

**HEALTH AND DEMOGRAPHIC SURVEILLANCE
SYSTEM–MATLAB**

Volume Thirty Eight

2005 SOCIO-ECONOMIC CENSUS

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SUMMARY

This report presents results of the 2005 Socio-economic Census carried out in Matlab, and show results of the socio-economic changes that has taken place in the Health and Demographic Surveillance System (HDSS) area during the 31 years from 1974 to 2005. It shows that population growth has slowed down in recent years with a rapid slowed down trend in ICDDR, B area followed by in the Government services area. This decline in growth has affected the age structure and consequently the dependency ratios. The dependency ratio declined from 101 to 66 with a remarkable decline in the children group during 1974-2005. In addition, the different dependency ratios between ICDDR, B and Government services areas shown during 1993 and 1996 census has largely been reduced in 2005.

Proportion having at least one year of schooling has increased to 70 percent in 2005 and the proportion that received high school education has also increased. The male: female difference in education has remarkably narrowed down. Analysis also suggests that equal number of boys and girls and in some age groups more girls than boys are attending schools.

In terms of possession of farmland, 70 percent of households were either landless or functionally landless (land<0.50 acres). As a result, the pattern of employment has shifted from predominantly farming to concentrate more in agricultural labour or other daily labour and business. Most of the households in this area have now adopted wide-ranging occupations for their earning. Only 15 percent of the households reported to have income from one source only. However, employment pattern of the household heads were almost similar in both areas.

There has been improvement in the use of construction materials for main dwelling. Ninety nine percent of the households use corrugated iron sheet for roof and 66 percent of the households use corrugated iron sheet for the wall. Improvement has also been evident in the possession of household articles. But contrary to expectation, the use of sanitary latrine slightly decreased (4 % point) over the last 9 years in the Government service area. Drinking tube-well water is nearly universal (90%) but 38 percent of the households drink arsenic contaminated water or water from a tube-well not tested against arsenic contamination. Use of arsenic contaminated water for drinking has been found 12 percentage points higher in the ICDDR,B area than Government service area. Only 4 percent of the households use pond sand or river sand filter (PSR/RSR), three pitchers or other water filtering process for drinking water.

Micro-credit and Non-Government Organizations have established a wide network through out the Matlab HDSS area. Forty nine percent of the households have NGO memberships. Ten percent of the total households of HDSS area have shortage of food at some point of time. Of them 46 percent have 1-3 month's food shortage and about 22 percent have yearlong food shortage. Half of the food shortage households fall within the poorest quintile of the society.

CHAPTER ONE

INTRODUCTION

1.1 Background of Socio-economic Census, 2005

The International Centre for Diarrhoeal Disease Research, Bangladesh has been maintaining a field research station at Matlab since 1963. Matlab is located about 55 kilometres southeast of the country's capital, Dhaka (Figure 1). The Matlab area was initially selected to test a cholera vaccine. The Demographic Surveillance System (DSS) started in Matlab later in 1966. The surveillance system consists of two types of operations: (1) continuous registration of vital events (pregnancy outcome, death, migration (in- and out-), marital union and dissolution, inter-village movement, household division, and household head change (when heads died or migrated out or household divided); (2) periodic censuses and socio-economic surveys.

At the onset, 132 villages were brought under the surveillance system, and 101 villages were added to the system in 1968. In the 1974 census, population of the entire surveillance area was 276,984 in 233 villages. A major modification in the field structure and programme activities was undertaken in October 1977 with a reduction of 84 villages (120 thousand population) from the surveillance area. The new surveillance area since October 1978 consisted of 149 villages with 173,443 population. The Family Planning and Health Services Programme was then launched in 70 villages (88,925 population), and the remaining 79 villages (84,518 population) were considered the Comparison area (Figure 2). The 1982 census covered the population of 149 villages. It reduced to 142 villages in 1993. In 1993, seven villages of the Government service area totally disappeared due to river erosion. However, most of these villagers have resettled in the nearby villages of the DSS area.

The recording of all vital events did not start at the same time. In fact, pregnancy outcome, death, and migration (in- and out-) have been recorded since 1966 while enumeration of marital union and dissolution started in 1975. The recording of the inter-village movements has been continuing since the 1982 census while recording of household division and changes in the household head began after the 1993 census. With the introduction of these three events DSS was prepared with all relevant information to update the population without field visit. After 1993 Census, several new initiatives were undertaken in DSS data collection system.

Figure 1: Map of Bangladesh showing Matlab study area

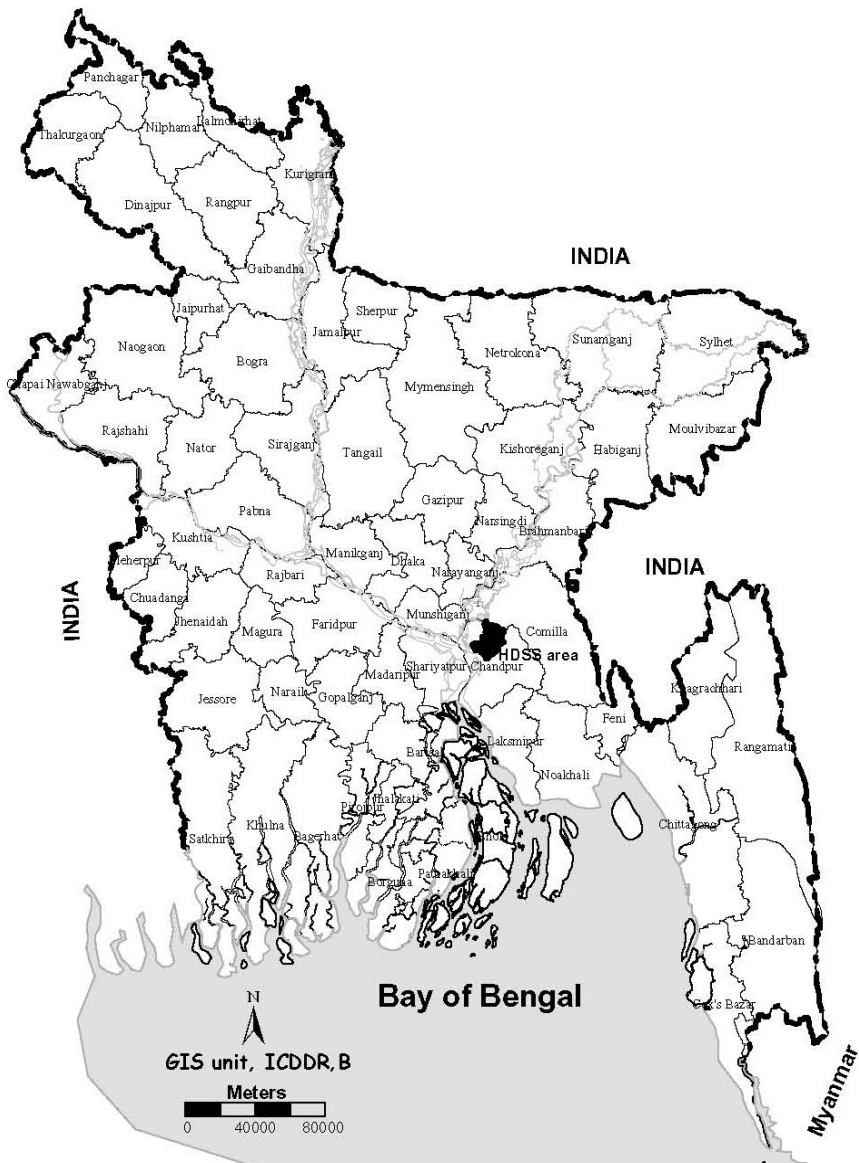
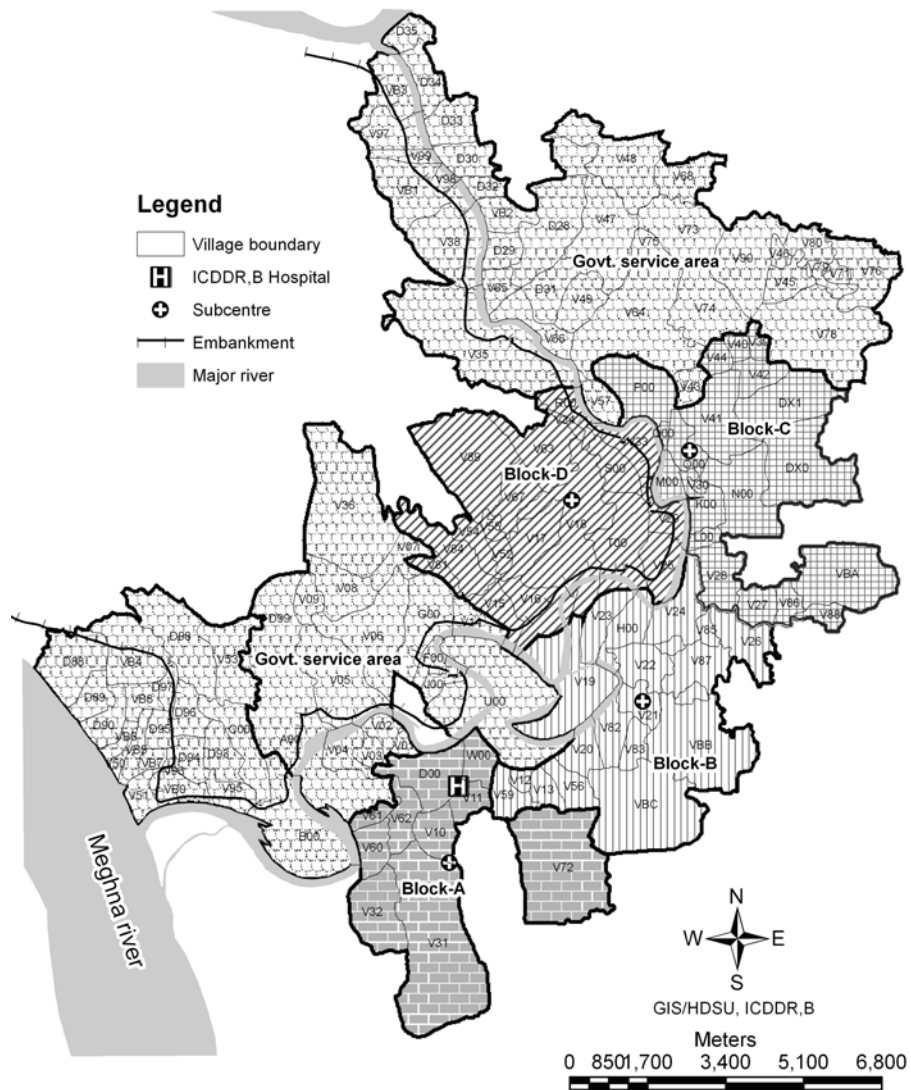


Figure 2: Map showing villages of HDSS area



These include reduction of DSS working units from 110 to 91, abolition of DSS data collection by Health Research Assistant and assignment of the Community Health Researcher Workers (CHRWs) for data collection. With these changes, data collection started on reproductive health and health care information of the women and ARI and diarrhoea morbidity of under five children extended to the Comparison area in February 2000. Since then the Demographic Surveillance System (DSS) has been termed as the Health and Demographic Surveillance System (HDSS) and the Comparison area termed as Government service area, while the MCH-FP area has now become the ICDDR, B service area.

Nine censuses/socio-economic surveys have been undertaken in the HDSS area since introduction of the surveillance in 1966. The population censuses of 1966, 1968, 1970, 1993 and 2000 did not collect socio-economic data, but the socio-economic censuses of 1974, 1982, 1996 and 2005 did. The first three-population censuses covered part of the population, while the other population and socio-economic censuses covered the entire population of the surveillance area. In 2000, an electronic census was undertaken using the information routinely collected from the field.

1.2 Objectives of the Study

Universally, the rationale of socio-economic data collection is to ensure up-to-date and important social, economic and other time relevant information to researchers and policy planners that help in policy decision to improve people's social and economic conditions. Simple levels and trends of demographic phenomenon (fertility, mortality, migration, marriage or contraception) could not be predicted in absence of the knowledge of socio-economic status. Considering the importance of socio-economic data in health and demographic research and policy planning, almost all censuses and surveys around the world include a few of such variables. However, these data are usually not collected through a demographic surveillance system. In situations where the population is under demographic surveillance, socio-economic data are usually collected at a certain interval.

In Matlab, the last detailed socio-economic census in the HDSS area was undertaken in 1996. These socio-economic data have been used in many studies, particularly those that make linkages with HDSS and MCH-FP data. However, with rapid socio-economic changes, data collected in 1996 have become out-dated for studies that make use of the most recent HDSS data. Moreover, the Millennium Development Goal (MDG) of eradicating poverty and hunger requires new data for the assessment of the state of poverty and hunger of the rural population. Keeping the above perspectives in view, the objective of the 2005 socio-economic census was to collect data on socio-economic condition as well as poverty and hunger status of Matlab HDSS area.

1.3 Organization of the Report

The report is divided into six chapters including this introduction. The second chapter discusses the methods and procedures, while the main reporting starts from Chapter 3. Chapter 3 will discuss the change in population and household structure including dependency ratio. Chapter 4 deals with education and employment, while chapter 5 deals with household socio-economic status, Chapter 6 summarizes the results and draws conclusions.

CHAPTER TWO

METHODS AND PROCEDURES

2.1 Database Update for the Census

In Matlab HDSS, the census procedure is somewhat different from usual census operation. During the census operation, field workers carried computer printouts with latest information of the population available in the database along with questionnaires for collecting or updating data on individual and households. Facilitating the census enumerators with computer printouts was made possible through HDSS database, which is continuously updated each year by all vital events since 1982 (for more details see Nahar, L. 1998). These printouts were used to update the existing information and collect additional information on individual and households. In fact, use of computer printouts at the time of census has increased efficiency of the fieldworkers as well as the data processing system.

