7	4.6	88.8	5.6	97.7
c) Bringing Water										
1. Total no. of hours spent on bringing water	16.5	20.0	88.5	6.5	131.5	74.5	415.5	2948.0	207.0	3645.0
2. Proportion of time spent on such activity by each age-group within each sex.	12.5	15.3	67.3	4.9	100.0	2.0	11.4	80.9	5.7	100.0
3. Proportion of total time spent on such activity by each age-group.	0.4	0.5	2.3	0.2	3.4	2.0	11.0	78.2	5.4	96.6
d) Child Care										
1. Total no. of hours spent on child care.	385.0	316.0	216.0	157.0	1070.0	12250.5	528.0	4444.0	506.5	6705.0
2. Proportion of time spent on such activity by each age-group within each sex.	35.9	29.4	20.1	14.6	100.0	18.3	7.9	66.3	7.5	100.0
3. Proportion of total time spent on such activity by each age-group.	4.9	4.1	2.8	2.0	13.8	15.8	6.8	57.1	6.5	86.2

Table 9.3. Continued.

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5 yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55&over	All Ages 5yrs.+
e) Marketing for Household Consumption										
1. Total no. of hours spent on marketing for household consumption.	434.0	417.0	354.5	94.5	1300	*	*	0	0	17
2. Proportion of time spent on such activity by each age-group within each sex.	2.6	9.7	65.3	22.4	100.0	*	*	0	0	100.0
3. Proportion of total time spent on such activity by each age-group	2.6	9.7	65.0	22.2	99.5	*	*	0	0	0.5
f) "Other Household Maintenance Activities"										
1. Total no. of hours spent on "Other household maintenance activities"	93.0	360.0	2414.5	827.0	3694.5	710.0	516.0	864.5	569.0	2659.5
2. Proportion of time spent on such acti ity by each age-group within each sex.	33.6	32.0	27.2	7.2	100.0	26.7	19.4	32.5	21.4	100.0
3. Proportion of total time spent on such activity by each age-group	11.1	10.5	8.9	2.4	32.9	17.9	13.0	21.8	14.3	67.1
Average no. of hours spent weekly on household maintenance activities	5.2	5.9	6.0	7.3	6.0	10.7	20.0	42.4	40.6	34.1

* Insignificant

spent on child care. This is because the responsibility of looking after young children lies mainly with the mother and other female members of the household.

The contribution of boys and girls in age-groups 5-9 years was relatively high in respect of child care and "other household maintenance activities". The relative contribution of boys and girls aged 10-14 years was lower than those in age-group 5-9 years in respect of child care and "other household maintenance activites". But, the contribution of girls aged 10-14 years was higher than those aged 5-9 years in respect of such activities as food preparation and cooking, washing and cleaning and bringing water. Boys aged 10-14 years had a higher share of time contributed to marketing for household consumption than boys aged 5-9 years. This is because with a rise in age children take up more purposeful and responsible activities.

About 42% of all time spent on total work was contributed by males, while females contributed 58% (see Table 9.4). In other words, the ratio of sexual division of labour was 1:1.4 in favour of males. Females aged five years and above worked, on average, 12.3 hours more per week than males. Such a sex differential is explained by the fact that, although males, on average, spent over twice as much time on DPA as females, females, on average, spent six times more time on HHMA than males.

The contribution of those in the young and old age-groups both among males and females was relatively small. Males aged 15-54 years contributed over two-thirds of all time spent by males, while females in the same age-group contributed three-quarters.

9.2 Household Allocation of Labour

Table 9.5 presents the proportion of time spent on DPA by

Table 9.4

Proportion of Time Spent on Total Work by Broad Age-Groups and Sex

	MALES					FEMALES				
	5-9yrs.	10-14yrs.	15-54yrs.	55yrs&over	All Ages 5yrs.+	5-9yrs.	10-14yrs.	15-54yrs.	55yrs&over	All Ages 5yrs.+
1.Total no. of hours spent on total work by age-groups and sex.	1810.5	4867.0	25844.0	3559.0	38080.5	2967.5	4456	40563	5443	53429.5
2.Proportion of time spent on total work by each age-group within each sex.	4.7	12.8	67.9	14.6	100.0	5.6	8.3	75.9	10.2	100.0
3.Proportion of total time spent on total work by each age-group (males and females).	2.0	5.3	28.2	6.1	.41.6	3.2	4.9	44.3	6.0	58.4
Average number of hours spent weekly on total work.	10.0	25.0	47.9	37.0	35.8	15.2	35.6	60.1	51.8	48.1

Table 9.5

Proportion of Time Spent on Directly Productive Activities and Its Various Components by Households, According to Size of Net Cultivable Area

Households By Size of Net Cultivable Land Areas (in acres).

	Landless	0.01-1.0	1.01-2.0	72.0
Directly Productive Activities				
Total no. of hours Spent on Directly Productive Activities	4882.5 (100.0)	21328.5 (100.0)	9697.5 (100.0)	9059.0 (100.0)
(a) Inside Family Farm/Business	19.6	72.9	89.8	100.0
(b) Outside Family Farm/Business	80.4	27.1	10.2	0
Agricultural Activities as proportion of Time Spent on Directly Productive Activities	52.7	54.6	51.9	69.5
(a) Inside Family Farm/Business	0	38.9	48.2	69.5
(b) Outside Family Farm/Business	52.7	15.7	3.7	0
Non-Farming Activities as proportion of Time Spent on Directly Productive Activities	41.5	19.1	19.3	5.1
(a) Inside	13.8	7.6	12.9	5.1
(b) Outside	27.7	11.5	6.4	0
Tending Animals	1.4	21.0	24.9	22.5
Fishing	4.4	5.3	3.9	2.9
Number of Households	6	19	5	4
Average Number of Hours Spent Weekly on Directly Productive Activities				
Males 5-9 years	3.7	3.2	6.3	8.4
Females 5-9 years	1.5	4.4	9.2	4.3
Males 10-14 years	20.5	29.8	14.1	17.7
Females 10-14 years	*	12.8	18.1	17.2
Males 15-54 years	39.8	35.3	30.4	39.9
Females 15-54 years	10.7	17.6	18.9	18.8
Males aged 55 years +	18.4	31.0	31.5	27.8
Females aged 55 years +	*	8.6	*	14.4

* No female aged 10-14 years and 55 years and above belonging to landless household; and no female aged 55 years and above belonging to households with land areas ranging between 1.01 and 2.0 acres.

households, according to the size of their net cultivable land areas. The main findings of the table are summarised as follows:

a) The greater the net cultivable area of a household, the higher the proportion of its time does the family spend inside its farm/ business. This is so because more work opportunities are available inside the family farm/business in the case of households with more land and because persons belonging to relatively richer households rarely work for wage employment. While, in the case of households possessing no cultivable land area, less than one-fifth of the time spent on DPA was spent inside the family farm/business, all time spent on DPA by households having land areas in excess of two acres was spent inside the family farm/business.

b) Generally, it is seen that the greater the net cultivable land areas of a household, the higher is the proportion of its time spent on agricultural activities and the smaller is the proportion of its time spent on non-farming activities. This is simply because households with relatively more land have more work opportunities available in respect of agricultural activities. Again, we see that in respect of agricultural activities the proportion of time spent inside the family farm increases with an increase in the size of cultivable land areas of a household.

c) Landed households spend considerably more time looking after animals than households having no cultivable land areas. The explanation lies in the fact that landless households have many fewer animals than landed households.

d) Landless and near-landless households spend more time on fishing than households with relatively more land. There are two main reasons for this. Firstly, households with relatively more land are comparatively better off so that they can afford to buy fish from the market; whereas, for poorer households, catching fish from the nearby tanks

and rice-fields provides an important source of protein intake. Fishing is an activity mostly pursued by children and it was observed that children belonging to relatively richer households spent less time on fishing than those belonging to poorer households. Secondly, adults from households with more land have more work opportunities available in respect of agricultural activities and hence the opportunity cost of spending time in fishing is greater.

We find that there is a positive relationship between time spent on HHMA and size of household (see Table. 9.6). The main reasons would appear to be as follows: (a) in larger households more time is required and consequently spent on food preparation and cooking, washing and cleaning, fetching water, etc.; (b) larger households have more rooms and the regular plastering of walls and floors with clay and water takes longer time than in the case of smaller households, most of which have just a single room. However, work-sharing is more prevalent among persons belonging to larger households than among smaller households. This is clear if we look at the average number of hours worked by persons belonging to households with different size which shows lower levels of work per person in larger households, for most age-groups.

The number of hours spent on HHMA by households is positively related to the size of land areas (see Table 9.7). Households with relatively more land areas are comparatively wealthier than those with relatively less land and have a better standard of living. They eat relatively more and better food, the preparation of which takes longer time. They have more rooms and the regular plastering of walls and floors with clay and water takes longer time than in the case of households with little or no land, most of which have just a single room.

Table 9.6

Average Number of Hours Spent on Household Maintenance Activities by Households, According To Their Size (in persons)

	SIZE OF HOUSEHOLD		
	1-6 persons	7 and more persons	All households
1. Total number of hours spent on Household Maintenance Activities	21619	14633.5	36252.5
2. Average number of Hours Spent Daily	9.0	12.7	10.2
3. Average number of Hours Spent weekly	62.7	88.7	71.1
Number of Households	23	11	34
Average Number of Hours Spent Weekly			
Males 5--9 years	6.1	3.3	5.2
Females 5-9 years	15.1	7.0	10.7
Males 10-14 years	6.1	5.8	5.9
Females10-14 years	20.0	15.6	18.5
Males 15-54 years	7.6	4.4	6.0
Males 55 years+	6.8	7.4	7.2
Females 15-54 years	44.9	39.7	42.8
Females 55 years+	33.9	36.5	35.5

Table 9.7

Average Number of Hours Spent on Household Maintenance Activities by Household, According to the Size of their Net Cultivable Land Area

	Net Cultivable Land Area (in acres)				
	Landless	0.01-1.0	1.0-2.0	72.0	All House holds
1. Total number of hours spent on Household Maintenance Activities	6775.0	20147.5	5344.5	6470.5	36252.5
2. Average No. of hours spent daily	9.2	9.3	10.2	15.4	10.2
3. Average No. of hours spent weekly	64.6	65.3	71.3	107.8	71.1
Number of Households	6	19	5	4	34
Average number of hours spent weekly					
Males 5-9 years	14.3	2.9	7.9	2.8	5.2
Females 5-9 years	12.2	12.2	8.4	6.4	10.7
Males 10-14 years	8.2	8.2	5.1	3.8	5.9
Females 10-14 years	*	13.6	28.7	27.9	18.5
Males 15-54 years	5.0	7.1	5.8	5.7	6.0
Males 55 years+	4.4	7.1	6.6	9.7	7.2
Females 15-54 years	43.2	43.9	32.0	46.9	42.4
Females 55 years+	*	39.9	*	42.3	40.6

*No female aged 10-14 years and 55 years and above belonging to landless households and no female aged 55 years and above belonging to households having land areas ranging between 1.01 and 2.0 acres.

Table 9.8 presents the proportion of time spent on major agricultural operations by household members and outside help among landed households, according to the size of their net cultivable land areas. We find that the larger the size of land area, the higher is the proportion of work done by outside labour. Households with over two acres of land employed outside labour to the extent of three-tenths of total labour requirements during the pre-harvest and the harvesting seasons, and the proportion was over one-third during the post-harvest period. Households with up to 1.0 acre of land depended on less than 5% of outside labour. Households with relatively greater land areas, as a rule, employ more outside labour than those with relatively less land, since such households can afford to employ outside labour and need to do so because of the greater total work inputs required. The dependence on outside help was even greater during the post-harvest period, because females belonging to such households spend less time on such activities as threshing and husking than women belonging to households with land areas ranging between 1.01 and 2.0 acres.