To prepare an updated computer printout for the 2005 socio-economic survey (SES-2005), the HDSS database was updated as close to the day of the census as possible. However, complete updating was not possible because of the time required for processing the latest HDSS events. The HDSS database had updated information up to the end of 2004. An updated census file for SES-2005 was created in the middle of 2005 from the database based on December 2004 status. Separate printouts of all the households were then produced for each village. These census printouts were sent to respective CHRWs. They updated all vital events, migrations and marriages from January 2005 to August 2005 from the field census volume.¹ For example, the deaths and out-migrations were deleted and births and in-migrations were included in the census printouts. The location of individuals was changed, if there were inter-village movements; and marital status was changed if there were deaths or marital unions or dissolutions. The census printout provided some basic information (identification number, name, relationship to household head, age, sex, etc.) along with additional space to collect new information. The new information included education and occupation of the population, and type of clothes that all ever-married women wear.

2.2 Census Instruments

Two types of structured questionnaire were administered: individual-level (demographic data, education, occupation, woman's clothes) and household-level (sources of household income, possessions of household assets, construction materials used for roof, wall and floor of the main

¹Each CHRW has a book known as field census volume comprised of all the population of her area. CHRWs record the date and status of each of the individuals in this book during her monthly visits and thus have the latest vital information of the all individuals of her area. For example, if a person died or migrated out, she would record the date of death/migration against that individual and then report it in a separate form (death/migration form) for Matlab and Dhaka.

dwelling, possession of homestead and agricultural land, type of water use and latrine use). In addition, information on the membership of micro-credit societies and prevailing food shortage in the households throughout the year were also included in the questionnaire. These set of questionnaires (Appendices A.1 and A.2) were reviewed several times by the ICDDR,B expert group and pre-tested thoroughly before finalization.

2.3 Recruitment and Training of Field Workers

This is for the first time that Matlab HDSS used its own staff, especially Community Health Research Workers (CHRWs) for collection of socio-economic data. For enumeration, each area was divided into 30 enumeration zones. There were 30 enumeration teams, one for each zone and each zone had approximately a population of 7,500 persons and was assigned to an enumeration team. Each team consisted of two CHRWs. Fifteen Field Research Supervisors (FRSs), including two Field Research Officers (FROs) supervised the work of the CHRWs. One FRS supervised two teams a day; basically the FRS accompanied one team in the morning and the other in the afternoon, and continuously monitored the work of the CHRWs during the whole operation. However, when the FRS was confident enough on the work of CHRWs, they allowed a few CHRWs to work independently. Senior Field Research Officer (SFRO) and Senior Manager of the HDSS supervised the overall census enumeration in the field.

A two-tier training was organized for the CHRWs. At the first stage, Senior Manager, Matlab-HDSS, SFRO and the FROs provided training at the sub-centre level and distributed the draft questionnaire to them for reading at home. Later a three-day training programme was organized for CHRWs at the Matlab head office, where all Matlab HDSS staff (3 supervisors, 15 FRSs, 6 Coders/Data Entry Technicians, 2 Quality Control Assistants and 90 CHRWs) and few HDSS supervisory level staff from the Dhaka office were present. The training methods involved classroom lectures along with field visits

2.4 Field Procedure and Definitions

Before starting the fieldwork, each census team received updated computer printouts arranged by village and household number. Matlab office divided the work of the CHRWs into several convenient units and distributed the printouts to them. These printouts were assumed to be quite accurate, but can be incomplete or wrong. So, it was necessary to check the accuracy of the computer printouts by comparing with the Field Census Volumes before starting the fieldwork. Each day after fieldwork, each CHRW updated the computer printouts adding new births and in-migrants and deleted deaths and out-migrants on the basis of Field Census Volumes. In case of discrepancy, it was advised to examine such cases more carefully at the time of field visit.

For efficient data collection, the following procedures were followed. When a census team arrived at a *bari*, the CHRWs first collected the Family Visit Cards. Family Visit Cards of a few households are usually kept in one place. The CHRW asked the household head or his/her spouse or senior member of the household to come and provide information or she would go to the household where head or his/her spouse or senior member of the household could not come, then collected information on both computer printouts and household socio-economic questionnaires. In some cases where the head or his/her spouse or senior member of the household was absent, the team leader selected a responsible person (aged 20 years or more) from the same or nearby household to provide such information.

The following procedures were followed at the time of field visits:

- A roll call of the household members to ascertain whether the printouts were correct.
- Deletion of deaths and out-migrations that were shown on the printouts.
- Inclusion of births and in-migrations, which were not shown in the printouts.
- Delete wrongly-included and include wrongly excluded household members.
- Assignment of the new location and determination of the head and relationships of members to the head of the households for household division cases.
- Identification of new head and assignment of relationship to this new head, if the head had died or out-migrated or became disabled.

FRSs collected the completed questionnaires during their supervisory visit to the CHRW and submitted them to Matlab head office. At the end of each day, FRSs edited the collected questionnaires and if necessary sent them back to the CHRWs on the following day for correction. This process continued for the whole census period.

Definitions that were used in the census are summarized below:

Household: A household is defined as a group of persons living together and sharing meals from a common cooking pot.

Resident: A person residing in the surveillance area permanently or continuously for at least six months is considered to be a resident. A person who resides outside Matlab HDSS area but returns to his/her home in the HDSS area at least once a month and stays overnight is also considered a resident.

Bari: A cluster of households whose members are usually patrilineally related and who use a common courtyard.

2.5 Quality Control

The Matlab office coordinated the census-related works. Two FRAs of the Quality Control (QC) team visited one-day work of a CHRW at least once during the survey period and filled up similar questionnaires. A Senior Programmer compared the data and suggested measures to be taken, if any differences between data collected by CHRW and QC team was found. In addition, built-in checks were also operated during the survey. For example, the supervisor (FRS) while supervising the work of a CHRW randomly selected a household where FRS was absent when CHRW collected data independently and matched with the work of the CHRW and instantly corrected the CHRW, if he found any confusion regarding the information collected. Finally, the Senior Manager, Matlab-HDSS, 3 FROs, and 2 personnel from Dhaka office were part of the supervisory team. Each enumeration team was visited every alternate day either by the Matlab or the Dhaka staff, spending 2-3 hours with the census team to observe the interviews.

2.6 Data Processing

After completion of fieldwork in a village, the computer printouts along with the filled up socio-economic questionnaires were sent to Matlab Data Management Office. Questionnaires were mostly pre-coded, however, a few variables needed to be coded. Data Entry Technicians/Coders edited and coded the data before data entry. The computer printouts were used for updating the existing computer files and for inclusion of new births and in-migrations, while data on the socio-economic status were entered in a separate computer file. A computer programme was developed to detect inconsistencies in the data. Crosschecking and cross matching between two files (socio-economic and individual information files) were done and continued until there were no inconsistencies left.

CHAPTER THREE

POPULATION AND HOUSEHOLD CHARACTERISTICS

3.1 Introduction

This chapter provides information on population and household characteristics like population size and composition, sex ratio, dependency ratio, household size and household structure and its changes over time.

3.2 Population Size

Table 1 shows the distribution of the population by area and sex. According to the SES-2005, 224,762 individuals were counted in 142 villages of which 107,141 were males and 117,621 were females, yielding a sex ratio of 91:100. This ratio reflects a further shift in the sex ratio in the Matlab HDSS area compared to the previous censuses in 1996 and 1993 (Razzaque et al., 1998; Nahar et al., 1996). The sex ratio of the ICDDR,B area was found similar to that of the Government services area (91 vs. 92). The same table also demonstrates that the sex ratios of different Blocks of the ICDDR,B area were not same in 2005. Highest deficit in the sex ratio (of 88 males over 100 females) was found in Block A. The sex ratios of the Blocks B, C, and D were 89, 95 and 93 per 100 females respectively.

Table 1: Population by area, sex, and sex ratio, SES-2005

Area	Both sexes	Male	Female	Sex ratio
Both areas	224762	107141	117621	91.1
ICDDR,B area	112294	53470	58824	90.9
Block-A	34350	16075	18275	88.0
Block-B	30832	14552	16280	89.4
Block-C	24598	11989	12609	95.1
Block-D	22514	10854	11660	93.1
Government area	112468	53671	58797	91.3

3.3 Age and Sex Composition

The distribution of population by age and sex is shown in Table 2. The sex ratios were not the same in different age groups. Among the younger (0-14 years) and older (75 years and over) age groups, there were more males than females, but the opposite pattern holds in the middle (15-74 years) age group.

Table 2: Age and sex distribution of the population, SES-2005

Age (year)	Number			Sex ratio	Percent		
	Both sexes	Male	Female		Both sexes	Male	Female
0-4	27170	13781	13389	102.9	12.1	12.9	11.4
5-9	24802	12667	12135	104.4	11.0	11.8	10.3
10-14	24825	12529	12296	101.9	11.0	11.7	10.5
15-19	23971	11458	12513	91.6	10.7	10.7	10.6
20-24	17956	7881	10075	78.2	8.0	7.4	8.6
25-29	15383	6516	8867	73.5	6.8	6.1	7.5
30-34	13944	6167	7777	79.3	6.2	5.8	6.6
35-39	14505	6219	8286	75.1	6.5	5.8	7.0
40-44	14706	6868	7838	87.6	6.5	6.4	6.7
45-49	12096	6175	5921	104.3	5.4	5.8	5.0
50-54	8415	4152	4263	97.4	3.7	3.9	3.6
55-59	7200	3351	3849	87.1	3.2	3.1	3.3
60-64	6825	2984	3841	77.7	3.0	2.8	3.3
65-69	5207	2458	2749	89.4	2.3	2.3	2.3
70-74	3927	1934	1993	97.0	1.7	1.8	1.7
75-79	2193	1122	1071	104.8	1.0	1.0	0.9
80-84	1054	562	492	114.2	0.5	0.5	0.4
85+	583	316	267	118.4	0.3	0.3	0.2
Total	224762	107140	117622	91.1	100.0	100.0	100.0

When the sex ratio was computed by age, sex and area (Table 3), it reveals that the lowest sex ratio (that is deficit of males over females) appears in the age group 20-39 years of age. Variation in sex ratio is due to both social and biological factors. Under normal circumstances, more male babies were born than female ones. However, at the later ages, death and migration factors change the sex ratios. High male deficit was also found among the age group 25-34 years of age in 1996 census (Razzaque et al., 1998), which demonstrates a clear expansion of migration across broader age group with a tendency of younger age migration. The same table also reveals that with a few exceptions, the sex ratios in the ICDDR, B and Government services areas follow a similar pattern.

Table 3: Age and sex distribution of the population (%) by area, SES-2005

Age (year)	ICDDR,B area				Government area			
	Sex ratio	Both sexes	Male	Female	Sex ratio	Both sexes	Male	Female
0-4	101.0	12.0	12.7	6.0	104.9	12.2	13.0	11.4
5-9	101.6	10.8	11.4	5.4	107.1	11.3	12.2	10.4
10-14	101.6	10.5	11.1	5.2	102.2	11.6	12.3	11.0
15-19	91.8	10.2	10.2	5.3	91.4	11.2	11.2	11.1
20-24	75.9	8.0	7.2	4.5	80.6	8.0	7.5	8.5
25-29	74.5	7.1	6.3	4.0	72.4	6.6	5.8	7.4
30-34	79.5	6.5	6.0	3.6	79.0	5.9	5.5	6.3
35-39	75.4	6.7	6.0	3.8	74.7	6.2	5.6	6.8
40-44	88.5	6.8	6.7	3.6	86.7	6.3	6.1	6.4
45-49	107.7	5.5	6.0	2.6	100.9	5.3	5.6	5.0
50-54	100.0	3.9	4.1	1.9	94.7	3.6	3.7	3.6
55-59	88.7	3.2	3.2	1.7	85.4	3.2	3.1	3.3
60-64	79.9	3.1	2.9	1.7	75.4	3.0	2.7	3.3
65-69	91.9	2.3	2.3	1.2	87.0	2.3	2.3	2.4
70-74	101.4	1.7	1.8	0.9	93.1	1.8	1.8	1.8
75-79	108.6	1.0	1.1	0.5	100.9	1.0	1.0	0.9
80-84	104.0	0.5	0.5	0.2	127.4	0.4	0.5	0.4
85+	126.2	0.3	0.3	0.1	109.0	0.2	0.2	0.2
Total	90.9	112294	53470	58824	91.3	112467	53670	58797

3.4 Religion

Table 4 shows the distribution of population by religion and area. Composition of the population by religion is not same in the two areas; 84 percent were Muslims in the ICDDR, B area compared to 88 percent in the Government service area. The population with religion other than Islam and Hinduism was negligible.

Table 4: Population by religion and area, SES-2005

Religion	ICDDR,B area		Government area		Both areas	
	Number	Percent	Number	Percent	Number	Percent
Muslim	94478	84.1	102405	91.1	196883	87.6
Non-Muslim	17816	15.9	10063	8.9	27879	12.4
Total	112294	100.0	112468	100.0	224762	100.0

Table 5: Dependency ratios and aging index by area, SES-2005

Age (year)	ICDDR,B area	Government area	Both areas
0-14	54.7 (37392)	59.1 (39405)	56.9 (76797)
65+	9.5 (6523)	9.7 (6441)	9.6 (12944)
Total	64.2 (43915)	68.8 (45846)	66.5 (89761)
*Aging index (60+ yrs)	3.7 (9987)	4.0 (9802)	3.9 (19789)

Note: Number in brackets are the number of 'dependents' (0-14, 65 and more years old)

Dependency ratio is calculated with the formula: $100 P_x/P_{15-64}$ where p_x is the population in age group x

*Aging index is P_{0-14}/P_{60+}

3.5 Dependency Ratio

An index of economic burden of a population is measured through the dependency ratio. The dependency ratio was calculated as the number of 'dependents' (0-14, and 65+ more years old) compared to the number of active population (15-64 years of age). The dependency ratio was higher in the Government service area than in the ICDDR,B area: 68.8 and 64.2 respectively (Table 5). When the dependency ratios in the ICDDR,B and Government service areas were examined for young and old, it appears that the difference, as expected, is due to young age group with ratios 55 against 59 in the ICDDR,B and Government service areas respectively. Dependency ratio for older people is similar in both areas. However, Table 6 reflects that dependency ratio found in 2005 Census is lower than the dependency ratio reported in 1996 Census or 1982 Census (87.4 in 1982 or 74.7 in 1996 vs. 66.5 in 2005). This is mainly due to reduction of population among the younger age groups. The same table also demonstrates that the difference in dependency ratios between the two areas has also been reduced during this period. Aging index, a ratio of older people (60+ years) by young children (0-15 years), reveals that aging index was 3.7 and 4.0 in 2005 in the ICDDR,B and Government service areas, respectively. Table 6 shows a gradual decline of the aging index during 1982 to 2005.

Table 6: Dependency ratios and aging indexes in the previous two censuses, 1982 and 1996

Age (year)	ICDDR,B area		Government area		Both areas	
	1982	1996	1982	1996	1982	1996
0-14	79.1 (39,976)	60.9 (38,853)	81.0 (40,124)	72.7 (42,263)	80.0 (80,100)	66.5 (81,116)
65+	8.5 (4,275)	7.7 (4,908)	6.3 (3,112)	7.5 (4,379)	7.4 (7,387)	7.6 (9,287)
Total	87.5 (44,251)	68.6 (43,761)	87.3 (43,236)	80.3 (46,642)	87.4 (87,487)	74.7 (90,403)
Aging index	7.1	4.8	7.7	5.7	7.4	5.2
60+ yrs.	(5651)	(8065)	(5221)	(7412)	(10872)	(15477)

Note: Number in brackets are the number of 'dependents' (0-14 and 65+ more years old) Dependency ratio is calculated with the formula: $100 P_x/P_{15-64}$ where p_x is the population in age group x

Table 7: Distribution of households (%) by household type and sex of the head of household, SES-2005

Household type	Sex					
	Male	Percent	Female	Percent	Both sexes	Percent
Single-person	266	0.78	1440	11.48	1706	3.65
One-generation	1589	4.65	100	0.80	1689	3.62
Two-generation	19893	58.21	5820	46.40	25713	55.04
Three-generation	10144	29.69	3852	30.71	13996	29.96
Others	2280	6.67	1331	10.61	3611	7.73
Total	34172	100.00	12543	100.00	46715	100.00

3.6 Household Type and Size

Table 7 presents the overall household structure by sex and area. It shows that the total number of households in the SES-2005 was 46,716 in the whole HDSS area, where 34,172 (73%) were headed by males and 12,543 (27%) were headed by females. Most of the households fall within the two or three generation family. Eighty eight percent of the male-headed and 77 percent of the female-headed households fall within the categories of two and three generation families. However, most of the single person households are females (84%).

Table 8: Distribution of households (%) by household type and area, SES-2005

Household type	Area					
	ICDDR,B area	Percent	Government area	Percent	Both areas	Percent
Single-person	850	3.6	856	3.8	1706	3.7
One-generation	893	3.7	796	3.5	1689	3.6
Two-generation	13154	55.1	12559	55.0	25713	55.0
Three-generation	7149	29.9	6847	30.0	13996	30.0
Others	1848	7.7	1763	7.7	3611	7.7
Total	23894	100.0	22821	100.0	46715	100.0

Total households in the ICDDR, B and Government service areas were 23,894 and 22,821 respectively (Table 8). Household structure of the two areas is the same. Single person households were also similar in both the areas. Average household size was found smaller in SES-2005 than SES-1996 (Razzaque et al., 1998). As expected, Table 9 shows that average household size in the ICDDR,B area is smaller (4.7 per household) than Government service area (4.9 per household). This has also been reflected in two and three generation families in the two areas.

Table 9: Average household size by household type and area, SES-2005

Household type	ICDDR,B area			Government area		
	Number	Population	Household size	Number	Population	Household size
Single-person	850	850	1.00	856	856	1.00
One-generation	893	1808	2.02	796	1610	2.02
Two-generation	13154	56260	4.28	12559	56729	4.52
Three-generation	7149	42379	5.93	6847	42464	6.20
Others	1848	10997	5.95	1763	10809	6.13
Total	23894	112294	4.70	22821	112468	4.93

CHAPTER FOUR

EDUCATION AND EMPLOYMENT

4.1 Introduction

One of the major objectives of SES-2005 is to assess the level of education and type of employment in the Matlab HDSS area. The Government of Bangladesh has introduced several education interventions to increase the level of enrolment, improve the level of education, and reduce disparity between the poor and rich, and between boys and girls. In the economic sector, a rapid change has been evident over the last few years. Micro credit programs and Garment Sector have been expanded further. The Garment Sector accredited 75 percent of the total export earning (BGMEA, 2007) and generates employment prospects for the rural adults, which may change the usual migration pattern of this community. Thus, this chapter will discuss the level of education and types of employment of Matlab HDSS population found in the SES-2005. Information on education and employment can help to assess the effect of these programs as well as other health and demographic studies conducted in this area.

In the present survey, two types of information on education were collected. First, the type of education and second, the years of schooling completed. Type of education includes secular, *madrasa* (religious schooling), *maktab* (informal religious ritual learning), and informal/NGO education. Secular education implies the general education under national education curriculum administered through secondary and higher secondary education board and tertiary and higher tertiary education at the college and university level. *Madrassa* education implies a combined curriculum of religious and general education with emphasis on religious education under the national education curriculum, administered through *Madrassa* Education Board. *Maktab* education is an informal religious teaching usually given during childhood period under the supervision of an *Imam* of a Mosque or a person having *madrasa* education. The curriculum includes how to read the Holy Quran and perform religious ritual like *namaz*, *fasting*, etc. Informal/NGO education implies education provided by the Non-Government Organizations. While completed years of schooling were recorded for secular, *madrasa* and NGO education, completed years of *maktab* education was recorded as zero. Information on education was asked to all, except children of age less than 5 years. If an individual had more than one type of education, the most advanced one was collected.

For collection of data on occupation, it was an open-ended question. The CHRWs recorded what the respondents reported as their primary occupations. Primary occupation was determined on the basis of highest time spent in any occupation. In addition, if any individual engaged either individually or collectively in any of the income generating activities of the household was treated as engaged in that occupation. A slight deviation in recording occupation of females was followed in the 2005-SES compared to previous ones, i.e. if a woman had income generating activities besides as a housewife, then the other activity was recorded as her occupation. Occupation was

then recoded into smaller groups. Information on primary occupation was asked to all, except children of age less than 8 years.

4.2 Education

In this report, education level of the HDSS population by area and age are presented. In addition, trends in education level over the last 23 years are also presented.

Data reveal that 30 percent of the HDSS population has no formal education. Out of the remaining 70 percent, 66 percent have secular education, 3 percent madrasa, and 1 percent has NGO education. The total number of NGO educated persons is 2,334, but only 76 of them have 1 or more years of schooling. Thus, in the subsequent section, only secular education has been discussed. However, tables on madrasa education and detailed secular education are presented in Appendix Tables B.1 and B.2.

Table10: Distribution of population¹ by years of schooling and age, SES-2005

Education (year)	Number					Percent				
	Age (year)					Age (year)				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
0	8487	3452	24631	20268	56838	21.5	8.2	34.9	57.2	30.3
1-3	18029	3371	9262	4199	34861	45.7	8.0	13.1	11.9	18.6
4-6	11015	11959	15787	5984	44745	27.9	28.5	22.4	16.9	23.9
7-9	1938	17767	10938	2588	33231	4.9	42.4	15.5	7.3	17.7
10+	14	5377	10017	2365	17773	0.0	12.8	14.2	6.7	9.5
Total	39483	41926	70635	35404	187448	100.0	100.0	100.0	100.0	100.0

¹Age 7 years or more

Table 10 shows the distribution of population by years of schooling and age. In the HDSS area, about 30 percent population has no formal education. The proportion with no formal education increases with increasing age, except for those in the 15-24 years age group, which might be related to higher out-migration. Such education pattern by age was also observed in several previous censuses in the Matlab area (Ruzicka et al., 1978; Razzaque et al., 1998). About one-fourth of the population was found to have education of more than six years of schooling, and 10 percent of the total population has completed 10 years of education.

Sex differential in education was reported in all the previous HDSS censuses. In SES-2005, education by age and sex presented in Table 11 demonstrates more females with no formal education than males, and such difference is more noticeable in older than younger age groups. The percent having no formal education is similar in both ICDDR,B and the Government service areas (29% vs. 31%), but the proportion having 7 or more years of schooling is slightly higher in the ICDDR,B area (Tables 12). In ICDDR, B area, this rate is 30 percent compared to 25 percent in the Government service area.

The sex differential in education was examined for ICDDR,B and Government services areas separately (Tables 13 and 14). Despite the Government's effort to promote female education, the percent of male education remains higher than female education in ICDDR,B area (75% vs. 67%) and Government services area (73% vs. 65%), although the differences appear to be much lower than in the previous censuses. More detailed information in the same table on education by sex, age, and completed years of schooling shows that though the difference in higher education between males and females has also been reduced, but it still exists. For example, more males had 7 or more years of schooling than females in ICDDR,B area (33% vs. 27%) and Government service area (26% vs. 23%). A similar pattern was also observed in different age groups, except the youngest ones. In the youngest age group (7-14 years), contrary to expectation, 32 percent males and 37 percent females had 4 or more years of schooling in the ICDDR,B area compared to 29 percent males and 34 percent females in the Government service area. Nineteen percent of females compared to 24 percent males in this age group did not have formal education. However, in the middle age groups (15-24 and 25-49 years), male education was not always higher than female education in the both areas. This might be due to higher out-migration of males in these age groups.

Table 11: Distribution of population¹ (%) by years of schooling, sex, and age, SES-2005

Education (year)	Male					Female				
	Age (year)					(Age (year))				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
0	24.1	9.8	30.7	38.6	26.1	18.9	6.9	38.3	74.2	34.0
1-3	45.7	11.4	13.7	14.2	20.5	45.6	5.2	12.6	9.7	16.9
4-6	25.9	30.2	20.2	21.0	23.9	29.9	27.1	24.1	13.1	23.9
7-9	4.3	34.6	15.8	12.6	16.7	5.5	49.1	15.2	2.5	18.6
10+	0.0	14.1	19.6	13.5	12.8	0.0	11.8	9.7	0.4	6.6
Total	19961	19339	31945	16879	88124	19522	22587	38690	18525	99324

¹Age 7 years or more

Table 12: Distribution of population¹ (%) by years of schooling, area, and age, SES-2005

Education (year)	ICDDR area					Government area				
	Age (year)					Age (year)				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
0	19.9	8.3	33.2	55.2	29.4	22.9	8.1	36.6	59.3	31.3
1-3	45.4	7.2	12.4	11.5	17.8	45.9	8.8	13.8	12.3	19.4
4-6	28.7	25.5	22.0	17.3	23.2	27.2	31.4	22.7	16.5	24.5
7-9	5.9	43.5	15.9	8.0	18.4	4.0	41.3	15.0	6.6	17.1
10+	0.0	15.4	16.5	8.0	11.3	0.0	10.4	11.7	5.3	7.6
Total	18905	20404	36533	17965	93807	20578	21522	34102	17439	93641

¹Age 7 years or more

Table 13: Distribution of population¹ (%) by years of schooling, age, and sex in ICDDR,B area, SES-2005

Education (year)	Male					Female				
	Age (year)					Age (year)				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
0	22.3	9.6	29.0	36.3	24.9	17.6	7.3	36.8	72.9	33.3
1-3	45.6	10.3	12.9	13.4	19.5	45.2	4.7	12.0	9.6	16.2
4-6	26.9	27.3	19.6	20.9	23.1	30.4	24.0	23.9	13.9	23.3
7-9	5.1	35.5	16.2	13.4	17.3	6.7	50.2	15.7	2.9	19.3
10+	0.0	17.3	22.3	16.0	15.2	0.0	13.8	11.6	0.6	7.8
Total	9501	9343	16623	8680	44147	9404	11061	19910	9285	49660

¹Age 7 years or more

Table 14: Distribution of population¹ (%) by years of schooling, age, and sex in Government area, SES-2005

Education (year)	Male					Female				
	Age (year)					Age (year)				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
0	25.7	10.0	32.6	41.1	27.4	20.1	6.5	39.9	75.5	34.7
1-3	45.7	12.4	14.6	15.0	21.6	46.0	5.7	13.3	9.8	17.5
4-6	25.0	32.9	20.8	21.2	24.6	29.5	30.0	24.3	12.4	24.5
7-9	3.6	33.7	15.4	11.8	16.1	4.4	48.0	14.8	2.0	18.0
10+	0.0	11.0	16.6	10.9	10.3	0.0	9.8	7.8	0.3	5.3
Total	10460	9996	15322	8199	43977	10118	11526	18780	9240	49664

¹Age 7 years or more

4.2.1 School attendance

Data for school attendance by age, sex, and area are presented in Table 15. The table shows that more than 90 percent children (7-10 years age group) are in school in the whole HDSS area. It is also evident that more than 80 percent of the children of age 11-15 years are attending schools. However, school attendance rates are pretty much similar between the two areas. The school attendance rates were slightly higher for girls than boys in both the age groups and areas, but reverse situation was evident for age groups 16-20 and 21-24 years.

Table 15: Percentage of the population age 7-24 years attending school, by age, sex, and area, SES-2005

Age (year)	ICDDR,B area			Government area		
	Male	Female	Total	Male	Female	Total
7-10	92.5	94.6	93.6	89.3	91.9	90.6
11-15	83.5	88.5	86.0	81.4	87.2	84.3
7-15	87.6	91.3	89.5	84.8	89.2	87.0
16-20	48.3	38.1	42.9	42.7	34.3	38.3
21-24	19.7	7.4	12.7	16.4	5.1	10.1

4.2.2 Trends in education, 1974-2005

Table 16 shows the distribution of population by years of schooling, age, and area in four censuses. The level of education has improved substantially over the period in ICDDR,B and Government service areas. In 1974, 65 percent in the ICDDR,B area and 69 percent in the Government services area were illiterate compared to 40 percent in 1996 and 30 percent in 2005 in both areas. Percent of population having 7 or more years of schooling has been also increased from about 7 percent in 1974 to 27 percent in 2005. A slightly higher percent of 7 and more years schooling was found in the ICDDR,B area than Government services area in 1996 (20% vs.16%) and in 2005 (30% vs. 25%). Such increase in education has also been reflected amongst males and females. However, the increase was more marked amongst females than amongst males.