While households with relatively less land usually employ outside labour only for such tasks as ploughing, transplanting, harvesting and threshing and only when the demand for labour is high and cannot be met from the family, households with relatively more land employ outside labour, in addition to the activities noted above, also for such activities as weeding, manual irrigation, fertilizing, boiling and drying grain and husking. That is, households with relatively more land employ outside labour also at times other than the peak periods.

Table 9.8

Proportion of Time Spent on Major Agricultural Operations by Household Members and Outside Help by Size of Net Cultivable Land Areas of Landed Households

	PRE-HARVEST OPERATIONS				HARVEST				POST-HARVEST			
	0.01 -1.0 acres	1.01 -2.0 acres	72.0 acres	All Landed House holds	0.01 -1.0 acres	1.01 -2.0 acres	72.0 acres	All Landed House holds	0.01 -1.0 acres	1.01 -2.0 acres	72.0 acres	All Landed House holds
1. Proportion of Time spent by Household Members	95.6	88.7	70.9	80.4	95.1	87.3	70.2	79.2	95.5	86.0	64.8	75.9
2. Proportion of Time spent by Outside Help	4.4	11.3	29.1	19.6	4.9	12.7	29.8	30.3	4.5	14.0	35.2	24.1

While most of the outside help utilized by households with relatively more land was in the form of wage labour, most of the outside help in the case of households with relatively less land was in the form of exchange labour.

CHAPTER 10: CONCLUSIONS

Barkait is one of some 65,000 villages in Bangladesh. In many ways, it can be said to be an average Bangladesh village. Like most villages of Bangladesh, Barkait depends largely on its agriculture, and its inhabitants share a common language, culture, history, topography, cropping pattern and practices, system of social organization and modes of reproductive behaviour with the population of most other areas of the country.

Land is the foundation of the economic structure in Bangladesh and in Barkait. It is the principal source of income and livelihood for most of the villagers. In Barkait, as in most villages of Bangladesh, land distribution is uneven. This reinforces the argument often put forward in favour of land redistribution among the landless and near landless farmers. Given a particular level of agricultural technology and a land tenure system, the landlessness or near landlessness can affect the organization of labour, types of crops grown and food availability. The size of the holdings is quite small and this is to a large extent a reflection of the demographic and economic situation in the village. A very high proportion of farms are fragmented. The amount of land lost by way of dividing lines between plots has, perhaps, never been estimated. This clearly is a loss of land in a country where land shortage is a serious problem. Although it is difficult to put an end to the system of subdivision of land (as this is provided for under the inheritance laws of both Islam and Hinduism), some measures ought to be taken to stop or discourage this practice. The problem could be tackled by encouraging farmers to set up cooperative farming. Since subdivision and fragmentation of land eventually leads to smaller plots of land, in terms of providing governmental services such as the supply of fertilizers, irrigation water, high-yielding variety

seeds, pesticides, credit, etc., a minimum size of plot could be fixed below which such facilities might not be made available. This, however, discriminates against poor and small farmers. Nevertheless, this still remains a very serious problem and attempts should be made to find a workable and equitable solution.

A very small proportion of total cultivable land area in Bangladesh and in Barkait is devoted to the cultivation of jute and sugar-cane. Admittedly, more land areas have to be devoted to the cultivation of paddy to feed the vast population. However, unless acreage under jute is increased there is a potential loss of foreign exchange earnings. The price of jute should be fixed at a level that will encourage greater acreage under jute cultivation but not so high as to induce farmers to switch from all rice to all jute, which then not only creates a problem of serious food shortage but also raises the price of rice beyond the purchasing power of the common man. Steps should be taken to encourage farmers to devote more land area under high-yielding varieties. The problems associated with high-yielding varieties should, however, be kept in mind by the policy-makers.[1]

A very small proportion of land in Bangladesh and none in Barkait is devoted to Boro crops. This is on account of lack of irrigation facilities In 1974-75 only 5.6 per cent of total cultivable land area in Bangladesh[2] and none in Barkait was under modern irrigation. The proportion of land area under irrigation in Bangladesh should be raised and facilities should be provided to villages not covered by modern irrigation to allow farmers

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1. For an understanding of the problems associated with high-yielding varieties see Shand, R.T. (ed.), Technical Change in Asian Agriculture, A.N.U., Canberra, 1973. Also Colin Barlow, On Developing Appropriate Technologies for Peasant Agriculture, seminar paper presented at the A.N.U., Canberra, September, 1978.

2. Statistical Yearbook of Bangladesh, 1975, op.cit.

to grow Boro crops. This extension of multiple cropping would substantially add to food production. Steps should be taken to ensure the supply of seeds, fertilizers, pesticides and credit to farmers at the right time. All this will mean an increase in agricultural production, thereby improving the food situation and standard of living of the villagers, besides increasing employment opportunities to them.

In Barkait, as in most villages of Bangladesh, there is no organized attempt at poultry and cattle breeding. Cattle are small and of stunted variety. In promoting rural development, the government should take steps to encourage poultry breeding and systematic breeding arrangements of cattle. This will not only increase the income level of the villagers and provide them with more nutritious food, but also provide them with employment opportunities. Livestock development projects would seem to offer women opportunities for more productive work. This could be adapted to many of the conditions which now govern women's employment such as purdah and the ability to integrate household maintenance activities and directly productive activities.

A vast majority of the people in the rural areas have a dismally low level of consumption of goods and services. On a material scale most families live at a level of substantial deprivation, when compared to the people in the urban areas. Unless people in rural areas have an adequate intake of calories, *ceteris paribus*, they cannot work to their full physical capacity. Clearly, this represents a loss in respect of utilization of human resources.

The rate of literacy is low, especially in the case of females. However, in the recent past, attitudes towards female education have undergone some changes. As a result, more girls are going to school today than in the past, although still very few of them go to secondary school. This

is mainly on account of shortage of secondary schools for girls in the rural areas. The establishment of more secondary schools for girls in the rural areas is, therefore, highly recommended. This will expectedly lead to a consequent delay in the age at marriage, which is still very low. This, in turn, is expected to bring about a decline in fertility, which stands at a reasonably high level. Further, expansion of educational opportunities can make an important contribution towards slowing the growth of the labour force, through its effects on activity rates at the younger working ages.

The overall labour force participation rates and age-specific labour force participation rates among males on the basis of the census approaches and the labour utilization survey were found to be quite similar. The rates were also close to those of the country as a whole. However, the female rates varied considerably due to reasons already discussed. In the case of males the potential supply of labour is influenced more by the effects of demographic factors, such as size and age distribution of the total population, than those caused by social and economic development. However, in the case of females and of younger and older males it is believed that the socio-economic and cultural factors seem to influence the labour force participation rates significantly.

The functional distribution of persons in the labour force and those who are "dependants" on the basis of the census approaches make little sense in the context of rural agrarian societies. We have seen that the difference in the number of hours worked between those reported as "working" (and, hence, in the labour force) and those reported as "dependants" is not as sharp as to permit such a distinction. Such a functional distribution, meaningful as it is in the context of the developed countries, is not relevant in rural agrarian societies, where it, in fact, leads to misleading

conclusions on the extent of the dependency burden.

A close relationship between the industrial and occupational structure of the labour force is found in countries characterized by a predominantly agrarian economy and where simple methods of production still exist. And, tautologically, the status composition of an occupation is similar to the status composition of the related industry. Due to the size of the agricultural sector in Bangladesh and in Barkait, a high degree of homogeneity exists between the occupational and industrial distributions of the labour force, most markedly in the case of females because of the restriction of their occupation largely to agriculture and because of the great influence of socio-cultural norms on the types of activities that they can undertake.

The number of hours spent on DPA is functionally related to age and sex. According to time-budget data, males spent over twice as much time on DPA as females, although the difference was somewhat smaller when the labour utilization survey data was employed. While the average number of hours spent weekly on the basis of the time-budget data and the labour utilization survey data were quite close in the case of males, this was not so in the case of females. This was due to over-reporting of the number of hours worked by women in the case of the labour utilization survey data.[1]

Servants clearly spent more time on DPA than any others in the household. This is consistent with both the time-budget and the labour-utilization survey data. When compared with the time-budget data it appears that the labour utilization survey data suffer from over-reporting of the number

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1. It should be pointed out that the present time-budget study cannot be claimed to be perfect. This is mainly because the size of the sample was relatively big compared to the number of investigators available for the study. However, either with a cut in the size of the sample or with more investigators available it is possible to reach greater accuracy.

of hours worked by heads of households and under-reporting in the case of sons. This, perhaps, is explained by the fact that the labour utilization survey collected data mainly from heads of households. There was also over-reporting in the case of housewives, daughters and those in the category of "others" (dependent relatives, etc.) so far as the labour utilization survey was concerned. The over-reporting in the case of such snap-shot surveys is mainly due to recall lapses.

The labour utilization survey data show that the number of hours spent on DPA by person decreases with an increase in the size of net cultivable land areas of household. However, the time-budget data show that males belonging to households with land areas between 0.01 and 1.0 acres spent more time on DPA than others. They were followed by those with over two acres of land. Among females also, the two sources of data do not give matching results. Thus, it may be said that on the basis of labour utilization survey data there was under-reporting among males belonging to households with up to 1.0 acre of land and over-reporting in the case of those belonging to landless households. Among females, as we have already observed, there was over-reporting in the case of the labour utilization survey data and more so in the case of females belonging to landless and near landless households.

According to time-budget data, owner-cultivators cum sharecroppers spent more time on DPA than all others, while the labour utilization survey data reveal that this was true of wage-earners. Considerable under-reporting exists in the number of hours worked by unpaid family workers (males) on the basis of the labour utilization survey data. The time-budget data show that unpaid family workers (males) spent more time on DPA than all others, with the exception of owner-cultivators cum sharecroppers. Thus, the notion which is widely held that the contribution of unpaid family workers

is only marginal is refuted by time-budget data.

The marital and maternal status of a woman does not adversely affect her participation in DPA. This is borne out by the findings of both the time-budget data and the labour utilization survey data.

Considering DPA only the overall underemployment rate was substantially high (roughly one-quarter and one-third among males and females respectively). However, if we consider total work the rate was lower, especially among females. The situation was worse during slack season. However, the crucial point that emerges is that underemployment was high even during the busy season. As we have already noted, Barkait represents fairly an average Bangladesh village. This indicates a great loss of human resources on a national level. This means that enough work opportunities are not available even during the busy season. More work opportunities should be created to remedy the problem. More attention should be given to mobilizing every prospective source of new investment in established areas of peasant agriculture, in stepping-up government investment in irrigation, agricultural extension and research and in setting-up suitable manufacturing industries geared towards employing rural labour. Unless productivity per acre is progressively raised or additional sources of income provided to the villagers, it is quite likely that people from rural areas will emigrate to urban areas in search of jobs.

Child labour is prevalent in most Third World countries. The main factors favouring child labour in most of these countries is the high rate of population growth, poverty and lack of educational opportunities.

A child passes through different phases of the productive life cycle. From a stage of complete dependence on parents, a child finally reaches a stage when he produces more than he consumes. Both boys and girls begin productive work at quite an early age. With a rise in age they participate

in more strenuous activities. Boys are more frequently engaged in activities outside the homestead (bari), while girls are often engaged in activities inside the bari. This is in keeping with the socially and culturally prescribed sexual division of labour.

The number of hours spent on DPA rises with age. As in the case of adults, considerable seasonal variation exists in the number of hours spent on DPA. At younger ages of up to 12 years a girl spends more time on DPA than a boy, but at ages of 13 years and above a boy spends more time on DPA than a girl of the same age. Boys belonging to landless households (most of whom worked as wage labourers) and those belonging to households with over two acres of land worked more than others. Girls belonging to households with land areas ranging between 1.01 and 2.0 acres worked more than the others. This is, in fact, in line with the findings with respect to adult males and adult females as well. There was not much difference in the number of hours worked, according to whether a boy or a girl aged ten years and above was reported as "working" or "dependent" on the basis of the labour force information provided by the census approaches.

Women and children (and adult males as well) contribute a substantial amount of time daily to HHMA. Such activities, as already observed, are indispensable to the maintenance of the household. The fact that a considerable amount of energy and time is expended in carrying out these activities and that these activities, if they were to be carried out by others, would have to be paid for, strongly suggests that such activities should be considered within the purview of "work". We have seen that, using a broader definition of work to include not only DPA but also HHMA, the number of hours worked by women and girls were considerably higher than those by men and boys. Any research on work input, particularly that of women and children, which overlooks or ignores time spent on HHMA, grossly under-estimate

their contribution to the household economy. In fact, very few studies exist which furnish such information and, hence, the persistence of the belief that women in traditional societies are hardly of any importance, besides their role of mothering and caring for children. The myth is exploded and there is clearly the need for more research on this line to throw more light on the subject, a field of, indeed, great importance and ignorance.

The census approaches and snap-shot labour utilization surveys rely heavily on the concept of "looking for work" to obtain information on unemployment. The problems associated with using the concept of "looking for work" have been pointed out earlier. Therefore, such a concept was not used in the labour utilization survey. Rather, those in the non-working section of the population aged ten years and above were asked to say whether they worked during the cropping season preceding enumeration and whether they would accept work if it were available. Such questions provide better information on the extent of unemployment and the use of such questions is recommended in future labour force and labour utilization surveys in rural agrarian societies. Further, the definition of "unemployment" used in Chapter 8 of the thesis gives more reliable figures.

Most of the studies concerned with the measurement of underemployment in rural areas of LDCs have taken into account mainly the farming population and usually only the number of hours spent on agricultural activities. An attempt at the measurement of underemployment should take into account both the farming and the non-farming population (the distinction between them is often not clear-cut) and the number of hours spent on all DPA, including tending animals and fishing as well as on HHMA. This will help to give two separate estimates of underemployment: a) one based on DPA and b) the other based on total work. Further, we have seen that with the

exception of visible underemployment the other concepts are not very suitable for measuring the amount of surplus labour in rural agrarian areas and their calculations depend on so many assumptions that the results obtained hardly serve any useful purpose.

In fine, it may be said that although time-budget data provide better information on the use of time and labour utilization, it is costly and time-consuming and, hence, cannot be recommended on a national level. Such studies should, however, be carried out at least in some areas of the country to highlight some of the important aspects of the use of time by men, women and children. Future labour force surveys should be conducted by adhering to the following broad guide-lines:

a) The adoption of three reference periods: one year, last cropping season and last week.

b) The collection of data on the number of hours spent on all DPA and on HHMA of all persons aged 5 years and above over the week preceding the survey (at least twice - at least once during the busy season and once during the slack season so as to examine the extent of seasonal unemployment).

c) The collection of information on the characteristics of persons not working during the reference period (in line with the questionnaire used to obtain information on non-workers in the Labour Utilization Survey).

Appendix I - UNDER-EMPLOYMENT AND ITS MEASUREMENT: A REVIEW

Models of economic development generally assume a surplus of labour in the agricultural sector of less developed countries and writers advocate the employment of such surplus labour in capital formation. In his model of two sectors, i.e. subsistence and capitalist sectors, Arthur Lewis assumes an excess supply of labour in the traditional subsistence sector and sought to analyze its implications for the strategy of economic development in the context of a two-sector model of economic growth.[1] The basic features of a two-sector labour surplus economy are quite well-known. It assumes that there is a small capitalist industrial sector co-existing with a large subsistence agricultural sector. Competitive conditions do not prevail in the labour market in the agricultural sector and the employment of labour is not governed by the criterion of profit maximization. The wage rate in the agricultural sector is near the subsistence level of agricultural workers. The social institutions and conventions help to keep the prevailing wage rate to this level.

Ranis and Fei have undertaken an elaborate extension of the two-sector growth model of Arthur Lewis.[2] The authors drew an elaboration of the distinction between two stages of labour surplus economy. This is a valuable extension of the concept of surplus labour found in Lewis' model. The first stage is characterized by zero-marginal productivity of labour. In other words, it is the stage in which the withdrawal of such surplus labour from agriculture does not reduce output. Labour is available at the

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1. W.A. Lewis, Economic Development with Unlimited Supplies of Labour, Manchester School, May, 1954.

2. J.C.H. Fei and G. Ranis, Development of the Labour Surplus Economy, New Haven: The Economic Growth Centre, Yale University, 1964.

going wage rate, which is higher than the rural wage rate by a given margin. This is termed as labour "redundancy". However, once the growth of the industrial sector and the reallocation of labour proceeds beyond the stage of "redundancy", the second stage sets in. Labour then has a positive marginal product, although it is below the institutional wage rate. A reallocation of labour from agriculture to industry means a reduction in agricultural output and reduces the surplus available to the landlord. The terms of trade moves against industry. The model postulates only redundant labour force and disguised unemployment. The realism of the model would have been enhanced if an explicit account was taken of the fact that in most less developed countries in both urban and rural areas there is open unemployment, although it is much more pronounced in the industrial sector. The modern urban sector has a very limited capacity to absorb labour. This leads to open unemployment and a rapidly growing, low productivity informal sector (activities involving petty trades, hawking etc.) in urban areas.

Though Lewis, Fei and Ranis did not claim universal validity of their models, several studies show that even in the areas explicitly referred to by them to hold true for their models, a transfer of some part of labour from agriculture is not possible without reducing output.[1] This is, perhaps, due to the fact that the seasonal nature of agricultural production was not considered in their model. If seasonality is considered, one can imagine output falling if, for instance, more acreage cannot be prepared for timely planting of crops due to lack of labour.

Reynolds cautioned about the possible confusion that exists between

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1. A.K. Sen, "Peasants and Dualism With or Without Surplus Labour", Journal of Political Economy, vol.74, 1966, pp.425-450.

labourers or man-hours of labour applied.[1] He argued that labour surplus does not exist in the form Ranis and Fei put it. This is because the marginal productivity of man-hours worked must be positive for most work has disutility. He, however, pointed out that surplus may exist in the Lewis's sense due to the over-pricing of industrial labour. But, because of the high price of labour in the industrial sector, the employers undertake to introduce labour-saving devices in their production, thus resulting in a low absorption of labour from rural areas.

The model renders a useful service in highlighting the strategic importance of a sufficiently rapid labour transfer to the high productivity sector in the course of economic development, although in its strict dichotomizing of sectors and its emphasis on discrete stages of the process of development that it departs far from reality. This is because "although 'core' subsistence and capitalist sectors can certainly be distinguished, there is always a 'middle range' of the economy which does not fit satisfactorily into either. Moreover, the typical identification of the 'subsistence' sector with agriculture and of the 'capitalist' sector with the rest of the economy can be very misleading when applied to South-East Asian countries".[2]

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1. L.G. Reynolds, Agriculture in Development Theory, Yale University Press, New Haven, Connecticut, 1975.

2. G.W. Jones, The Growth of Malaysia's Labour Force, unpublished Ph.D. Thesis, A.N.U., Canberra, 1966.

The importance assigned by the writers to the problem of excess supply of labour in the agricultural sector and to the potential for development it represents calls for the need for empirical investigations to complement and test the theoretical discussions. The appendix is a critical review of literature on the subject and of the methods of measuring surplus labour.

What is Surplus Labour?

Difference meanings have been given to describe the term known as 'surplus labour' in less developed countries and various concepts have been used to describe the phenomenon. We shall discuss below some of the main interpretations of surplus labour and they are as follows:

(a) disguised unemployment,

(b) potential underemployment,

(c) cyclical underemployment, and

(d) visible underemployment.

(a) Disguised Unemployment

The term 'disguised unemployment' was coined by Mrs Joan Robinson to refer to workers with a low rather than zero marginal product. It applied to workers in the developed countries who were laid off from industries

due to a fall in demand for their products and were prepared to be absorbed in inferior occupations. The term was later adopted to explain underemployment in the less developed countries. We begin by putting forward the definition of 'disguised unemployment' by Mrs Robinson.

"In a society in which there is no regular system of unemployment benefit, and in which poor relief is either non-existent or "less eligible" than almost any alternative short of suicide, a man who is thrown out of work must scratch up a living somehow or other by means of his own efforts ... Thus, except under peculiar conditions, a decline in effective demand which reduces the amount of employment offered in the general run of industries will not lead to "unemployment" in the sense of complete idleness, but will rather drive workers into a number of occupations - selling match-boxes in the Strand, cutting brushwood in the jungles - which are still open to them ... In all those occupations which the dismissed workers take up, their productivity is less than in the occupations that they have left ... The wage received by a man who remains in employment in a particular industry measures the marginal physical productivity of a similar man who has been dismissed from it ... If a revival of investment were to occur, dismissed workers would be called back from the hedgerows, and the street-kerbs into their normal occupations".[1]

Mrs Robinson maintains that the dismissed workers by providing their labour inputs into inferior occupations add to the total output. This is possibly not so, since by adopting inferior occupations, the dismissed workers, perhaps, lead to an equivalent curtailment of the employment of

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1. Joan Robinson, Essays in the Theory of Employment, 2nd edition, Oxford: Basil Blackwell, 1947, pp.61-62.

those who have been regularly engaged in such inferior occupations. The significant element would be the differential productivity of labour employed in regular industries and labour employed in inferior occupations rather than the marginal productivity of labour employed in the inferior occupations. The difference in productivity between labour employed in regular industries and labour employed in inferior occupations accounts for the so-called disguised unemployment. Mrs Robinson's distinction between regular and inferior occupations is not clear-cut. Any attempt to classify occupations on the basis of their respective productivities falls into difficulties. Many household goods and services which are objects of exchange in the market place in the developed countries are produced by families for their own use in the LDCs and these cannot necessarily be considered inferior.

The worker suffering from disguised unemployment, in Mrs Robinson's sense, can identify himself. Such a person is aware of his state of under-employment and, when opportunities exist, he will resume work suited to his training and skill. However, in the case of the LDCs, the production unit in the rural areas is usually the household. In a household-based economy family members participate in the process of producing goods and services but not for wages. There is no possibility of personal identification here. In an over-populated peasant economy, it is not possible to point to any person and say he is unemployed in disguise. The people may all be occupied and no-one may consider himself idle.[1]

Rosenstein-Rodan referred to the concept of 'disguised unemployment' as 'static'.[2] Chiang Hsieh used the concept in a similar context.[3] The same

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1. Nurkse, Ragnar, Problems of Capital Formation in Underdeveloped Countries Oxford: Basil Blackwell, 1955.

2. P.N. Rosenstein-Rodan, 'Disguised Unemployment and Underemployment in Agriculture', Monthly Bulletin of Agricultural Economics and Statistics, July/August 1957.

3. Chiang Hsieh, 'Underemployment in Asia: 1, Nature and Extent', International Labour Review, June 1952.

idea of surplus was embodied in the term 'disguised unemployment' by Nurkse[1] and U.N. experts.[2] Such an idea of surplus labour assumes that the marginal productivity of labour is zero and, hence, identical conditions are important. By reorganization of work routine it is possible to maintain the same level of output. It assumes that other aspects of production organization such as factors of production and combination of farm enterprises are constant. Although this concept of 'disguised unemployment' is theoretically reasonable, its empirical validity has been questioned. The very notion of fixed technical coefficients in agriculture has been subjected to attacks from many writers. Viner rejected this argument and stated, "As far as agriculture is concerned, I find it impossible to conceive of a farm of any kind on which, other factors of production being held constant in quantity, and even in form as well, it would not be possible, by known methods, to obtain some addition to the crop by using additional labour in more careful selection and planting of the seed, more intensive weeding, cultivation ...' Even supposing that there were such a farm, on which every product had technically and economically fixed ingredients, labour would still have positive marginal productivity unless there were not only fixed technical coefficients of production for all the economically relevant potential products of the farm, but the proportions between the technical coefficient were uniform for all of these products".[3] Schultz characterized disguised unemployment as "an illusion ... a piece of the aftermath of the mass unemployment of the late thirties". He further

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1. Ragnar Nurkse, Problems of CApital Formation in Underdeveloped Countries, London. 1953.