Table 16: Percentage distribution of population¹ (%) by years of schooling, age, and area in four Censuses

Education (years)	Age (year)									
	ICDDR, B area					Government area				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
1974 Census										
None	43.5	49.8	81.4	95.5	64.7	50.6	54.6	84.4	95.9	69.1
1-3	42.6	9.5	4.4	1.4	16.7	37.9	9.2	4.4	1.2	15.2
4-6	11.7	20.1	9.3	2.6	11.6	9.6	18.5	7.7	2.4	9.9
7-9	2.0	9.3	1.7	0.3	3.3	1.8	8.6	1.2	0.3	2.9
10+	0.1	11.3	3.2	0.2	3.7	0.1	9.1	2.3	0.2	2.9
Total	19571	14773	20879	9339	64562	19195	14358	20453	9354	63360
1982 Census										
None	57.6	49.6	59.0	67.6	57.4	66.9	53.2	63.7	70.2	62.6
1-3	30.2	12.6	9.8	10.2	16.2	25.9	13.6	9.7	9.5	15.0
4-6	11.5	21.7	17.6	14.6	16.6	6.8	19.9	16.1	14.0	14.3
7-9	0.7	12.1	6.2	5.3	6.2	0.5	10.5	5.0	4.4	5.2
10+	0.0	3.9	7.3	2.3	3.6	0.0	2.9	5.5	1.9	2.8
Total	20486	20616	22828	11420	75350	19081	19800	22161	10716	71758
1996 Census										
None	28.6	23.2	48.3	64.6	40.5	29.8	22.3	50.1	66.3	40.8
1-3	49.0	9.3	9.4	8.6	18.7	51.5	11.7	11.2	10.4	22.1
4-6	20.0	27.0	19.9	15.7	20.9	17.4	30.3	20.4	15.3	21.1
7-9	2.3	24.7	10.3	6.5	11.1	1.4	24.1	9.3	5.1	9.9
10+	0.0	15.9	12.1	4.7	8.8	0.0	11.7	9.0	3.0	6.2
Total	21623	21398	31621	15712	90354	23137	19966	28288	14228	85619
2005 Census										
None	19.9	8.3	33.2	55.2	29.4	22.9	8.1	36.6	59.3	31.3
1-3	45.4	7.2	12.4	11.5	17.8	45.9	8.8	13.8	12.3	19.4
4-6	28.7	25.5	22.0	17.3	23.2	27.2	31.4	22.7	16.5	24.5
7-9	5.9	43.5	15.9	8.0	18.4	4.0	41.3	15.0	6.6	17.1
10+	0.0	15.4	16.5	8.0	11.3	0.0	10.4	11.7	5.3	7.6
Total	18905	20404	36533	17965	93807	20578	21522	34102	17439	93641

¹Age 7 years or more

A gradual decline in percent having no formal education is evident in Figure 3 and Appendices (Table B.3). It also reveals that though differential education level by males and females still exists in 2005, it has been greatly reduced during 1974-2005. Census 1974 reported a higher number of females with no formal education than males (close to 75% and 60%), which reduced to 35 percent for females, and 26 percent for males in 2005. Similar trends have also appeared in 4-6 and 7-9 years of schoolings. In case of higher education (10+ years) improvement has been minimum.

Trends in school attendance during 1974-2005 have been presented in Figure 4 and Appendices (Table B.4). A clear picture of increasing school attendance during 1974-2005 is evident in Figure 4. The same figure also shows a gradual takeover of female school attendance over the years. Higher level of school attendance among boys of 7-15 years was evident in 1974. The difference in school attendance was reduced in 1982. The school attendant rate was found higher among girls than boys in 1996 and this trend persisted in 2005.

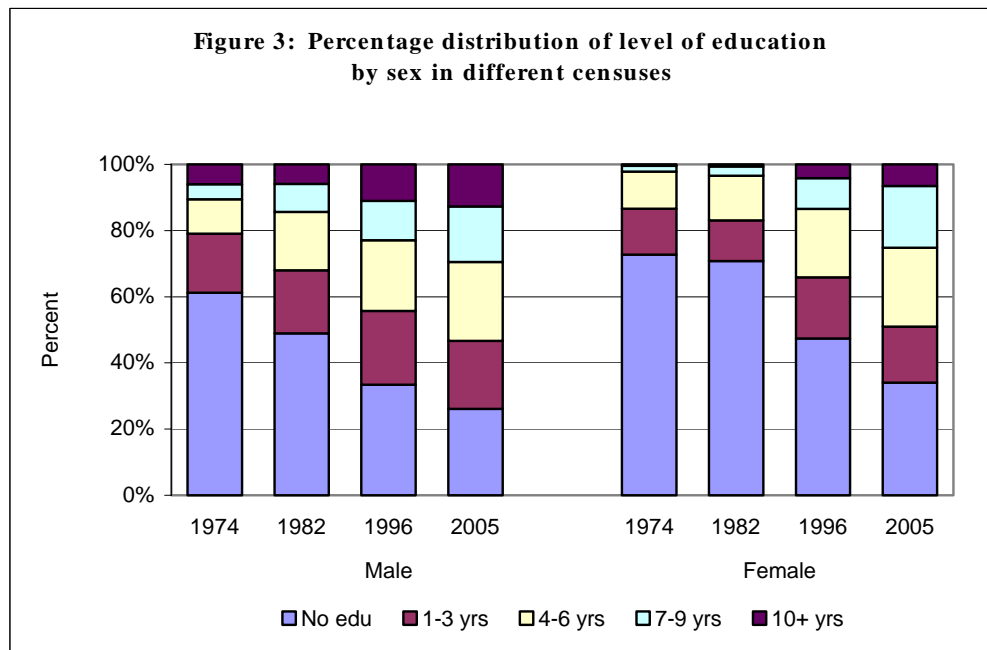


Figure 4: Trends in school attendance among the population aged 7-24 years and sex, 1974-2005

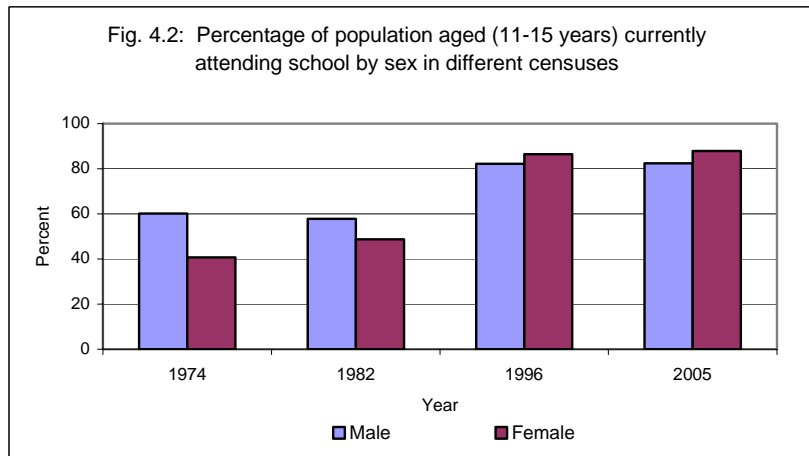
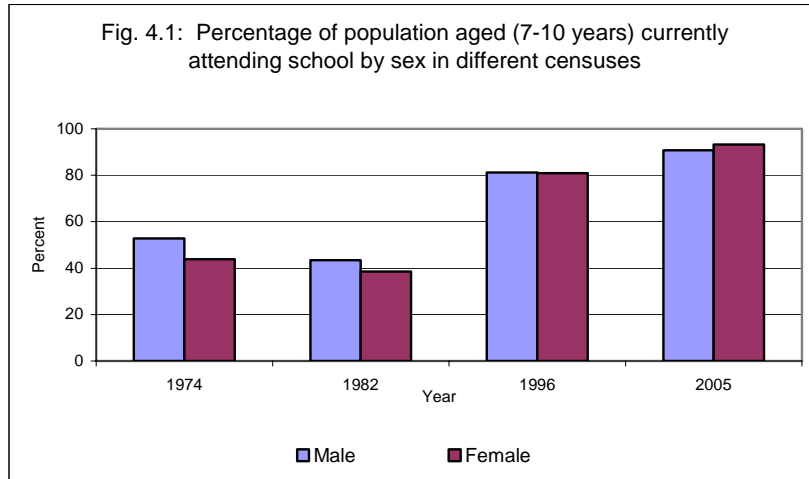


Fig. 4.3: Percentage of population aged (7-15 years) currently attending school by sex in different censuses

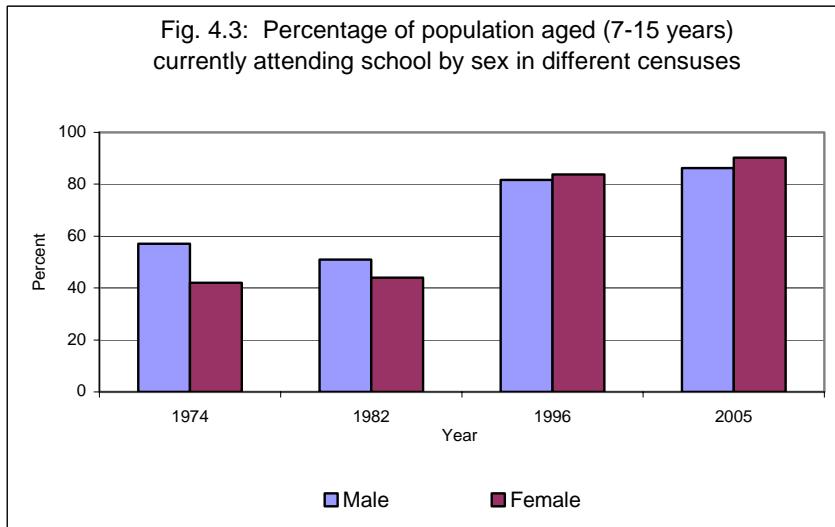


Fig. 4.4: Percentage of population aged (16-20 years) currently attending school by sex in different censuses

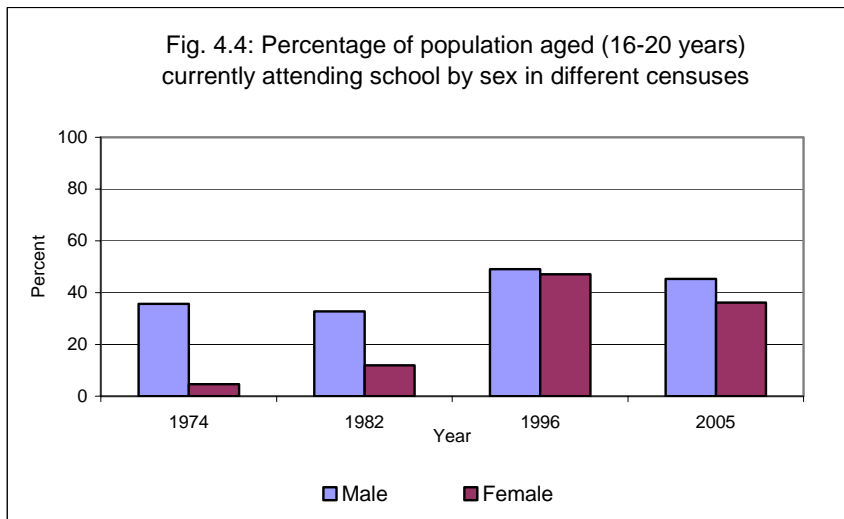
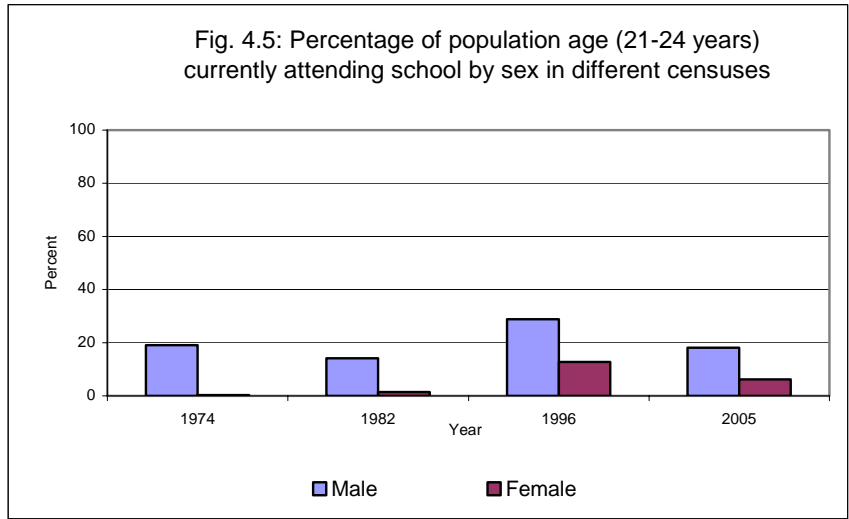


Fig. 4.5: Percentage of population age (21-24 years) currently attending school by sex in different censuses



4.3. Employment

Inquiries on occupation were made for individuals aged 8 years and above. Detailed occupation data were collected and then coded (Appendix C). In the present census, questions on only primary occupations were asked.

Table 17 shows the distribution of occupations of the household heads and other members. Major occupations among household heads appeared to be three: housewife/housework, business and farming. About 22 percent of household heads reported to be housework/ housewife followed by business (around 15%), owner-workers (farmer) and agricultural labour constituted (12% each).

The second set of occupation among heads included skilled services (8%) and skilled worker (4%). About 5 percent of the total household heads were found to be either retired or disabled. This employment composition has been changed when sex of the household heads were controlled. It appears that 16 percent of the male household heads were owner-workers (farmer), 15 percent were in agricultural labour and about 18 percent in business; and most of the female heads were, as expected, engaged in housework (81%). Occupation rankings of the household heads were fairly similar in the two areas (Table 18). For household members, other than the household head, a different distribution of occupation categories was evident (Table 19). The other household members were mainly either students, or engaged in housework/house-wife categories. Similar occupation ranking was also found in the two areas for other household members (Table 19).

Table 17: Distribution of primary occupation¹ (%) of the household heads and other members by sex, SES-2005

Occupation	Head			Others		
	Both sexes	Male	Female	Both sexes	Male	Female
Farm owner-worker	11.9	16.1	0.3	2.2	5.7	0.0
Rent or sharecropper	4.3	5.9	0.2	0.6	1.5	0.0
Fisherman	2.0	2.8	0.0	0.7	1.7	0.0
Fish seller	2.9	3.9	0.1	0.5	1.2	0.0
Boatman	0.4	0.6	0.0	0.0	0.1	0.0
Cottage industry	1.1	1.1	1.1	0.9	0.4	1.3
Business (established)	6.5	8.7	0.4	2.1	5.2	0.1
Business (small)	2.6	3.5	0.2	0.7	1.7	0.1
Business (others)	5.5	7.0	1.1	1.9	4.3	0.5
Doctor	0.3	0.4	0.0	0.0	0.1	0.0
Engineer/Lawyer	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural labour	12.2	15.5	2.9	2.6	5.9	0.6
Mill worker	0.5	0.6	0.1	0.4	0.9	0.1
Skilled worker	4.5	6.0	0.6	1.8	4.0	0.5
Rickshaw puller	3.0	4.1	0.0	0.4	1.2	0.0
Unskilled worker	0.4	0.5	0.0	0.3	0.8	0.0
Service	8.1	10.1	2.8	4.2	8.0	1.9
Social worker	0.1	0.2	0.0	0.0	0.0	0.0
Student	0.1	0.1	0.1	34.0	45.6	27.0
Housewife/ housework	21.9	0.1	81.3	35.4	0.1	56.8
Retired	0.7	0.9	0.0	0.1	0.2	0.0
Disabled	8.6	9.7	5.6	2.8	1.5	3.6
Others	0.5	0.6	0.1	0.2	0.4	0.0
Unemployed	1.2	1.4	0.8	6.4	7.2	5.9
Beggar	0.8	0.2	2.2	0.1	0.0	0.2
Unknown	0.0	0.0	0.0	1.5	2.4	1.0
Total	46715	34172	12543	135499	51249	84250

¹Age 8 years or more

Table 18: Distribution of primary occupation¹ (%) of the household heads by sex and area, SES-2005

Occupation	ICDDR,B area			Government area		
	Both sexes	Male	Female	Both sexes	Male	Female
Farm owner-worker	11.7	15.7	0.2	12.1	16.6	0.5
Rent or sharecropper	2.8	3.8	0.2	5.9	8.1	0.3
Fisherman	2.8	3.7	0.0	1.3	1.8	0.0
Fish seller	2.2	3.0	0.0	3.6	4.9	0.1
Boatman	0.5	0.7	0.0	0.3	0.4	0.0
Cottage industry	0.8	0.8	0.6	1.5	1.5	1.5
Business (established)	6.0	7.9	0.3	7.0	9.6	0.5
Business (small)	2.6	3.4	0.2	2.6	3.6	0.2
Business (others)	4.8	6.2	0.7	6.2	8.0	1.5
Doctor	0.3	0.4	0.0	0.2	0.3	0.0
Engineer/Lawyer	0.0	0.1	0.0	0.0	0.0	0.0
Agricultural labour	12.3	15.6	2.6	12.0	15.4	3.2
Mill worker	0.3	0.4	0.0	0.6	0.9	0.1
Skilled worker	5.6	7.4	0.2	3.5	4.4	1.0
Rickshaw puller	4.2	5.6	0.0	1.7	2.4	0.0
Unskilled worker	0.5	0.6	0.0	0.2	0.3	0.0
Skilled service	9.0	11.0	3.2	7.2	9.0	2.4
Social worker	0.1	0.2	0.0	0.2	0.2	0.0
Student	0.1	0.1	0.1	0.1	0.1	0.1
Housewife/ housework	21.3	0.1	82.8	22.5	0.0	79.9
Retired	0.8	1.1	0.0	0.5	0.7	0.0
Disabled	8.8	9.7	6.0	8.4	9.7	5.2
Others	0.6	0.7	0.1	0.4	0.5	0.2
Unemployed	1.5	1.6	1.1	0.9	1.1	0.5
Beggar	0.5	0.1	1.6	1.0	0.3	2.8
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Total	23894	17754	6140	22821	16418	6403

¹Age 8 years or more

Table 19: Distribution of primary occupation¹ (%) of the other household members by area and sex, SES-2005

Occupation	ICDDR, B area			Government area		
	Both sexes	Male	Female	Both sexes	Male	Female
Farm owner-worker	2.0	5.2	0.0	2.3	6.1	0.0
Rent or sharecropper	0.3	0.9	0.0	0.8	2.0	0.0
Fisherman	0.8	2.2	0.0	0.5	1.2	0.0
Fish seller	0.4	0.9	0.0	0.6	1.5	0.0
Boatman	0.1	0.1	0.0	0.0	0.0	0.0
Cottage industry	0.4	0.3	0.5	1.5	0.5	2.0
Business (established)	2.1	5.3	0.1	2.0	5.0	0.2
Business (small)	0.8	1.7	0.2	0.7	1.6	0.1
Business (others)	1.6	4.0	0.2	2.2	4.6	0.7
Doctor	0.1	0.1	0.0	0.0	0.1	0.0
Engineer/Lawyer	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural labour	2.3	5.1	0.6	3.0	6.6	0.7
Mill worker	0.4	0.8	0.1	0.5	1.0	0.1
Skilled worker	2.0	4.8	0.3	1.7	3.2	0.8
Rickshaw puller	0.6	1.6	0.0	0.3	0.8	0.0
Unskilled worker	0.3	0.8	0.0	0.3	0.7	0.0
Skilled service	4.1	7.7	2.1	4.3	8.3	1.8
Social worker	0.0	0.0	0.0	0.0	0.0	0.0
Student	33.6	45.8	26.4	34.5	45.5	27.6
Housewife/ housework	36.9	0.1	58.8	33.9	0.1	54.9
Retired	0.1	0.2	0.0	0.1	0.1	0.0
Disabled	2.9	1.6	3.7	2.7	1.4	3.5
Others	0.2	0.4	0.0	0.2	0.3	0.0
Unemployed	6.7	7.9	5.9	6.1	6.4	6.0
Beggar	0.1	0.0	0.1	0.2	0.0	0.3
Unknown	1.4	2.1	0.9	1.7	2.6	1.2
Total	67359	25112	42247	68140	26137	42003

¹Age 8 years or more

Table 20: Distribution of primary occupation (%) of household heads in four Censuses

Occupation	Census year			
	1974	1982	1996	2005
Farm owner-worker	35.2	31.4	24.3	11.9
Rent or sharecropper'	1.9	0.5	3.4	4.3
Fisherman	4.4	-	3.8	2.0
Fish seller	0.5	5.0	1.9	2.9
Boatman	3.1	2.2	1.3	0.4
Cottage industry	1.1	0.4	0.5	1.1
Business (established)	2.2	7.3	4.7	6.5
Business (small)	4.2	1.0	5.3	2.6
Business (others)	-	-	2.4	5.5
Doctors ²	-	-	0.7	0.3
Engineer/Lawyer	-	-	-	0.0
Agricultural labour	18.0	21.2	5.1	12.2
Mill worker	6.2	5.4	3.2	0.5
Skilled worker	4.8	4.6	5.2	4.5
Unskilled worker	2.0	1.0	7.0	0.4
Service	4.7	6.4	5.5	8.1
Social worker	-	-	0.1	0.1
Others	1.0	0.7	0.5	0.5
Unemployed	0.7	0.4	0.5	1.2
Beggar	1.6	0.9	0.6	0.8
Disabled	1.8	0.5	3.0	8.6
Student	0.4	0.2	0.2	0.1
Housework/housewife	6.1	11.0	18.0	21.9
Retired	-	-	0.7	0.7
Rickshaw puller	-	-	2.1	3.0
Unknown	0.0	0.1	0.0	0.0
N	28,600	31,975	39,909	46,715

¹Age 8 years or more

²In 1974 and 1982 censuses there has no separate code, it may fall under category service

4.3.1 Trends in occupation pattern, 1974-2005

Figure 5 and Table 20 show the distribution of household head's occupations in four successive censuses. Over the period, occupations of the household heads have been changed substantially. Farming is no longer a major occupation of the rural community of Matlab. Thirty five percent of the household heads were engaged in farming in 1974, which has been reduced to 12 percent in 2005. A substantial increase in business as occupations was evident during 1974 to 2005. The same is true about housework/housewife. A similar pattern is observed in the ICDDR,B and the Government service areas (Table 21).

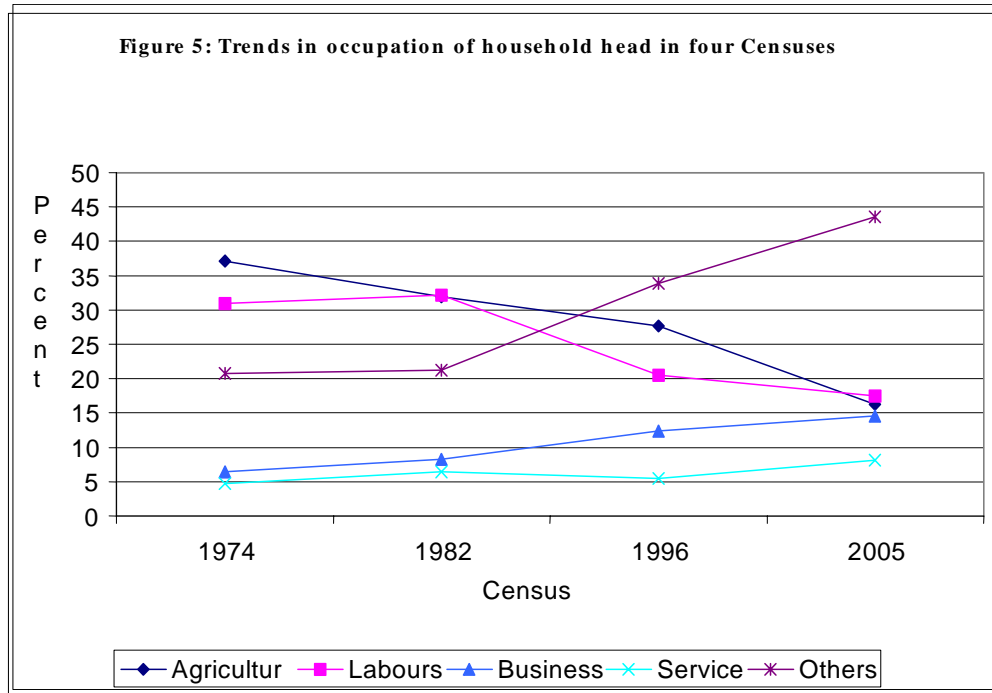


Table 21: Distribution of primary occupation¹ (%) of household heads by area in four Censuses

Occupation	1974 Census		1982 Census		1996 Census		2005 Census	
	ICDDR,B area	Govt. area	ICDDR,B area	Govt. area	ICDDR,B area	Govt. area	ICDDR,B area	Govt. area
Farm owner-worker	37	33.4	31.7	31	23.5	25.2	11.7	12.1
Rent or sharecropper	1.7	2.1	0.4	0.7	2.5	4.4	2.8	5.9
Fisherman	5.2	3.5	-	-	4.1	3.5	2.8	1.3
Fish seller	0.5	0.6	5.8	4.1	1.5	2.4	2.2	3.6
Boatman	1.4	4.7	1.1	3.3	0.9	1.8	0.5	0.3
Cottage industry	1.1	1.2	0.6	0.2	0.5	0.6	0.8	1.5
Business (established)	2.6	1.8	7.2	7.3	5.1	4.2	6.0	7.0
Business (small)	4.3	4.1	1.2	0.9	5.9	4.7	2.6	2.6
Business (others)	-	-	-	-	2.3	2.6	4.8	6.2
Doctors ²	-	-	-	-	0.9	0.6	0.3	0.2
Engineer/Lawyer	-	-	-	-	-	-	0.0	0.0
Agricultural labour	18.2	17.9	21.1	21.3	5	5.2	12.3	12.0
Mill worker	4.5	8	3.8	7	2.4	3.9	0.3	0.6
Skilled worker	5.3	4.2	5.5	3.7	6.1	4.2	5.6	3.5
Unskilled worker	2.3	1.8	1.1	0.9	8.1	5.8	0.5	0.2
Service	5.1	4.3	6.7	6	6.4	4.5	9.0	7.2
Social worker	-	-	-	-	0.1	0.2	0.1	0.2
Others	1.1	0.9	0.8	0.7	0.5	0.6	0.6	0.4
Unemployed	0.7	0.6	0.4	0.4	0.5	0.6	1.5	0.9
Beggar	1.3	1.9	0.9	0.8	0.4	0.9	0.5	1.0
Disabled	1.7	1.9	0.6	0.5	2.7	3.4	8.8	8.4
Student	0.5	0.4	0.1	0.2	0.2	0.2	0.1	0.1
Housework/housewife	5.5	6.8	10.9	11.1	18.2	17.8	21.3	22.5
Retired	-	-	-	-	0.6	0.8	0.8	0.5
Rickshaw puller	-	-	-	-	2.1	2.1	4.2	1.7
Unknown	-	-	-	-	-	-	-	-
N	14,268	14,332	16,338	15,637	20,963	18,946	23,894	22,821

¹Age 8 years or more

²In 1974 and 1982 censuses there has no separate code, it may fall under service category

CHAPTER FIVE

HOUSEHOLD ECONOMIC STATUS

5.1 Introduction

Major objectives of SES-2005 were to assess the household economic status and living condition in terms of major sources of income, possession of household assets, materials used for construction of main dwelling, sources of drinking water at different seasons, and type of latrine used by males and females.