2. United Nations, Department of Economic Affairs, Measures for Economic Development of Underdeveloped Countries, New York, 1951.

3. J. Viner, "Some Reflections on the Concept of 'Disguised Unemployment'", Indian Journal of Economics, July 1957, p.18.

remarked, "I know of no evidence for any poor country anywhere that would even suggest that a transfer of some small fraction, say 5 per cent, of the existing labour force out of agriculture, with other things equal, could be made without reducing production".[1] Haberler felt that it is preposterous to assume technical coefficients as being fixed in the agriculture of a primitive economy as a chronic situation.[2]

Empirical studies on marginal productivity of labour in agriculture of less developed countries have been rare. However, it is appropriate to point out that there exist some empirical studies on both sides of the issue. Mellor and Moorti, on the basis of their study in an Indian village concluded that a substantial increase in yields is possible through greater and more effective application of labour.[3] This was also found in another study in India.[4] The evidence from Africa in general is that the marginal productivity of labour in agriculture is positive.[5] Oshima questioned the very existence of disguised unemployment in agriculture and labour with a zero marginal productivity.[6]

On the other hand, several empirical studies point to zero marginal productivity of labour. Mellor and Stevens, from a study in Beng Chan, a village in Thailand, in 1948, estimated an approximately zero marginal

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1. T.W. Schultz, "The Role of Government in Promoting Growth", in L.D. White (ed.), The State of Social Sciences, Chicago, 1956, p.375.

2. G. Haberler, "Critical Observations on Some Current Notions in the Theory of Economic Development", Readings in Economic Development, 1963, p.232.

3. John W. Mellor and T.V. Moorti, Farm Business Analysis of 30 Farms in Midhekur, Agra, India, 1959-60.

4. Government of India, Studies in Economics of Farm Management in Uttar Pradesh, Delhi, 1958.

5. G.K. Helleiner, "Smallholder Decision Making: Tropical African Evidence", in Reynolds, L.G. (ed.), Agriculture in Development Theory, Yale University Press, New Haven, Connecticut, 1975, pp.27-52.

6. H.T. Oshima, "The Ranis-Fei Model of Economic Development: Comment", American Economic Review, June 1963, pp.448-452.

productivity of labour.[1] Oshima remarked, "There is one empirical study ... of 104 farms in one Thai village. In this pioneer study, the conclusion is reached that there is substantial zero MPP farm workers. I feel it hazardous to regard this study as conclusive for either theoretical or policy use".[2] He further remarked, "The spread of the data in the scatter diagram relating rice yields to labour inputs for each of the 104 farms suggests to me, not a linear regression line as it does to the author, but inadequate data and/or dubious assumptions".[3] Clark pointed out zero marginal productivity on some cotton-growing farms in Soviet Uzbekistan.[4] However, Clark makes no mention of whether the land was of uniform quality and nothing of the capital equipment on the farms. Differences in the quality of land and extent of capital formation could lead to differences in labour inputs from 238 to 348 man-days per hectare per year without any significant difference in yield. Suryanarayan, in his production function studies of agriculture in Andhra Pradesh in India in 1958, computed the marginal product of labour as 0.93 and 0.22 per month (close to zero) on irrigated and dry farms respectively.[5] Maruta, in a study of one of the poorest provinces of Japan, with an average labour input of 2,700 man hours per hectare found a marginal return of man-hour

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1. J.W. Mellor and R.D. Stevens, "The Average and Marginal Product of Farm Labour in Underdeveloped Economies", Journal of Farm Economics, August 1956, vol.38, pp.780-91.

2. H.T. Oshima, "Underemployment in Backward Economies - An Empirical Comment", The Journal of Political Economy, vol. LXVI, June 1958, p.173.

3. Ibid., p.173.

4. Colin Clark, "Future Sources of Food Supply: Economic Problems", in Food Supply and Population Growth, London, 1963.

5. Suryanarayan, K.S., "Resource Returns in Telengana Farms - A Production Function Study", Indian Journal of Agricultural Economics, 1958, pp.20-26.

of labour of only 0.064 kg. of milled rice - a marginal productivity close to zero.[1]

The results on both sides of the argument are, perhaps, not conclusive, since the methods used in these studies were particularly unsatisfactory. It seems, therefore, that the concept of disguised unemployment is not suitable for measuring the amount of surplus labour unless it can be definitely proved that there exists zero marginal productivity of labour.

(b) Potential Underemployment

Rosenstein-Rodan developed the static concept of disguised unemployment into a dynamic concept by allowing for a change in identical assumptions.[2] He referred to surplus labour as the amount of labour which can be removed from agriculture without there being a decline in output by bringing about changes in the methods of cultivation through the reorganization of capital and resources and technological changes. The idea of surplus is, therefore, changed from an actual to a potential one. It implies that marginal productivity of labour is not zero. As a result of reorganization and other changes, resource allocation and methods of production are made more efficient in the rural sector. The potential surplus is, thus, the surplus resulting from the introduction of such changes. The empirical measurement of such a surplus is dependent on the degree of change assumed in the identical assumptions and also on numerous other assumptions regarding subsequent changes resulting from the proposed changes. Admittedly, the measurement of this potential surplus is relevant and meaningful within the context of economic development, but its empirical calculation depends on so many assumptions that the results obtained would hardly serve any useful purpose.

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1. S. Maruta, in Colin Clark, Food Supplies and Population Growth, 1963.

2. Rosenstein-Rodan, "Disguised Unemployment", op.cit., pp.1-2.

Chiang Hsieh's concept of 'potential underemployment' belongs to this category.[1] The Navarrettes' concept of 'structural (hidden) underemployment' refers to an underemployed situation caused by 'lack of productive equipment' and could be interpreted as belonging to this category.[2]

(c) Cyclical Underemployment

This theory states that underutilization of labour is due to cyclical fluctuations in foreign demand for primary products.[3] The extent of such underemployment is claimed to be a direct function of the importance of foreign trade. Such an underemployment will be greater, if the subsistence sector is more important which, generally, absorbs the excess labour and which serves as a shock-absorber for cyclical fluctuations of external demand. However, the demand for non-agricultural commodities, such as iron and steel is, perhaps, subject to greater cyclical fluctuations than is the demand for primary products in general. It appears, therefore, that underemployment arising out of cyclical fluctuations of demand is not restricted to less developed countries producing primary products. Such an underemployment exists in developed countries as well. As a matter of fact, the price elasticity of most agricultural products is low and, thus, the volume of output does not alter much in the long run, even when the price of the product fluctuates widely. This concept does not seem to be very helpful as a measure of distinguishing unemployment in less developed countries.

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1. Chiang Hsieh, op.cit.

2. Alfredo Navarrette and I.M. de Navarrette, "Under employment in Underdeveloped Economies", in The Economics of Underdevelopment, (ed.) A.N. Agarwala and S.P. Singh, Bombay, Oxford University Press, 1958.

3. Navarrette and Navarrette, op.cit.

(d) Visible Underemployment

The concept of 'visible underemployment' is directly related to the seasonal nature of agricultural production. Seasonal unemployment or underemployment is one of the most crucial problems of manpower utilization in less developed countries. The seasonal rise and fall in farm activity is a general phenomenon in agriculture. Seasonality can be traced back to the time interval between the tasks of sowing and harvesting, to the rigid necessity of carrying out operations at the right time, and to the simultaneity of the harvest period for, more or less, all cultivators in a particular region. Howard views the problem of seasonality as "the problem of inelasticities of the time-pattern of primary production".[1] According to Dantwala the problem of seasonality is mainly the problem of 'inelasticities' of the time pattern of primary production.[2] Here nothing is made or manufactured; everything has to grow and become. The greater the agricultural (cereal) production in a country, the greater the seasonality of a production as a whole. The magnitude of seasonal underemployment varies with the type of crop-mix, condition of the soil, technique of production, possibility of crop rotation, etc. The seasonality is explained by the rhythm and vagaries of the climatological and biological factors. The underemployment which prevails during the slack period has been referred to as 'seasonal underemployment' by most writers dealing with the subject. Chiang Hsieh referred to 'visible underemployment' as the underemployment resulting from the seasonal nature of agricultural production.[3] He divided 'visible underemployment' into 'seasonal underemployment' and 'chronic

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1. Louise E. Howard, Labour in Agriculture: An International Survey, London, Oxford University Press, 1935, pp.8-9.

2. Dantwala, M.L. "Notes on Some Aspects of Rural Employment", Indian Journal of Agricultural Economics, Vol.VIII, No.2, August 1953, p.19.

3. Chiang Hsieh, op.cit.

underemployment'. He defined 'chronic underemployment' as the difference between visible and seasonal underemployment. Leibenstein used a different term 'disguised unemployment' to describe the same phenomenon.[1] Cho divided underemployment into 'tradition-directed (closed) underemployment' and 'technical (open) underemployment', based on his assumption of the marginal behaviour of individuals.[2] He said that the work force in less developed countries is, in reality, heterogeneous, consisting mainly of family labour and partly of wage labour. Cho assumed wage-workers in a tradition-dominated society as marginal (both socially and economically). According to him, underemployment of this category of workers must be attributed to the lack of technical means of production than to traditional social institutions, and underemployment of family labour results from traditional social instiutions. According to Cho, it is only 'technical underemployment' which is removable surplus, although it is generally regarded that the chronic underemployment part of visible underemployment is the removable surplus for capital formation. Further, the operational value of 'tradition-directed underemployment' will be in a hypothetical socially changed society. Cho, himself, was aware of this when he observed, "A sudden breakdown of prevailing social institutions is an important conjecture in this study".[3]

Measurement of Surplus Labour

With the exception of visible underemployment all other concepts of underemployment reviewed above are quite abstract and rigid for practical

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1. Harvey Leibenstein, "Economic Backwardness and Economic Growth" in Studies in the Theory of Economic Development, New York, John Wiley and Sons, 1960, pp.62-66.

2. Cho Yong Sam, "Disguised Unemployment" in Underdeveloped Areas with special reference to South Korean Agriculture, University of California Press, Berkeley and Los Angeles, 1963, pp.87-89.

3. Cho Yong Sam, op.cit., p.96.

use in the measurement of surplus labour. There are two main approaches to measuring surplus labour. The first approach is often referred to as the indirect or norm method and the second approach as the direct method. The indirect or norm method, adopted by the traditional school, uses the standard of labour productivity to measure surplus labour. Generally speaking, the net amount of surplus labour arrived at by the indirect method is the actual labour available for farming minus the norm. This indirect method of measuring surplus labour has three common variants.

(i) Optimum Work-unit Approach: Under this approach, the work-units that are required to produce a given output are subtracted from the total number of labour units the farm population is able to supply. The difference between the two measures the extent of surplus labour. The approach fails to determine the extent of seasonal underemployment, as it takes no account of seasonal variation in work requirements and assumes a constant demand for labour throughout the year.

(ii) Optimum-size Holding Approach: Under this approach, the number of areas under given cultivation techniques that is required to support a family of a given size is contrasted with the total area under cultivation in the area. This approach provides a measure of the total number of families that the area can support at a certain standard of living and the excess number of families in the area is considered as a surplus. Gupta used the concept of 'economic holding' in estimating the extent of disguised unemployment in Indian agriculture for the year 1953.[1] After taking into account factors such as climate, technique of cultivation, nature of crops, etc., Gupta arrived at an estimate of the size of 'economic holding' for different quantitites of land, ranging between 5 and 10 acres. He observed that farms of the size of 'economic holding' would provide opportunities for the full-time use of the available labour of families cultivating lands

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1. M.L. Gupta, Problems of Unemployment in India, 1955.

of different qualities. Gupta, however, himself was aware of the fact that the size of economic holding was a matter of personal approximation. Besides, the term 'economic holding' is one of those elusive and vague terms that is not easily amenable to precise definition. Such a term is indeterminate to a large extent and involves humanistic and ethical value judgements. The concept of 'economic holding' depends on so many variables, such as size of a family, quality of land, degree of mechanization, etc. and, therefore, the results will differ not only from country to country but also from region to region and farm to farm within the same region. Hence, the use of the concept of 'economic holding' as a norm to estimate the extent of disguised unemployment would lead to crude and undependable results.