In the present socio-economic survey, information was collected on number of sources and major sources of household income. Information on domestic household assets was also collected. Twenty-six household domestic assets were included in the questionnaire and asked whether the household owned those assets or not. In addition, construction materials used for roof, wall and floor were also collected. For collecting data on sources of drinking water, questions were asked about the sources of water, and what sources were used for drinking water during dry and monsoon seasons. Finally, data on type of latrine used by males and females was also collected.

5.2 Sources of Household Income

New information on sources of household income was collected in the SES-2005 only. Question on main source and other sources of household income were asked. The main source of income of households, presented in Table 22, shows that 15 percent of households reported agriculture as the major source of income. A higher percentage of households have reported to have business and agricultural labour (18% each) as their main sources of income than all other sources of income. One-fourth of the total households depend on remittance either from outside or from within the country. Income from Food for Works/VGD (0.5) or pension (0.7) was very few.

Most of the households have more than one source of income. Analysis shows (Table 23) that 65 percent of the households have two to three sources, while 19 percent have more than three sources of income. Households in the Government service area have 4 or more sources of income (24%) than in the ICDDR,B area (13%).

Table 22: Major sources of household income by area, SES-2005

Major income sources	Number			Percent		
	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area	Both areas
Agriculture	3389	3547	6936	14.2	15.5	14.8
Labour	4400	4030	8430	18.4	17.7	18.0
Handicraft work	1370	1191	2561	5.7	5.2	5.5
Business	4111	4344	8455	17.2	19.0	18.1
Service	3029	2313	5342	12.7	10.1	11.4
Pension	174	151	325	0.7	0.7	0.7
Remittance from country	2715	3224	5939	11.4	14.1	12.7
Remittance from outside	2523	2761	5284	10.6	12.1	11.3
Food for Work/VGD	113	109	222	0.5	0.5	0.5
Others	2070	1151	3221	8.7	5.0	6.9
Total	23894	22821	46715	100.0	100.0	100.0

Table 23: Number of household income source by area, SES-2005

#of sources of household income	Number			Percent		
	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area	Both Areas
1	4536	2854	7390	19.0	12.5	15.8
2	9052	6862	15914	37.9	30.1	34.1
3	7094	7596	14690	29.7	33.3	31.4
4+	3212	5509	8721	13.4	24.1	18.7
Total	23894	22821	46715	100.0	100.0	100.0

5.3 Land Ownership

An inquiry was made to assess how much land each household owns. In this respect, two types of ownership were considered: homestead land and land under cultivation (for definitions see Appendix C). Table 24 shows the distribution of households by homestead land in two areas. In both areas, 28 percent of the households owned homestead land less than 5 decimal, another 23

percent of the households owned homestead land 5-9 decimal, while 30 percent possessed homestead land of 10-24 decimal. Only 6 percent reported having no homestead land. Households having no homestead land were more prevalent in the Government service area than in the ICDDR,B area (7% vs. 5%). The number of households without homestead land was also reported to be greater in SES-2005 than the 1996 Census. In contrast to 1996 census, the rate of increase in households without homestead land has been found to be slightly higher in the ICDDR,B area

Table 24: Distribution of homestead land by area, SES-2005

Land (decimal*)	Number			Percent		
	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area	Both Areas
0	1210	1607	2817	5.1	7.0	6.0
1-4	7067	6060	13127	29.6	26.6	28.1
5-9	5555	5416	10971	23.2	23.7	23.5
10-24	6984	6942	13926	29.2	30.4	29.8
25-49	2232	2107	4339	9.3	9.2	9.3
50-99	641	563	1204	2.7	2.5	2.6
100+	205	126	331	0.9	0.6	0.7
Total	23894	22821	46715	100.0	100.0	100.0

*100 decimals = 4046.86 square meters

than Government service area in 2005 Census. This inter-censal increase in household with no homestead land in the ICDDR,B area is unexpected as no report of such unusual event like disaster or anything of that sort were recorded during 1996-2005 as was recorded in the Government service area before 1993 Census. It is noted that the river Megna eroded a total of 7 villages in the Government service area during 1982-1991 periods. Most of the households of these 7 villages had resettled in the nearby villages in the HDSS area, but usually do not own the land on which their houses are built (Razzaque et al., 1998).

Table 25 shows distribution of households by cultivable land and area. Findings reveal that 43 percent of the households are landless and 31 percent of households have less than 0.50 acres of land. Number of landless households increased from 26 percent in 1982 to 38 percent in 1996, and further to 43 percent in 2005. Possession of land is almost similar in the two areas. This is in contrast to 1996 census, where there were slightly more landless households in the Government service area than in the ICDDR,B area (Table 26).

Table 25: Distribution of agricultural land by area, SES-2005

Land (decimal*)	Number			Percent		
	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area	Both Areas
No land	10152	10128	20280	42.5	44.4	43.4
1-49	7627	6973	14600	31.9	30.6	31.3
50-99	2940	2648	5588	12.3	11.6	12.0
100-199	2057	2036	4093	8.6	8.9	8.8
200+	1118	1036	2154	4.7	4.5	4.6
Total	23894	22821	46715	100.0	100.0	100.0

*100 decimals = 4046.86 square meters

Table 26: Distribution of agricultural land by area in three Censuses

Land (decimal)	1982 Census		1996 Census		2005 Census	
	ICDDR,B area	Government area	ICDDR,B area	Government area	ICDDR,B area	Government area
No land	26.1	27.4	36.0	40.6	42.5	44.4
1-49	23.5	22.9	28.5	27.2	31.9	30.6
50-99	19.4	17.2	14.4	12.6	12.3	11.6
100-199	17.7	16.8	12.5	11.2	8.6	8.9
200+	13.3	15.7	8.6	8.4	4.7	4.5
Total	16,334	15,637	20,956	18,941	23,894	22,821

5.4 Household Assets

Data were collected on ownership of 26 household assets, such as: *chat* (bed), quilt/blanket, *took* (mattress), hurricane, chair/table, *almirah*, sofa set, dinning table; communication assets: radio, television, mobile phone; transportation: engine boat, traditional boat; and modern amenities: fan, refrigerator; modern agricultural equipment and personnel belongings: watch/clock, bicycle. In addition, several other assets like fishing net, fishing boat; rickshaw and grocery shop, rearing chicken/duck and cow were also collected. Damaged items were included, if these were repairable. Table 27 suggests that majority of the households owned hurricane, quilt, *tosok*, chair/table, *almirah*/showcase and watch/clock (63-95%). Less than 5 percent of the households owned refrigerator, engine boat, traditional boat or motorcycle. Ownership of other assets ranges from 5 percent to 33 percent. Except for the ownership of fishing net and modern agricultural

equipment, household assets in both ICDDR,B and Government service areas were almost similar.

Table 27: Distribution of the ownership of some selected assets by area, SES-2005

Assets	Number			Percent		
	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area	Both areas
Khat / bed	22796	21977	44773	95.4	96.3	95.8
Hurricane	20159	19737	39896	84.4	86.5	85.4
Quilt / blanket	20098	18494	38592	84.1	81.0	82.6
Chicken / duck	17221	17729	34950	72.1	77.7	74.8
Mattress	17515	15627	33142	73.3	68.5	70.9
Chair / table	16561	15774	32335	69.3	69.1	69.2
Watch / wall clock	15079	15059	30138	63.1	66.0	64.5
Almirah / showcase	15142	14716	29858	63.4	64.5	63.9
Fan	8203	7621	15824	34.3	33.4	33.9
Cow / goat	7871	7940	15811	32.9	34.8	33.8
Radio / tape recorder	7944	7830	15774	33.2	34.3	33.8
Fishing net	5229	6374	11603	21.9	27.9	24.8
Fishing boat	5464	5266	10730	22.9	23.1	23.0
Television	5340	4826	10166	22.3	21.1	21.8
Dining table	3988	3017	7005	16.7	13.2	15.0
Telephone / mobile	3402	2800	6202	14.2	12.3	13.3
Modern agricultural equipment	2286	3641	5927	9.6	16.0	12.7
Grocery shop	2389	2065	4454	10.0	9.0	9.5
Bicycle	1751	1608	3359	7.3	7.0	7.2
Sewing machine	1253	1017	2270	5.2	4.5	4.9
Sofa set	1470	671	2141	6.2	2.9	4.6
Rickshaw/ rickshaw-van	1091	915	2006	4.6	4.0	4.3
Refrigerator	1015	354	1369	4.2	1.6	2.9
Boat	637	660	1297	2.7	2.9	2.8
Engine boat	304	546	850	1.3	2.4	1.8
Motor cycle	160	78	238	0.7	0.3	0.5
Total	23894	22821	46715	100.0	100.0	100.0

Possession of some selected household assets those were collected in all four censuses since 1974 in both the areas are presented in Figure 6 (Tables 28 and 29). It shows that the possession of these four assets over the last 31 years increased substantially. Possession of quilt/blanket was reported to be 37 percent in 1974, which has increased to 63 percent in 1996 and more than 80 percent in 2005. The same was true for watches and radios. Possession of these assets in 1974 increased from 13 percent and 12 percent to 55 percent and 46 percent in 1996, respectively. In 2005 while possession of watch/clock increased further to 66 percent, the possession of radio reduced to 33 percent. But remarkable improvement was evident in the ownership of television sets (Table 29), which rose from 5 percent in 1996 to 22 percent in 2005. Information on several other assets, which were collected only in 1996 and 2005, are presented in Table 29. The table shows that use of wooden bed for sleeping is universal, as 96 percent of the households used some form of wooden furniture for sleeping in both the areas. Possession of chair/table increased from 56 percent in 1996 to 69 percent in 2005.

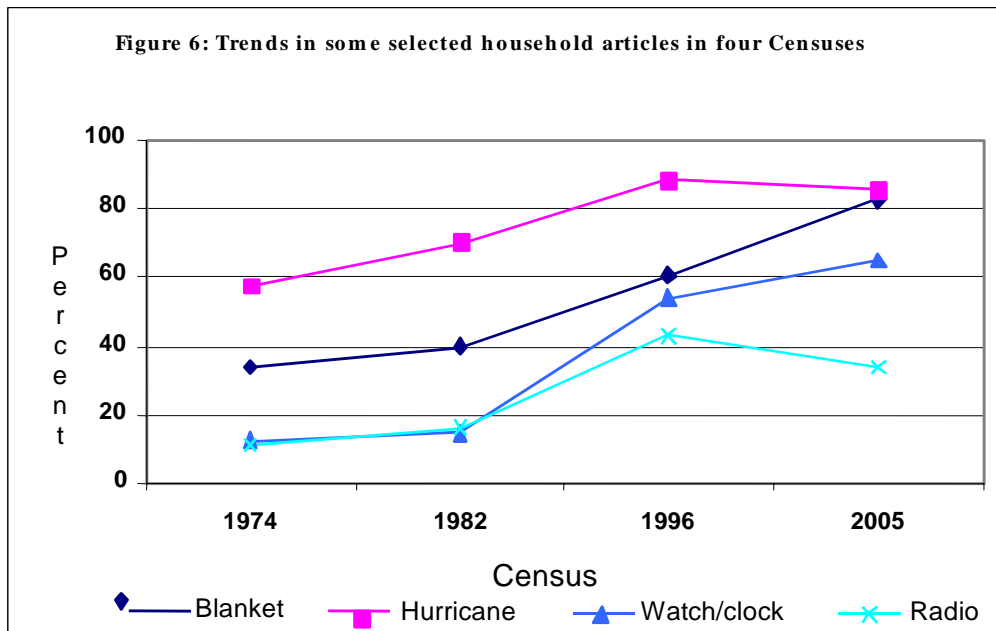


Table 28: Percentage of households owning selected articles by area in four Censuses

Articles	1974 Census		1982 Census		1996 Census		2005 Census	
	ICDDR,B area	Govt. area	ICDDR,B area	Govt. area	ICDDR,B area	Govt. area	ICDDR,B area	Govt. area
Quilt/blanket	36.7	31.0	43.6	35.1	63.3	56.6	84.1	81.0
Hurricane	59.2	56.0	70.8	68.4	86.7	89.3	84.4	86.5
Watch/clock	13.0	11.7	14.7	15.4	55.5	51.5	63.1	66.0
Radio	11.6	10.7	16.8	16.2	45.8	40.1	33.2	34.3

Table 29: Percentage distribution of some selected household assets in 1996 and 2005 censuses

Articles	1996 Census	2005 Census
Khat / bed	24.5	95.8
Chair / table	56.2	69.2
Almirah / showcase	32.2	63.9
Television	4.5	21.8
Bicycle	2.8	7.2
Boat	25.4	2.8
Cow / goat	32.4	33.8
Total	39880	46715

5.5 Dwelling Structure

Information on the construction material used for wall, roof and floor of the main dwelling was collected after physical verification. Tables 30 to 32 show the distribution of households by construction material and area. These tables demonstrate that the quality of roof and wall material was similar in both areas: about 95 percent in the ICDDR,B area and 97 percent in the Government service area used *tin/pacca* (iron sheet/cement) material for roof and 65 percent in the ICDDR,B area and 69 percent in the Government service area used *tin/pacca* material for wall. This is the first time that data on the material used for floor was also collected. Overall, 7 percent households have *pacca* (cement) floor of their houses.