Mujumdar advanced the concept of a 'standard holding' to refer to a holding which, under existing conditions of techniques, provides full employment for a family of average size working with such assistance as is customary in agricultural operations. More broadly viewed, it would become necessary to integrate it with livestock also.[1] The surplus calculated under this approach depends on the criterion 'standard holding' and it is difficult to establish an objective criterion of this nature. Any criterion so established would depend on so many assumptions that the results calculated would be vague and imprecise to be useful for any practical purpose. Besides, Mujumdar's methodology suffers from several shortcomings, as mentioned below:

a) The determination of 'standard holding' assumes that households with holdings smaller than the 'standard holdings' are underemployed.. But, the findings of several studies indicate that smaller farmers use their

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1. N.A. Mujumdar, Some Problems of Underemployment, Bombay, 1961, p.83.

land more intensively and are found to work longer hours than bigger farmers.

b) Mujumdar did not take into account the fact that some people are engaged in non-agricultural activities in the rural areas. He also failed to take note of the fact that in rural areas some persons are engaged in both agricultural and non-agricultural activities. Such persons normally belong to households with little land and, therefore, there is no justification to assume that such persons would work less than those with more land. In the case of persons pursuing non-agricultural occupations, land does not determine the extent of their employment and underemployment.

c) Mujumdar made no attempt to quantify labour inputs. His results merely show the proportion of underemployed cultivators and there is no indication of the extent of their underemployment. In the absence of such information, no policy measures can be formulated to utilize the surplus rural manpower in the economic development process.

d) Mujumdar excluded (i) the big farmers (with holdings larger than the 'standard holding') and (ii) the agricultural wage labourers. This exclusion would prevent the results from showing the complete picture.

e) Mujumdar assumed capital intensity, irrigation and cropping system to be constant and considered employment as a function of the size of holding only. This is rather an over-simplification, for irrigation, capital intensity and cropping system are not fixed and vary from region to region within the same country.

f) Finally, the size of the 'standard holding' itself may differ from one region to another within the same country. Mujumdar himself noted this point. This is a reflection of the variations in factors like rainfall, type of soil, irrigation, methods of cultivation, etc., which broadly determine the work intensity of land. This suggests that one

needs different estimates of 'standard holding' for different regions and this makes things more difficult.

Thus, it may be said that Mujumdar's method of estimating disguised underemployment has little operational value.

(c) Optimum Density Approach: The necessary density of population for a given type of cultivation may be a norm, which is then subtracted from the actual density of population. The difference is the measure of surplus labour. This approach gives highly aggregate estimates and, therefore, its usefulness is only minimal.

Rosenstein-Rodan, Cho and others applied the direct method of estimating surplus labour. Rosenstein-Rodan rejected the indirect method solely on the technical ground that its results are imprecise because of the difficulties inherent in establishing a criterion of need.[1] Cho rejected it not only on the ground of Rosenstein-Rodan but also because of his objection to the traditional productivity criterion Rosenstein-Rodan borrows.[2] The productivity criterion and the consequent indirect method, if used, would lead to an estimate of surplus labour that would be inaccurate and, perhaps, exaggerated for decision-making on development programmes. Besides, such a method will give a surplus labour force, all of which could not be withdrawn from the land.

A direct method is generally based on sample survey and fieldwork. The advantage of such a method is that it permits the measurement of both seasonal and chronic components of labour surplus. The chronic surplus, as already observed, is usually considered as a removable surplus, although it needs to be pointed out that there exist in less developed countries

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1. Rosenstein-Rodan, op.cit., p.2.

2. Cho, op.cit., p.53. For a discussion on some of the theoretical and empirical objections to the marginal productivity criteria sometimes used to identify the underemployed see also Smith,A.D.,Concepts of Labour Force Underutilization, ILO,Geneva,1971,pp.34-41.

social and cultural barriers that hinder the removal of surplus farm workers from joint families and village environments.

Under the direct method of measuring surplus labour, some norm has to be set up regarding minimum working hours to calculate the number of underemployed. In some other cases, the norm would be the total working hours potentially available per day to calculate the available supply of labour. This is then used in relation to the total number of hours worked to calculate the degree of underemployment. Such a method of measuring surplus labour is used in the present study. However, it has to be pointed out that most of the studies referred to concerned themselves with measuring surplus labour in the agricultural sector only. Although agriculture is the predominant occupation for most people in rural areas of less developed countries, some people are engaged in non-agricultural activities primarily, while many are engaged in both agricultural and non-agricultural activities, besides contributing time to household maintenance activities. Thus, to examine the question of agricultural unemployment and underemployment is to provide a partial picture of the employment and underemployment situation in rural areas of less developed countries. The present study, therefore, concerned itself with (a) measurement of employment and underemployment by taking into account time spent on all directly productive activities, and (b) measurement of employment and underemployment by taking into account total number of hours worked, i.e. time spent on directly productive activities and household maintenance activities.

APPENDIX II - COMPONENTS OF VARIOUS CATEGORIES OF ACTIVITIES

1) DIRECTLY PRODUCTIVE ACTIVITIES: ploughing, harrowing, nursery work, transplantation, manuring and fertilizing, weeding, spraying pesticides, manual irrigation, harvesting, bringing crops from the field, growing vegetables, marketing (buying and selling raw materials, paddy, rice, sugar-cane, jute, handicrafts, fishing nets, etc.), maintenance and repair on farm, taking food to the field, threshing, boiling of grain, drying of grain, husking, winnowing, retting jute, separating jute fibre, grinding sugar-cane, drying and heaping straw, scaring birds, fishing, tending animals and milking cows, transportation, hawking, spinning yarn, working in shop/tea-stall, handicraft production, weaving fishing nets, teaching at school/madrasha (religious school), tailoring, hair-cutting, repairing and building houses, earth-digging, teaching at home, performing religious duties for others (in exchange for payment).

2) AGRICULTURAL ACTIVITIES: ploughing and harrowing, nursery work, transplantation, manuring and fertilizing, weeding, spraying pesticides, manual irrigation, harvesting, bringing crops from the field, growing vegetables, marketing, maintenance and repair on farm, threshing, boiling and drying grain, husking, winnowing, grinding sugar-cane, retting jute, separating jute fibre, scaring birds, drying and heaping straw.

(a) Pre-harvest Operations: ploughing and harrowing, nursery work, transplantation, manuring and fertilizing, weeding, spraying pesticides, manual irrigation, maintenance and repair on farm.

(b) Harvest: harvesting (cutting crops) and bringing crops from the field.

(c) Post-harvest Operations: threshing, boiling and drying of grain,

husking, winnowing, scaring birds, retting jute, separating jute fibre, grinding sugar-cane, drying and heaping straw.

3) NON-FARMING ACTIVITIES: transportation, hawking, spinning yarn, working in shop/tea-stall, handicraft production, weaving fishing nets, teaching (school/madrasha/at home), tailoring, hair-cutting, repairing and building houses, earth-digging, performing religious duties.

4) HOUSEHOLD MAINTENANCE ACTIVITIES: maintenance and repair at home (plastering walls and floor with clay and water etc.), food preparation and cooking, washing and cleaning, child care, marketing for household consumption, fetching water, collecting firewood, running errands, attending patients, sewing/knitting.

5) TOTAL WORK: Directly Productive Activities plus Household Maintenance Activities.

6) PERSONAL NEEDS: praying, mid-day rest, swimming/bathing, eating.

7) STUDYING: attending school and time spent with books at home.

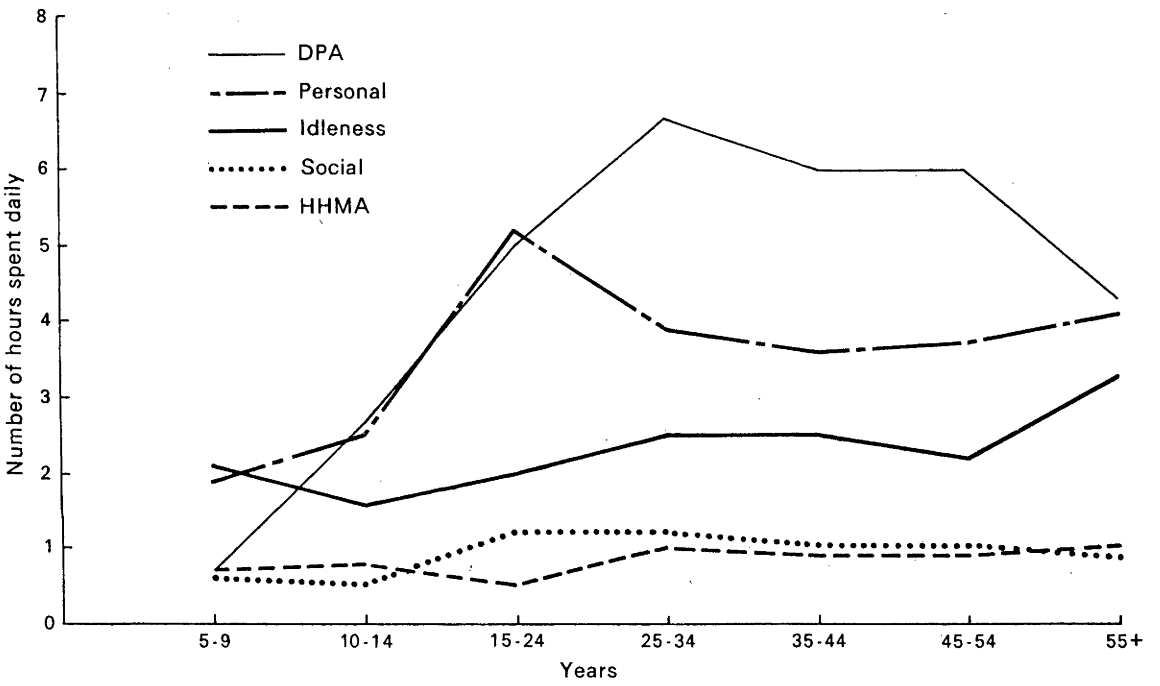
8) PLAYING: time spent in playing games and sports.

9) SOCIAL NEEDS: visiting friends and relations (both within and outside the village), attending marriages, funerals and such other functions and attending various meetings.

10) IDLENESS: sleeping during daytime, gossiping and practically doing nothing.