Table 30: Distribution of structure of the main dwelling in both ICDDR,B and Government service areas, SES-2005

Material used	Number			Percent		
	Roof	Wall	Floor	Roof	Wall	Floor
Pacca / tin	46533	32550	3200	99.6	69.7	6.9
Tin and others	74	8213	-	0.2	17.6	0.0
Bamboo and others*	51	4735	-	0.1	10.1	0.0
Mud	-	-	43493	-	-	93.1
Others	36	1194	2	0.1	2.6	0.0
Unknown	21	23	20	0.0	0.0	0.0
Total	46715	46715	46715	100.0	100.0	100.0

*Jute stick or other thatched materials

Table 31: Distribution of structure of main dwelling in ICDDR,B area, SES-2005

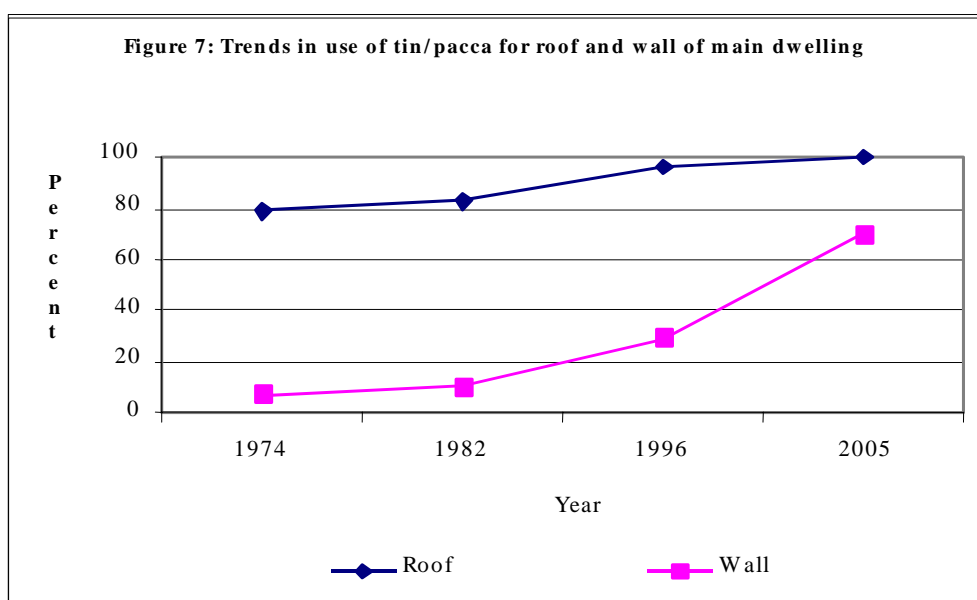
Material used	Number			Percent		
	Roof	Wall	Floor	Roof	Wall	Floor
Pacca / tin	23754	16492	2343	99.4	69.0	9.8
Tin and others	67	3857	-	0.3	16.1	0.0
Bamboo & others*	34	2930	-	0.1	12.3	0.0
Mud	-	-	21534	-	-	90.1
Others	22	597	1	0.1	2.5	0.0
Unknown	17	18	16	0.1	0.1	0.1
Total	23894	23894	23894	100.0	100.0	100.0

*Jute stick or other thatched materials

Table 32: Distribution of structure of main dwelling in Government service area, SES-2005

Material used	Number			Percent		
	Roof	Wall	Floor	Roof	Wall	Floor
Pacca / tin	22779	16058	857	99.8	70.4	3.8
Tin and others	7	4356	-	0.0	19.1	0.0
Bamboo and others*	17	1805	-	0.1	7.9	0.0
Mud	-	-	21959	-	-	96.2
Others	14	597	1	0.1	2.6	0.0
Unknown	4	5	4	0.0	0.0	0.0
Total	22821	22821	22821	100.0	100.0	100.0

*Jute stick or other thatched materials



Changes in the materials used for roof and wall of the largest dwelling over the last 31 years since 1974 are presented in Figure 7 (Appendix Tables B.5 and B.6). Figure 7 reveals a substantial change in materials used for roof and walls, especially the walls of the main dwelling. In 1974, only 7 percent of the dwelling used tin materials for wall and it increased to 29 percent in 1996 and further increased to 70 percent in 2005. Both areas, with a slight variation in 1996, have similar household condition when wall materials were considered.

5.6 Water Use

Unlike the earlier socio-economic surveys(1982 and 1996), where water use for drinking, cooking, washing, and bathing were collected, SES-2005 collected information on the sources of water for drinking during the dry and rainy season only. However, in contrast to earlier censuses, more detailed information about the use of tube-well water for drinking was collected in the present census.

The present census reveals that 90 percent of the households used tube-well water, where 51 percent of the total households drink safe (green) water, while the rest use arsenic contaminated (red tube-well) water or from tube wells that were not tested against arsenic contamination. Only 4 percent of the households use pond sand or river sand filter (PSR/RSR), three pitchers or other water filtering process for drinking water. However, the use of drinking water by area reveals a higher percentage (59.3%) of population in the Government service area uses safe drinking water sources (green tube-well and filter water) than by the population of ICDDR,B area (52%), although the use of filter water is higher in the ICDDR,B area (5.7%) than the Government service area (2.7%).

Table 33: Distribution of sources of drinking water by area, SES-2005

Sources of water	ICDDR,B area	Government area	Both areas
Tube-well	91.4	88.3	89.9
- Safe (green)	46.3	56.6	51.3
- Contaminated (red)	31.9	21.1	26.6
- Tube-well (not tested)	13.2	10.6	11.9
Ponds	0.8	0.8	0.8
River	1.0	6.5	3.7
Filter water	5.7	2.7	4.2
Others	1.1	1.7	1.4
Total	23894	22821	46715

But use of river or other sources of water for drinking in both the areas is low, as was found in earlier censuses. However, there was no variation in the drinking water habit by season.

Table 34 shows distribution of households by drinking water use by area in four censuses. Use of tube-well water for drinking has increased remarkably over the period: 33 percent in 1974 to 96 percent in 1996 in the ICDDR,B area, while corresponding figures in the Government service area increased from 17 percent to 88 percent.

Table 34: Percentage distribution of households by sources of drinking water by area in four Censuses

Sources of drinking water	ICDDR,B area	Government area	Both areas
1974 Census			
Tube well	33.2	16.7	24.9
Others	66.8	83.3	75.1
Total	14,264	14,319	28,583
1982 Census			
Tube well	66.3	43.3	55.0
Others	33.7	56.7	45.0
Total	16,338	15,637	31, 975
1996 Census			
Tube well	95.9	93.3	94.7
Others	4.1	6.7	5.3
Total	20,929	18,923	39,852
2005 Census			
Tube well	91.4	88.3	89.9
- Safe (green)	46.3	56.6	51.3
- Contaminated (red)	31.9	21.1	26.6
- Not tested	13.2	10.6	11.9
Filters	5.7	2.7	4.2
Others	2.9	9.0	5.9
Total	23,894	22,821	46,715

5.7 Latrine Use

Inquiries were made about places where males and females usually defecate. Table 35 shows the distribution of households by place of defecation. For males and females, use of sanitary latrine (modern water-sealed) was higher in the ICDDR,B area than in the Government service area (23% vs. 12%), while most people were using open latrine. In contrast to 1996 Census, about 19 percent of the men and women use open places as latrine in both the areas.

Table 35: Distribution of latrine use by area, SES-2005

Type of toilet	ICDDR,B area		Government area		Both areas	
	Male	Female	Male	Female	Male	Female
Modern toilet	22.7	20.7	12.6	12.6	17.8	16.8
Open latrine	52.6	54.6	61.7	64.7	57.3	59.8
Open place	18.9	21.0	17.2	18.2	18.1	19.7
Others	3.6	3.3	4.1	4	3.8	3.7
Not applicable	2.3	0.4	4.5	0.4	3.4	0.4
Total	23894	238 94	22821	22821	46517	46517

5.8 Poverty and Development

Micro credit development originated in Bangladesh and spread all over the country within short time. In the present census, a question on micro credit membership and number of years involved with these activities was asked. A new type of information on food security was also asked in SES-2005. Questions included number of calendar months a household had shortage of food supply over the last 12 months, number of days with actual food shortage in the household.

5.8.1 Micro-credit membership

Level of micro-credit membership by area is presented in Table 36. It reveals that 40 percent of the households have membership in any of the micro credit programs of Government, i.e. Bangladesh Rural Development Board (BRDB) and Non- Government Organization (NGO) in both areas. The same table also reveals that 12 percent of the households have membership in Bangladesh Rural Advancement Committee (BRAC), while 13 percent have in Grameen Bank, 8 percent in Association for Social Advancement (ASA). The lowest number of membership was found for BRDB. Besides the membership of micro-credit program of these leading NGOs, there has been several other small and localized NGO running micro-credit programs in Matlab HDSS area. The data show that 12 percent of the households have membership in those small NGOs. Membership percentage in both areas is similar with a slightly higher proportion of memberships in BRAC in the ICDDR,B area and membership in the smaller NGOs in the Government services area.

Table 36: Percent of households by membership in different NGOs by area, SES-2005

Membership with NGOs	Number			Percent		
	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area	Both Areas
Yes	9498	8984	18482	39.8	39.4	39.6
No	14396	13837	28233	60.2	60.6	60.4
Total	23894	22821	46715	100.0	100.0	100.0
Names of NGOs:						
-BRAC	3295	2389	5684	13.8	10.5	12.2
-Grameen	2946	3047	5993	12.3	13.4	12.8
-BRDB	551	271	822	2.3	1.2	1.8
-ASA	2047	1854	3901	8.6	8.1	8.4
-Smaller NGOs	2353	2778	5131	10.6	13.0	11.8

Mean and median duration, and the duration of membership in years in NGOs by area have been presented in Table 37. The table shows that mean months of household membership in BRAC is 52 months followed by BRDB (47 months) and ASA (42 months) in ICDDR,B area. The lowest mean months were evident for the newly formed or less familiar NGOs, which fall in the categories as 'Smaller NGOs'. In the Government service area, in contrast to ICDDR,B area, the highest mean months of household memberships were found in the BRAC and BRDB (48 months each) followed by ASA (40 months). The table also shows that rate of new memberships are increasing in BRAC, Grameen, ASA, and even in smaller NGOs, but decreasing in BRDB. Forty to 50 percent of the memberships in BRAC, BRDB and ASA in the ICDDR, B area has more than 4 years involvement in micro-credit activities. The Grameen and other smaller NGOs activities are recent compared to three other leading NGOs. In the Government service area, NGOs activities are comparatively recent compared to ICDDR,B area.

Table 37: Duration of membership of the household in the NGO by area, SES-2005

Name of NGO	Duration in months							Total
	Mean	Median	<12	12-23	24-35	36-47	48+	
ICDDR,B area								
-BRAC	52.2	36.0	15.1	13.7	16.0	11.4	43.8	3295
-Grameen	29.9	24.0	27.6	17.0	15.8	18.0	21.6	2946
-BRDB	47.0	48.0	9.8	12.0	14.3	12.5	51.4	551
-ASA	41.9	36.0	20.3	12.3	14.1	12.7	40.7	2281
-Smaller NGOs	26.4	24.0	22.6	25.0	23.4	13.9	15.1	2353
Government area								
-BRAC	48.4	36.0	18.3	14.1	13.3	10.8	43.6	2389
-Grameen	30.7	24.0	23.7	18.3	19.9	15.2	23.0	3047
-BRDB	47.9	36.0	8.9	22.5	17.7	11.8	39.1	271
-ASA	39.9	27.0	20.6	15.4	17.1	11.9	34.9	2161
-Smaller NGOs	27.3	24.0	28.0	19.0	19.5	13.2	20.3	2778

5.8.2 Shortage of food supply

Overall shortage of food supply reported in the SES-2005 was about 11 percent, i.e. 11 percent of the households reported to have shortage of food at some point of time during the last 12 months. Food shortage in the ICDDR,B area was slightly higher than in the Government service area (12.3% vs.9.1%). Food shortage data presented in Table 38 reveals that 46 percent of the total food shortage households have shortage spread over 1-3 months, and around 22 percent household's food shortage spread over 10-12 months, i.e. yearlong food shortage. The same table also demonstrates that short-range food shortage is higher in the ICDDR,B area, while long-range food shortage is more evident in the Government services area.

Table 38: Distribution of food crisis months by area, SES-2005

Food crises/ Enough food	ICDDR,B area	Government area	Both areas
No	12.3	9.1	10.7
Yes	87.7	90.9	89.3
Total	23894	22821	46715
In month (If “No”)			
1	11.2	11.4	11.3
2	17.0	15.5	16.4
3	18.9	16.9	18.1
4-6	30.3	25.0	28.1
7-9	4.2	3.8	4.1
10-12	18.4	27.4	22.1
All (%)	100.0	100.0	100.0
Total	2930	(2086)	5016

Table 39 presents actual number of days that a household had shortage of food. It reveals that 41 percent of the households reported to had not have enough food for 1-15 days and 26 percent did not have enough food for a month in both the areas. Around 5 percent of the households reported to have shortage of food throughout 6-12 months. Both areas are similar in terms of total days of food shortage. Table 40 reveals that asset quintiles have consistent inverse relationship with food shortage. Almost 50 percent of the food shortage households fall within the poorest quartile followed by the second poorest quartile with 27 percent.

Food shortage months by asset quintile reveals (Table 40) that most of the food shortage continued for 1-3 months, which is true for all quintiles. As expected, long-term food shortage is higher among poor quintiles. However, longer food shortage among the poorest is more evident in the ICDDR,B area. Food shortage by sex of the household heads is presented in Table 41. It shows that short-term food shortage is more prevalent among male-headed households, while long-term food shortage is more prevalent among female-headed households.

Table 39: Distribution (%) of food crisis in days by area, SES-2005

No food (actual days/months)	Percent		
	ICDDR,B area	Government area	Both areas
1-15 days	42.6	39.6	41.4
16-30 days	25.5	27.1	26.1
1-2-months	14.4	18.7	16.2
3-5 months	12.3	10.0	11.4
6-8 months	3.7	3.1	3.5
9-12months	1.5	1.5	1.5
Total	2942	2091	5033

Table 40: Duration of food shortage months by asset index quintile and area, SES-2005

No food (in months)	Poorest quintile	2 nd poorest quintile	3 rd poorest quintile	2 nd rich quintile	Rich Quintile
ICDDR, B area	48.1	26.6	15.5	7.2	2.6
Government area	53.5	28.1	11.4	5.9	1.1
ICDDR, B area:					
1-3	42.1	50.7	52.9	52.8	53.3
4-6	30.5	27.7	31.5	34.4	33.3
7-9	4.5	4.4	3.7	3.3	4.0
10-12	23.0	17.2	11.9	9.4	9.3
Total	1410	779	454	212	75
Government area:					
1-3	40.5	43.1	56.5	51.2	50.0
4-6	26.4	24.0	20.7	24.4	31.8
7-9	3.6	3.9	4.6	3.3	4.5
10-12	29.5	29.0	18.1	21.1	13.6
Total	1117	587	237	123	22
Both areas:					
1-3	41.4	47.4	54.1	52.2	52.6
4-6	28.7	26.1	27.8	30.7	33.0
7-9	4.1	4.2	4.1	3.3	4.1
10-12	25.9	22.3	14.0	13.7	10.3
Total	2527	1366	691	335	97

Table 41: Distribution of food shortage months by sex of the head of the households, SES-2005

No food months	Number		Percent	
	Male head	Female head	Male head	Female head
1-3	1792	501	47.1	41.2
4-6	1086	323	28.6	26.6
7-9	146	57	3.8	4.7
10-12	777	334	20.4	27.5
Total	3801	1215	100.0	100.0

CHAPTER SIX

SUMMARY AND CONCLUSIONS

The Matlab Health Demographic Surveillance System has been generating high-quality vital registration data since 1966. The value of the surveillance data has increased further because of its capacity to link with data of all other socio-economic censuses, as well as other survey data conducted in this area. Maintenance of such surveillance, along with linkage to socio-economic data, has provided immense opportunities to conduct longitudinal analysis on important policy issues that have become very useful for a country like Bangladesh where registration of vital events is incomplete. The following paragraphs summarize the main findings of the SES-2005. The major objective of the SES-2005 is to capture socio-economic status of the population living in the HDSS area. While doing so, a few populations related issues would also be highlighted.