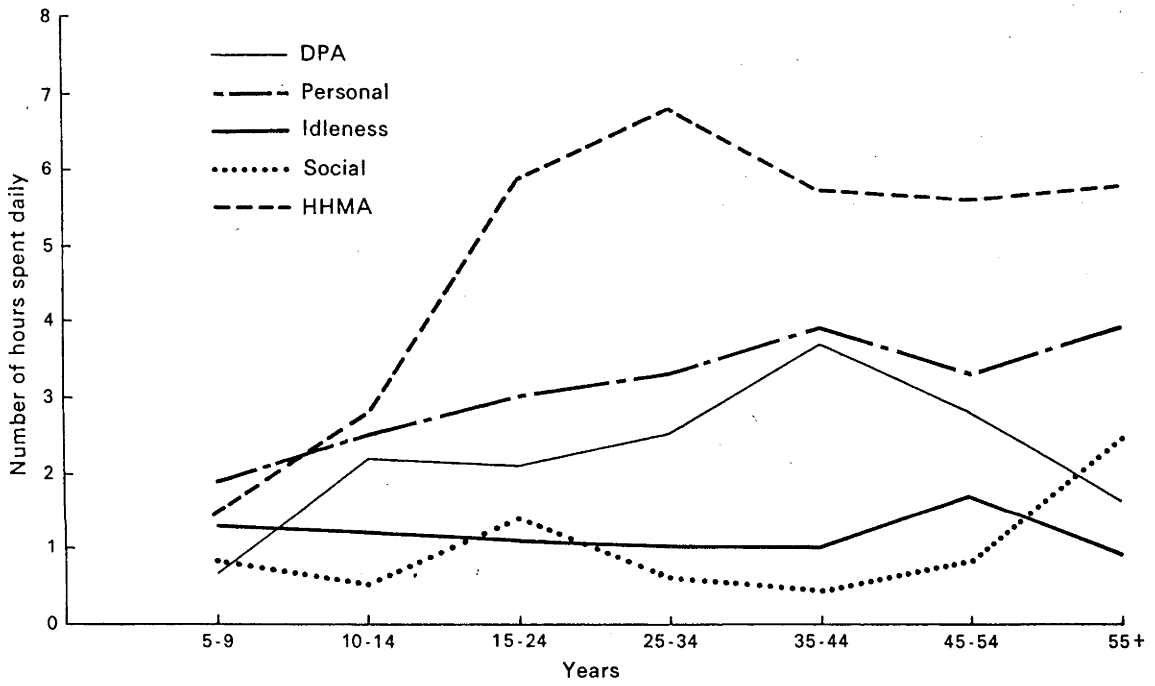
Appendix III

FIGURE 1 : AVERAGE NUMBER OF HOURS SPENT DAILY ON VARIOUS ACTIVITIES BY MALES BY AGE GROUPS



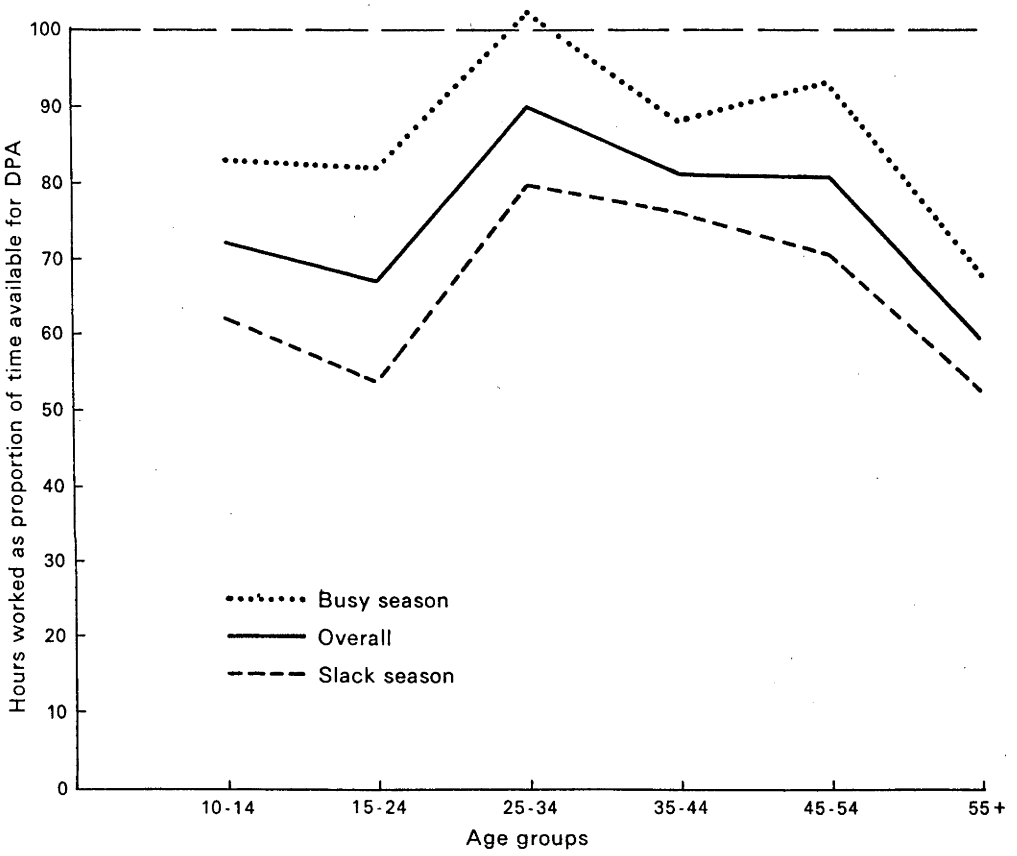
Appendix III

FIGURE 2: AVERAGE NUMBER OF HOURS SPENT DAILY ON VARIOUS ACTIVITIES BY FEMALES BY AGE-GROUPS



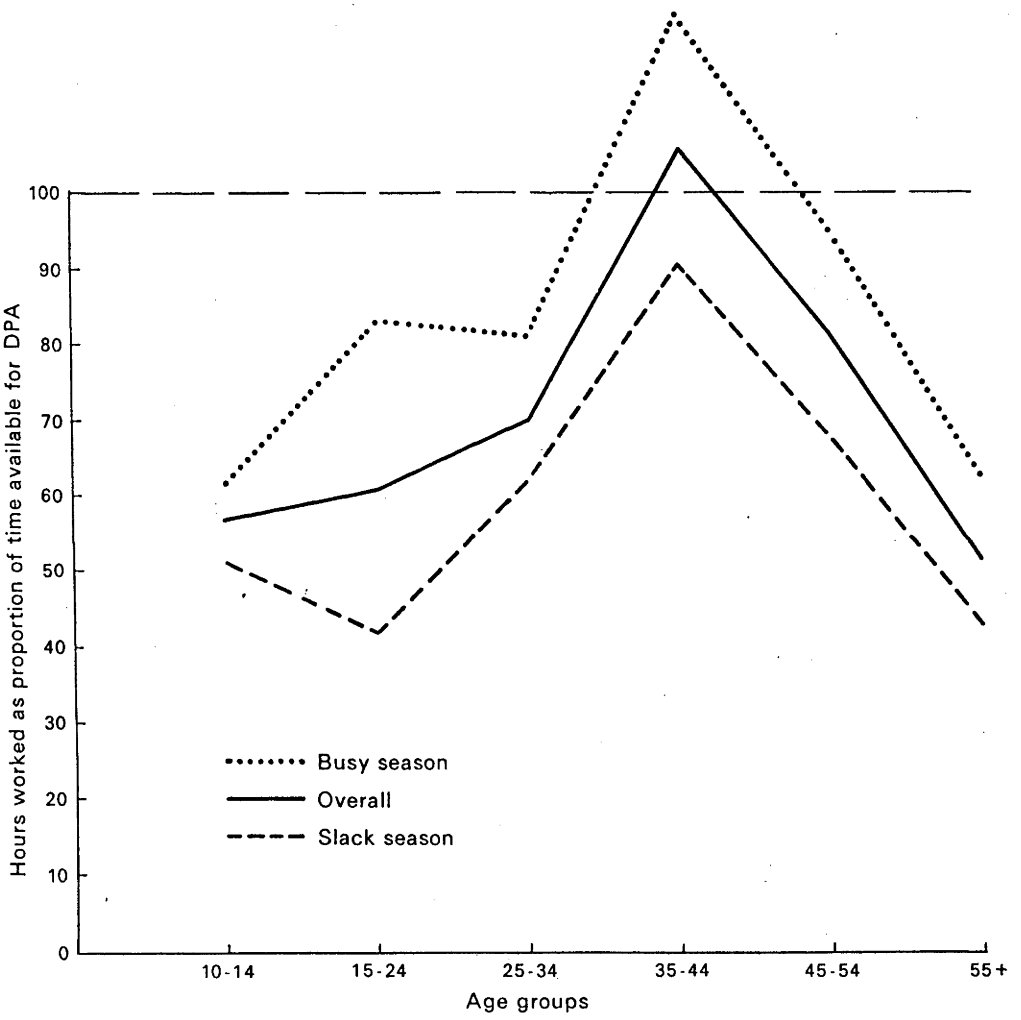
Appendix III

FIGURE 3 : HOURS WORKED AS PROPORTION OF TIME AVAILABLE FOR DPA (MALES)



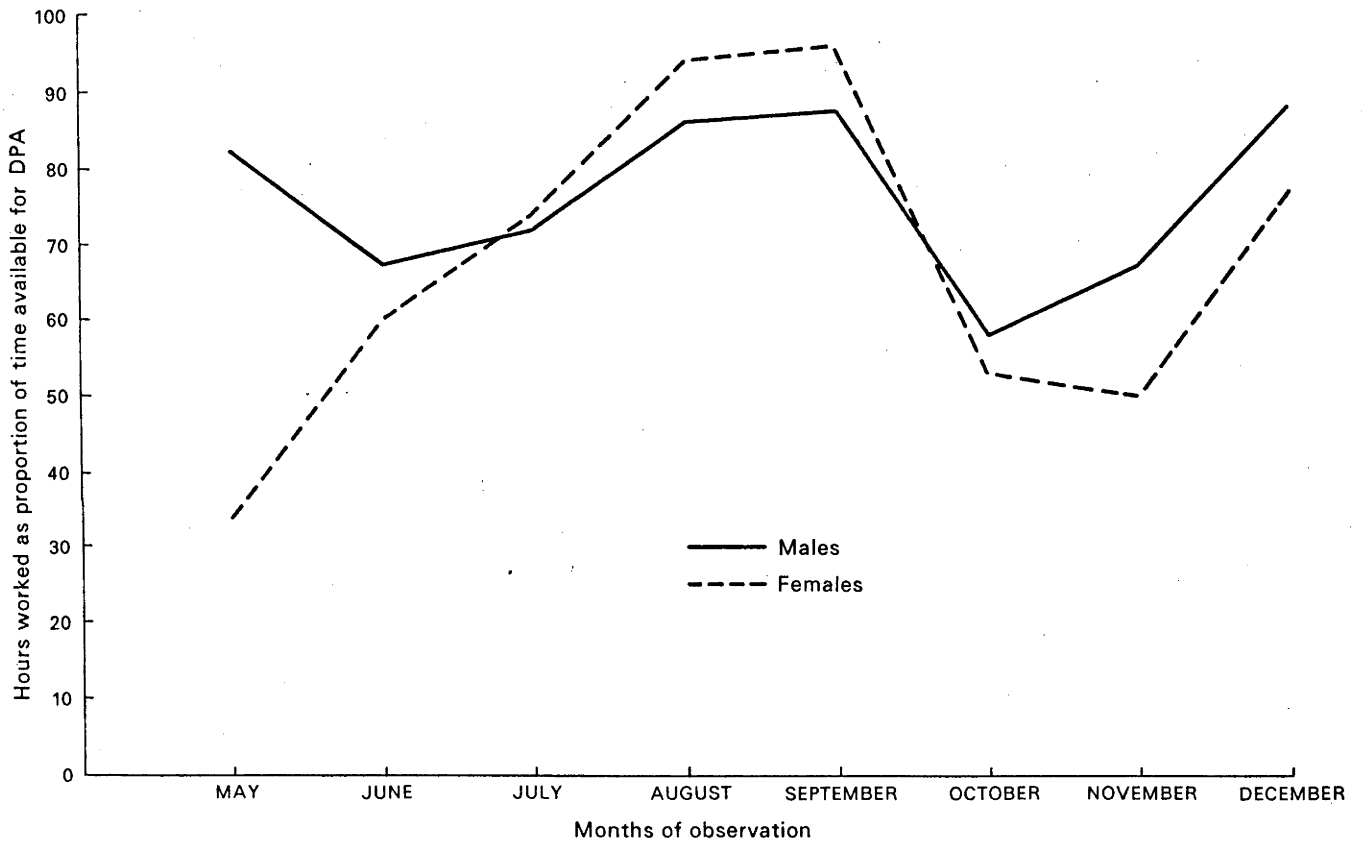
Appendix III

FIGURE 4 : HOURS WORKED AS PROPORTION OF TIME AVAILABLE FOR DPA (FEMALES)



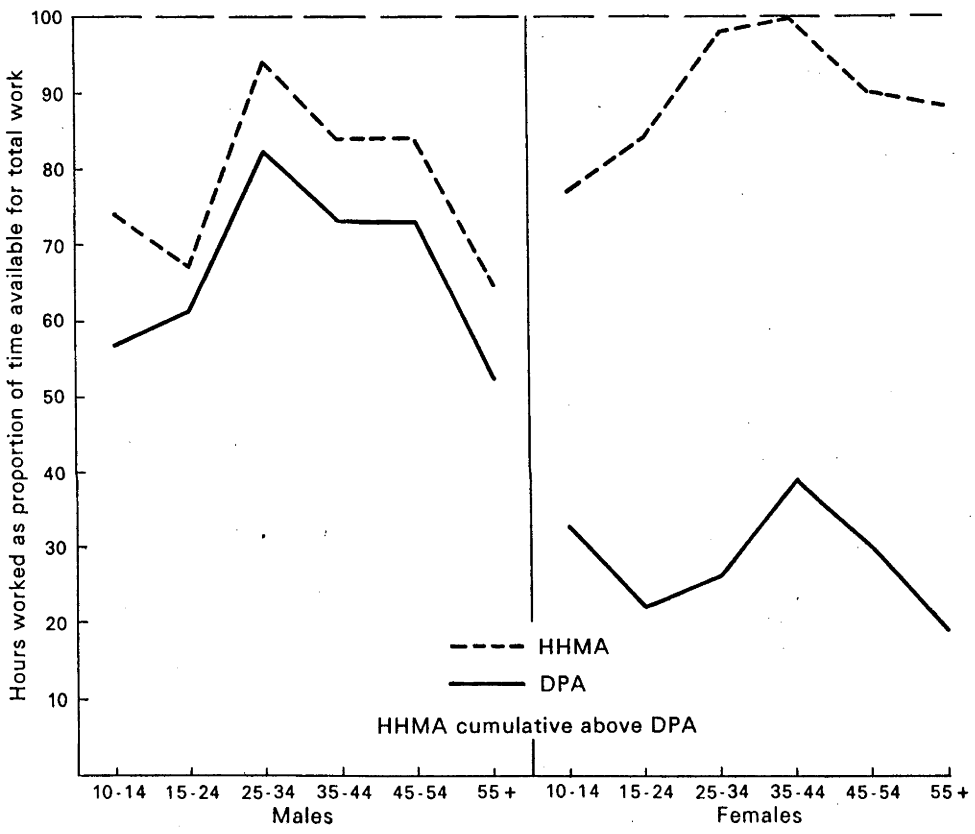
Appendix III

FIGURE 5 : HOURS WORKED AS PROPORTION OF TIME AVAILABLE FOR DPA BY MONTHS OF OBSERVATION



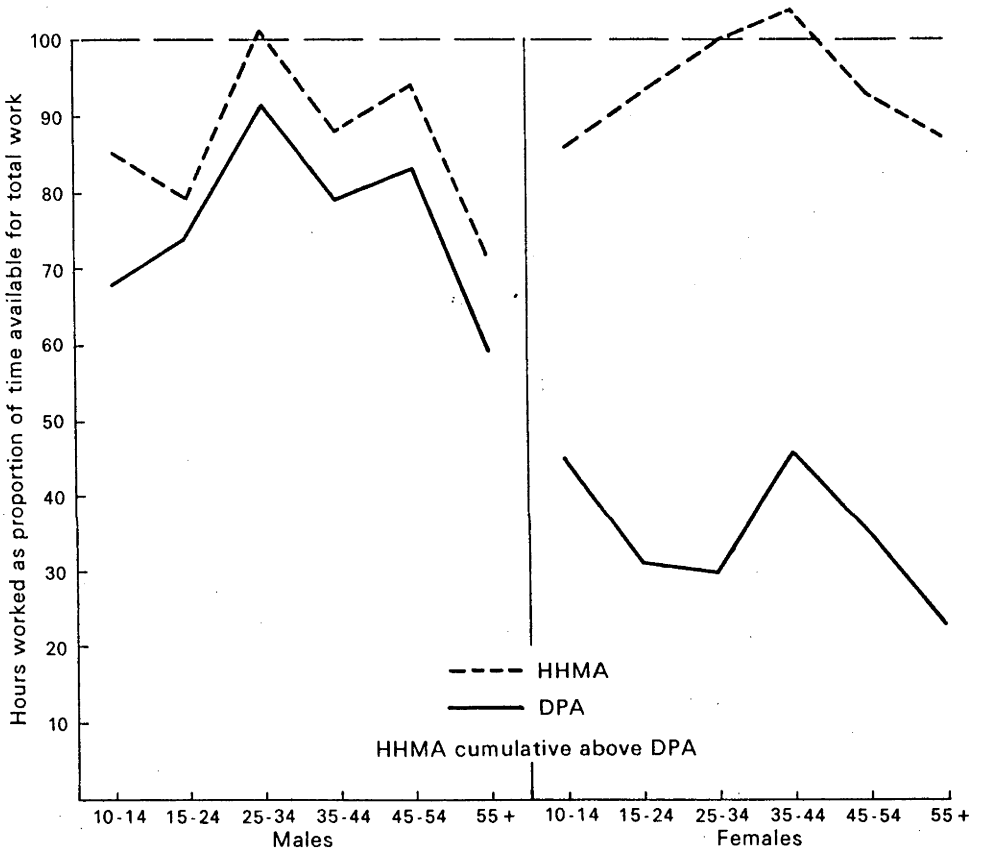
Appendix III

FIGURE 6 : HOURS WORKED AS PROPORTION OF TIME AVAILABLE FOR TOTAL WORK DIVIDED BETWEEN DPA AND HHMA (ENTIRE PERIOD OF OBSERVATION)



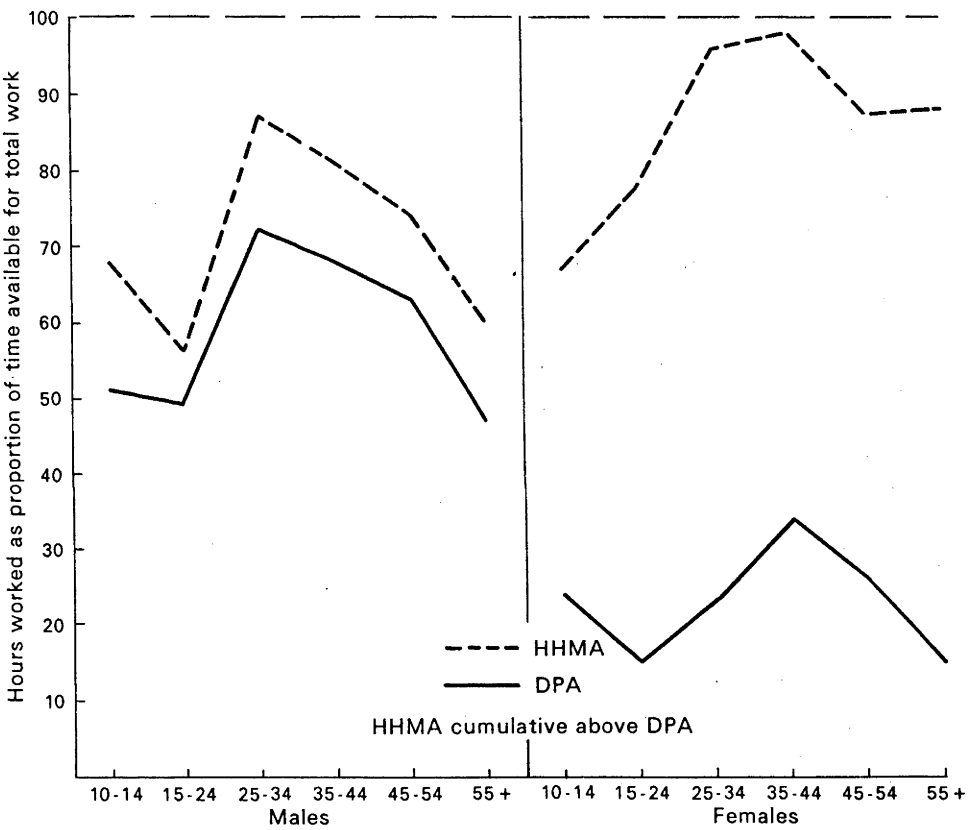
Appendix III

FIGURE 7 : HOURS WORKED AS PROPORTION OF TIME AVAILABLE FOR TOTAL WORK DIVIDED BETWEEN DPA AND HHMA (BUSY SEASON)



Appendix III

FIGURE 8 : HOURS WORKED AS PROPORTION OF TIME AVAILABLE FOR TOTAL WORK DIVIDED BETWEEN DPA AND HHMA (SLACK SEASON)



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SCHEDULE NO. 1

CENSUS OF HOUSEHOLD

Household Number ☐☐☐ Date of filling __/__/__

Name of House _____

Name of Respondent _____ Name of Investigator _____

Household Member Number	Name of Head of Household & others living in the household	Relationship to Head of Household	Religion	Sex	Age	Marital status	Educational status	Physical or mental disability	In case of Ever Married Women		
									Duration of married life	No.of children born alive	No.of children surviving
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

SIZE OF CULTIVABLE LAND AREA				Are farming operations solely carried out by members of household or do you require outside help, and if so at what time?	In what way is outside help obtained?	Was the last cropping season, more or less, average of the other cropping seasons?	What crops did you grow last cropping season?				Did you sell any part of your produce?
Own land	Land Rented In	Land Rented Out	Net Cultivated Land Area				Name of crops	Land area devoted to each crop grown	Total yield (in Maunds) per each crop	Yield per acre (in Maunds) per each crop	
(13)				(14)	(15)	(16)	(17)				(18)

If yes to Q.18, what proportion of your produce did you sell?		Did you and members of your household eat two rice meals daily during the last twelve months?	If no to Q.20, which months during the last twelve months did you and members of your household have no/one rice meal?		During the months when you and members of your household did not have two rice meals a day did you have enough to eat, or did you go hungry?	Which months did you go hungry?	What is the ownership of your house?	What is the condition of your housing?
Name of crops	Proportion sold		Months having one rice meal	Months having no rice meal				
(19)		(20)	(21)		(22)	(23)	(24)	(25)

(26) Do you have any of these? If yes, indicate the number you have.

(a) Cow ☐☐
(b) Bull ☐☐
(c) Goat ☐☐
(d) Chicken ☐☐
(e) Duck ☐☐
(f) Plough ☐☐
(g) Bicycle ☐☐
(h) Radio ☐☐
(i) Rickshaw ☐☐
(j) Sewing machine ☐☐
(k) Chair ☐☐
(l) Table ☐☐
(m) Cot ☐☐

SCHEDULE NO. 2

CENSUS QUESTIONNAIRE ON LABOUR FORCE

(a) Reference period of one year, and
(b) Reference period of one week.

Household Number ☐☐☐

Name of respondent _____

Name of Investigator _____

Date of filling __/__/__

Household Member Number	Were you or he/she (on whose behalf the respondent was giving particulars) working for profit or earning wage or salary or helping any member of your family on farm/business or looking for work during the last one year/one week?	What was your or his/her main occupation	What was your or his/her status?	Did you have any additional occupation besides main occupation? If so, what was that?
(1)	(2)	(3)	(4)	(5)

SCHEDULE NO. 3

LABOUR UTILIZATION SURVEY

Household Number | | | |

Name of Investigator _____

Name of Respondent _____

Date of filling / /

PART (A) - WORKERS [Those aged ten years and above who worked for at least seven hours during the reference period]

Household Member Number	INSIDE FAMILY FARM OR BUSINESS				OUTSIDE FAMILY FARM OR BUSINESS				TOTAL NUMBER OF HOURS WORKED LAST WEEK
	List type of activity/ activities you or he/she was engaged the last one week on family farm or business	List number of hours worked in each activity	Total number of hours worked inside family farm or business	Income during the last week from inside family farm/ business	List type of activity/ activities you or he/she was engaged in during the last one week outside family farm or business	List number of hours worked in each activity	Total number of hours worked outside family farm or business	Income during the last week from outside family farm/ business	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Household Member Number	Total income during the last week	Did you want more work last week?	If yes to Q.12 was more work available during last week?	Do you prefer to work inside family farm/ business or outside?
	(11)	(12)	(13)	(14)

continued SCHEDULE NO. 3

PART (B) - NON-WORKERS [Those aged ten years and above who had not worked at least seven hours during the last week]

Household Member Number	Present status	Did you work during the last cropping season?	IF YES, to Q.3				Will you work, if work were available?	IF YES, to Q.8	
			Number of hours worked during planting season	Number of hours worked during harvesting season	Did you work inside family farm/ business or outside during planting season?	Did you work inside family farm/ business or outside during harvesting season?		What type of activities would you like to get yourself engaged in?	What sort of wage/ salary would you like to work for?
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

SCHEDULE NO. 4

VALUE OF CHILDREN SURVEY (VOC)

Household Number ☐☐☐ Name of Investigator _____

Name of respondent _____(M/F) Date of filling __/__/__

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1. What is the best number of children to have? ☐☐

2. In other words, how many boys and how many girls?

   Boys ☐☐ Girls ☐☐

3. If you have six children, how many sons and how many daughters would you like to have?

   Sons ☐☐ Daughters ☐☐

4. Is it important to have some boys?

5. Why is it important to have boys?

6. Is it important to have some daughters?

7. Why is it important to have some daughters?

8. How many sons and daughters have you?

   Sons ☐☐ Daughters ☐☐

9. Is there a chance that you will be having a child in the next twelve months?

10. If yes or up to God to Q.9, what is good about having a/another child in the next twelve months?

11. If yes or up to God to Q.9, what is bad about having a/another child in the next twelve months?

12. What is good about having many children?

13. What do you think is the maximum number of children to have? ☐☐

14. What is good about having few children?

15. What do you think is the minimum number of children to have? ☐☐

16. Who is better off: a) a man who has ten children none of whom go to school or b) a man with four children all of whom go to school? And, why?

VALUE OF CHILDREN SURVEY (continued)

17. If a friend of yours in this village decided to have only two children, do you think it was wise? And, why?

18. Do you feel sorry for a man with no sons? And, why?

19. If a person has a small piece of land (less than half an acre), is it useful for him to have a large number of children? And, why?

20. Is it still valuable for a landless person to have a large number of children? And, why?

21. Which would you choose of the following?

a) A pair of bullocks, ☐
b) Radio,
c) New clothes,
d) Buy some new land,
e) A new house,
f) Another child, or
g) More education for your children.

22. If you were offered seeds, fertilizers and pesticides free for one year on condition that you put off having another child for three years, would you accept the offer?

23. If the government decided to pay for the educational costs of your children up to S.S.C. level (equivalent of Matriculation) but only if you agree to have a maximum of four children would you accept the offer?

24. Who is more spent on by you: school-going children or children of the same age but not going to school?

25. Who is more spent on: sons or daughters of the same age?

26. If you had the following number of children, how difficult would it be for you to maintain their expenses?

	Number of Children	Fairly Easy to Maintain	Somewhat Difficult to Maintain	Very Difficult to Maintain
a)	One child			
b)	Two children			
c)	Three "			
d)	Four "			
e)	Five "			
f)	Six "			
g)	Seven "			
h)	Eight or more "			

27. What are the most and second most expensive items on children?

Most expensive _____

Second most expensive _____

VALUE OF CHILDREN SURVEY (continued)

28. At what age does a child cost the most? [ ][ ]

29. When parents are old, do they require their own grown-up children to do hard physical work for them or will other people help just as well?

30. At what age do your children begin productive work?

Sons [ ][ ] Daughters [ ][ ]

31. List three good things sons can do for their parents.

a)
b)
c)

32. List three good things daughters can do for their parents.

a)
b)
c)

33. When you are old, who do you expect would meet most of your needs?

a) Sons,
b) Daughters, [ ]
c) Both sons and daughters,
d) Relations and friends.
e) Others

34. Who does more productive work: school-going children or children not going to school?

35. Who does more productive work: a boy or a girl (of ten years of age)?

36. What is the most common type of activity of children of these age-groups?

School Attendance	BOYS			GIRLS		
	5-7yr.	8-10yr.	11-14yr.	5-7yr.	8-10yr.	11-14yr.
1. Going to school						
2. Not going to school						

37. At what age does a child who has been to school earn or produce enough to make up for the costs of maintaining his/her expenses?

VALUE OF CHILDREN SURVEY (continued)

38. At what age does a child who has not been to school earn or produce enough to make up for the costs of maintaining his/her expenses?

39. Do you think that the money spent on children is more or less than their earnings or work input?

School Attendance	BOYS			GIRLS		
	5-7yr.	8-10yr.	11-14yr.	5-7yr.	8-10yr.	11-14yr.
1. Going to school						
2. Not going to school						

40. How many of your children gave you real assistance when they grew up, but before leaving home?

41. How many of your children gave you real help when they grew up, but after leaving home?

42. How many of your children do you expect would give you real assistance when they grow up, before leaving home?

43. How many of your children do you expect would give you real assistance when they grow up after leaving home?

44. What kind of economic or practical help do you expect from your children, either when they are growing up or have already become adults?

45. Do you think that the work contribution of a child aged 8-10 years in a household having other older children the same as that of another child of the same age in a household having no other older children?

If yes, why?
If no, what are the differences?

46. Do children, especially young ones, affect the work pattern of household members, especially that of mothers?

47. Do children stop you from doing something you want to do?

48. If yes to Q.47, what do children prevent you from doing?

49. Do your children stop going to school during peak periods of agricultural activities?

If yes, for how many days?

Transplanting Season	Harvesting Season

50. Do children cause you mental worries or anxieties?

VALUE OF CHILDREN SURVEY (continued)

51. Does a son or a daughter cause you more worry?

52. What causes the most worry and tension to parents in respect of upbringing of children?

53. If the average farmer in this village has four sons, will they all get work on family farm or business, or will some have to look for work elsewhere?

54. Do you think it is good for your children to leave home to look for work elsewhere?

55. Are you very anxious for the education of your children?

56. What sort of educational level do you wish your children to have?

a) None
b) Religious
c) Primary
d) Secondary
e) College/university

Sons	Daughters

57. Considering your problems, how far do you expect to have your children educated?

a) None
b) Religious
c) Primary
d) Secondary
e) College/university

Sons	Daughters

58. If you were able to send only one child to school, whom would you send and why?

59. Do you think that if your children read up to S.S.C. level, this will help them to get better jobs?

60. Do you think that if your children read up to S.S.C. level, would this promote the social and economic condition (status) of your family?

61. Do you agree with the following statements:

(a) A family without children is no family (i.e. it is not a complete family). ☐

(b) The real dead are those who die without descendants (i.e. without children). ☐

(c) Children are more trouble than they are worth. ☐

(d) Small children save adults from menial tasks and help at home. ☐

(e) Labour provided by children mainly frees other older members of the household for more productive work. ☐

(f) The real financial worry about children is schooling. ☐

(g) It is best if the first child is a daughter. ☐

VALUE OF CHILDREN SURVEY (continued)

(h) The more children one has, the richer one becomes. ☐

(i) The best form of investment on children is on their education. ☐

(j) Children are wealth. ☐

(k) A man with many grown-up children has a lot of power and prestige in society and is surely happy. ☐

(l) Too many children bring about chaos and disorder. ☐

(m) Sons are really important when husband is no more alive. ☐

(n) It is bad to have all sons as it is bad to have all daughters. ☐

(o) Girls add economic burden to the family at the time of marriage. ☐

(p) A woman with many children has to work harder than a woman with few children. ☐

(q) Those women doing hard work, such as agricultural work, handicraft production, etc., who have many children find life very difficult. ☐

(r) Children are important because of the help and support they give to parents, when they are old, sick or under crisis. ☐

(s) Children are sources of wealth. ☐

(t) Today having a large family means too many responsibilities. ☐

(u) It is best if the first child is a son. ☐

(v) The more children one has, the poorer one is. ☐

(w) A man with many children is blessed. ☐

(x) A man should have only the number of children he can afford or maintain. ☐

(y) Getting ahead in life is mostly a matter of luck. ☐

(z) Before having a child a woman should consider whether it would interfere with her work. ☐

(zi) Children use up wealth. ☐

62. Who have the most children?
   (a) Better educated people or less educated people, ☐
   (b) Rich or poor people, ☐
   (c) People living in big towns and cities or those living in villages, ☐ and
   (d) Women who take up jobs outside the home or housewives at home. ☐

DAILY RECORDING OF THE ACTIVITIES OF MEMBERS SET ☐ Name of respondent _____ Date / / 1976

AGED 5 YEARS AND ABOVE OF THE HOUSEHOLD (TIME-BUDGET STUDY) H H No. ☐☐☐ Name of interviewer _____ Week _____

Type of Activities	H H MEMBERS Indicate Inside Family Farm/ Business or Outside	EXCHANGE LABOUR IN (BADLI)	OUTSIDE LABOUR IN	UNPAID OUTSIDE LABOUR IN
A. DIRECTLY PRODUCTIVE ACTIVITIES				
1. Ploughing & harrowing				
2. Nursery work				
3. Transplanting				
4. Manuring & Fertilizing				
5. Weeding				
6. Spraying pesticides				
7. Manual irrigation				
8. Harvesting				
9. Gardening & growing vegetables				
10. Marketing				
11. Maintenance & repair on farm				
12. Threshing				
13. Boiling of grain				
14. Drying of grain				
15. Husking				
16. Scaring birds				
17. Taking food to field				
18. Bringing crops from field				

continued

Type of Activities	H H MEMBERS Indicate Inside Family Farm/ Business or Outside	EXCHANGE LABOUR IN (BADLI)	OUTSIDE LABOUR IN	UNPAID OUTSIDE LABOUR IN
19. Fishing				
20. Milking cows				
21. Tending animals				
22. Drying straw etc.				
23. Transportations				
24. Shop/Office				
25. Hawking				
26. Spinning yarn				
27. Handicraft				
28. Weaving fishing nets				
29. Teaching at school/Madrasha				
30. Tailoring				
31. Haircutting				
32. Repairing & building houses				
33. Earth digging				
34. Teaching at home				
35. Carrying goods to the market				
36. Performing religious duties for others				
37. Winnowing after threshing				
38. Winnowing after drying				
39. Winnowing after husking				
40. Retting jute				

continued

Type of Activities	H H MEMBERS Indicate Inside Family Farm/ Business or Outside	EXCHANGE LABOUR IN (BADLI)	OUTSIDE LABOUR IN	UNPAID OUTSIDE LABOUR IN
41. Separating jute fibre				
42. Grinding sugar-cane				
43. Looking after crops				
B. OTHER ACTIVITIES				
44. Maintenance & repair at home				
45. Food preparation & cooking				
46. Washing and cleaning				
47. Child care				
48. Marketing for H H consumption				
49. Bringing water				
50. Collecting firewood				
51. Studying				
52. Playing				
53. Gossiping				
54. Praying				
55. Visiting friends & relations				
56. Attending functions & meetings				
57. Sleeping during day time				
58. Mid-day rest				
59. Idleness				
60. Errand				
61. Attending patients				

continued

Type of Activities	H H MEMBERS Indicate Inside Family Farm/ Business or Outside	EXCHANGE LABOUR IN (BADLI)	OUTSIDE LABOUR IN	UNPAID OUTSIDE LABOUR IN
62. Sewing/knitting				
63. Swimming/bathing				
64. Eating				
65. Others (specify)				

DIRECTLY PRODUCTIVE ACTIVITIES INTERRUPTED, DUE TO:

1. Rain				
2. Sickness				
3. Festival				
4. Others (specify)				