The population in both the ICDDR, B and Government service areas has been increasing, but the pace of increase has slowed down in recent years in both areas with a much slower rate of increase in the ICDDR,B area compared to the Government service area. The decline in the population growth has also been reflected in the household size. As expected, the decline in the household size was faster in the ICDDR, B area than in the Government service area.

The slowing down of the population growth has affected the age structure in ICDDR, B and Government service areas: decline in the proportion of young population, increase in the middle-aged and old-aged populations. Such change in age structure is also reflected in the dependency ratio. The dependency ratio has been declining in the ICDDR,B area faster comparing to Government service area. By 2005, the difference in dependency ratio between ICDDR,B and Government service area has reduced to 5 percentage points.

A substantial improvement is evident in the education level. The proportion illiterate declined to 30 percent from its earlier level of 69 percent in 1974 with both areas showing similar trends. The proportion receiving higher education has also been substantially increased. Significant reduction is evident in the male-female difference in education. The sex differential for education, especially 7 or more years of education, which was very high in the earlier periods, has also been substantially reduced by 2005.

Ownership of agricultural land has drastically reduced. Seventy five percent of the households were reported to be virtually landless. The pattern of employment has

also shifted from predominantly farming to concentrate more in agricultural labour or other daily labour and business. Most of the households in HDSS area have now adopted wide-ranging occupations for their earning. Only 15 percent of the households reported to have income from one source only and about 25 percent of the households reported to have dependency on remittances either from the country or from outside. However, employment pattern of the household heads were almost similar in both the areas.

Improvement over the last 30 years is evident in terms of all other economic information collected in the SES-2005. For example, 99 percent of the households use corrugated iron sheet for roof and 66 percent of the households use corrugated iron sheet for the wall. Ownership of household articles has become even better. Sleeping on *khat* (wooden bed) is almost universal, as 96 percent of the households use some form of wooden furniture for their sleeping. More than 80 percent have blankets and hurricanes while 70 percent of the households own mattresses. Interestingly, radio ownership shows a declining trend until 2005, but ownership of television has increased from 7 percent in 1996 to 22 percent in 2005. Lastly, 34 percent of the households own fans, 13 percent possess mobile telephones and 3 percent households own refrigerators. Possession of these items was fairly similar between ICDDR,B area and Government service area.

Non-Government Organizations have established a wide network of micro-credit operations throughout the country. In Matlab HDSS area, 49 percent of the households have NGO membership, and some of these memberships (BRDB) are as old as 20 years. However, those cases are very few. Situation of food shortage in this area is around 10 percent. Of them 46 percent have 1-3 month's food shortage and about 22 percent have yearlong food shortage.

Finally, the difference between the two areas in terms of these households socio-economic status is not very high though exists in some cases. Socio-economic status of Matlab HDSS area found in 2005 Census was in some cases similar to that of national level and in some cases turn out to be better. Similarity was evident in cases of drinking water, sanitation facility, construction materials used for roof and wall, and household assets but better in terms of food supply (Mitra, et. al. 2005).

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APPENDIX A.1

Questionnaires (SES)

Matlab Socio-Economic Survey-2005
ICDDR,B

Bari Code										
CID Household Head										
RID Household Head										
Information relating Land:										
S.1 How much land do you owned? a. Homestead (including ponds & ditch) b. Agricultural land	decimal			Kani	gonda	kora				
S.2 Sources of Income										
a) During the last 12 Months what was the sources of income of your household ?					1	Agriculture (own land)	1	2		
					2	Agriculture (share crops)	1	2		
					3	Mortgage/ Kot/ Poshani (In/ Out)	1	2		
					4	Day labourer	1	2		
					5	Catching fish& selling fish	1	2		
					6	Cattle/chicken/duck farm	1	2		
					7	handicraft	1	2		
					8	Tailoring works	1	2		
					9	Business	1	2		
					10	Service	1	2		
					11	Pension	1	2		
b) What was the main source? Sl. No. <input style="width: 50px;" type="text"/>					12	Remittance(within country)	1	2		
					13	Remittance (other country)	1	2		
					14	Food for work	1	2		
					15	VGD/old age/destitute allowance	1	2		
					16	Renting house/shop	1	2		
					17	Others _____	1	2		
S.3										
a) Some households may not have food for all members for three times everyday for all times. Has your household been able to have food for all members for three times everyday for all months of the last year?					Yes				1	
					No				2	
					If No. go to next question					
b) Among your family members, for how many days you could not eat three times a day full fed in the last year due to shortage of food?					Months		Days			

SES-2005

S.4 Number of dwellings		Numbers			
S.5 Materials used for the main dwelling (Check before write)		1=Pacca/Sami Pacca	Roof	Wall	Floor
		2=Tin			
		3=Tin and Bamboo			
		4=Tin & others			
		5=Bamboo & oth.			
		6=Kachha (mud)			
		7=Wood			
		8=Others			
				Yes	No
S.6	Do you have the following commodities in your house?	1	Cow or goat	1	2
		2	Fishing net	1	2
		3	Chicken/Duek	1	2
		4	grocessary Shop	1	2
		5	Rickshow/Van	1	2
		6	Modern Agricultural equipment	1	2
		7	Engine Boat for cvarrying goods and passenger	1	2
		8	Fishing boat	1	2
		9	Boat	1	2
		10	Khat/chowki	1	2
		11	Quilt/blanket	1	2
		12	Mattres	1	2
		13	Hurricane	1	2
		14	chair/table	1	2
		15	Dining table	1	2
		16	Almerah/Showcase	1	2
		17	Sofaset	1	2
		18	Television	1	2
		19	Radio/tape recorder	1	2
		20	watch/wallclock	1	2
		21	Telephone/Mobile	1	2
		22	bicycle	1	2
		23	Motor cycle	1	2
		24	Frig	1	2
		25	Fan	1	2
		26	Sewing Machine	1	2

SES-2005

S.7	a). Are you or any one in your household be the member of and NGO/samity (Yes= 1, No= 2)					
	If No, go to Q S.8					
				Years	Months	
	b). If Yes, (give tickmarks in the first box) and ask for how many years and months they were the member of that samity/NGO. (write in years and months)	1	BRAC			
		2	Grameen Bank			
		3	BRDB			
		4	ASA			
5		Other NGO/ Samity, specify:				
5.a						
5.b						
5.c						
				Male	Female	
S.8	What type of latrine are you using? (Check it before write)					
	1	Septic tank/ modern toilet			1	2
	2	Water sealed/ (closed tank)			1	2
	3	Water sealed/ (not closed tank)			1	2
	4	Pacca latrine (open tank)			1	2
	5	Kacha latrine (open)			1	2
	6	others (specify)			1	2
				Dry	Rainy	
S.9	What is the main sources of drinking water in dry and rainy season					
	1	Tubewell (Green)			1	2
	2	Tubewell (Red)			1	2
	3	Tubewell (not yet checked)			1	2
	4	Pond			1	2
	5	River			1	2
	6	Ditch/canal			1	2
	7	PSF/RSF			1	2
	8	Three pitchers			1	2
	9	Rain water			1	2
	10	Other filter water			1	2
	11	Pipe/ Tap/ Supply water			1	2
	12	Others (specify)			1	2
	13	Unknown			1	2

Respondant Individual Number

--	--

Signature of CHRW

Code

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Signature of FRS

Code

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SES-2005

APPENDIX A.2

Questionnaires (Individuals)

MATLAB SOCIO-ECONOMIC SURVEY - 2005, ICDDR,B
(Individual Information)

DATE OF INTERVIEW :

Page#

VILLAGE : VB8 VILLAGE NAME : FARAZIKRANDI
 BARI# : BARI NAME :

HOUSE HOLD :
 RELIGION :

Ind	Name	S Relation e to H.H. x	Marr stat	Member's Reg. No.	Date of birth DD/MM/YY	Education: Age >5 yrs Type Yrs.	Occupation :	Ever marr. women weat*	Remarks
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									

*Code: 1-Kamiz, 2-Maxi, 3-Both

APPENDIX B

Table B.1: Distribution of population of secular education by year of schooling, age, sex, and area, SES-2005

Years of schooling	Age (in years)									
	Male					Female				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
ICDDR,B area:										
No schooling	1427	364	2707	2054	6552	1185	331	4808	4568	10892
1yr	1364	129	374	221	2088	1309	48	412	149	1918
2yrs	1432	374	978	521	3305	1387	205	1036	408	3036
3yrs	1214	410	791	419	2834	1367	256	938	336	2897
4yrs	1027	571	937	514	3049	1195	535	1391	395	3516
5yrs	900	1257	1831	1007	4995	942	1207	2749	808	5706
6yrs	466	606	472	273	1817	607	811	622	88	2128
7yrs	262	651	534	232	1679	375	1145	786	84	2390
8yrs	159	898	842	386	2285	173	1408	1012	127	2720
9yrs	53	1550	1257	523	3383	54	2724	1302	55	4135
10yrs	0	1154	1459	697	3310	0	1198	1188	43	2429
12+yrs	0	362	2054	627	3043	0	276	1072	15	1363
Total	8304	8326	14236	7474	38340	8594	10144	17316	7076	43130
Government area:										
No schooling	1797	497	3469	2691	8454	1473	347	5698	5898	13416
1yr	1650	189	458	276	2573	1708	77	552	230	2567
2yrs	1475	481	984	553	3493	1455	222	1034	391	3102
3yrs	1249	505	770	391	2915	1338	339	899	286	2862
4yrs	1149	763	928	579	3419	1325	692	1424	384	3825
5yrs	883	1596	1689	892	5060	965	1536	2468	676	5645
6yrs	412	737	535	246	1930	519	1056	645	77	2297
7yrs	266	842	512	208	1828	296	1329	737	58	2420
8yrs	79	805	686	290	1860	90	1383	842	90	2405
9yrs	16	1497	1098	434	3045	29	2449	1140	38	3656
10yrs	0	814	1085	510	2409	0	855	873	22	1750
12+yrs	0	179	1237	331	1747	0	149	493	2	644
Total	8976	8905	13451	7401	38733	9198	10434	16805	8152	44589

Table B.2: Distribution of population of madrasa education by year of schooling, age, sex, and area, SES-2005

Years of schooling	Male					Female				
	7-14	15-24	25-49	50+	Total	7-14	15-24	25-49	50+	Total
ICDDR,B area:										
No schooling	152	29	13	7	201	67	5	10	6	88
1yr	131	6	1	0	138	63	1	1	1	66
2yrs	103	20	2	0	125	52	0	1	1	54
3yrs	72	21	6	5	104	39	7	1	0	47
4yrs	55	23	4	3	85	28	19	1	0	48
5yrs	74	43	13	12	142	54	39	2	2	97
6yrs	35	51	5	3	94	31	43	3	0	77
7yrs	16	66	5	2	89	25	69	4	0	98
8yrs	2	69	15	10	96	5	87	9	0	101
9yrs	0	82	35	10	127	5	122	7	0	134
10yrs	0	83	63	16	162	0	48	38	1	87
12+yrs	0	19	132	46	197	0	5	6	0	11
Total	640	512	294	114	1560	369	445	83	11	908
Government area:										
No schooling	133	21	4	1	159	40	2	1	1	44
1yr	159	11	9	2	181	62	2	0	0	64
2yrs	131	21	4	2	158	43	4	1	0	48
3yrs	121	31	7	6	165	50	10	3	1	64
4yrs	92	49	12	2	155	73	22	3	1	99
5yrs	61	78	18	14	171	60	54	11	3	128
6yrs	16	70	11	4	101	41	97	13	1	152
7yrs	9	75	11	11	106	24	124	12	1	161
8yrs	4	72	18	12	106	5	104	19	2	130
9yrs	2	75	33	15	125	2	141	22	0	165
10yrs	0	82	69	23	174	0	109	57	0	166
12+yrs	0	25	150	32	207	0	19	41	0	60
Total	728	610	346	124	1808	400	688	183	10	1281

Table B.3: Distribution of population (%) by years of schooling, sex and area in four Censuses

Education (year)	Male			Female		
	Both areas	ICDDR,B area	Government area	Both areas	ICDDR,B area	Government area
1974 Census:						
0	61.2	59.1	63.4	72.7	70.5	74.9
1-3	17.9	18.5	17.4	13.9	14.9	13
4-6	10.3	10.9	9.7	11.2	12.2	10.2
7-9	4.6	4.8	4.3	1.7	1.8	1.5
10+	6	6.7	5.2	0.5	0.6	0.5
N	64,656	32,720	31,936	63,262	31,841	31,421
1982 Census:						
0	49.0	46.4	51.6	70.9	68.2	73.6
1-3	19.0	19.3	18.6	12.3	13.0	11.4
4-6	17.7	18.6	16.7	13.4	14.7	12.0
7-9	8.5	9.1	7.9	2.9	3.2	2.5
10+	5.9	6.5	5.2	0.6	0.8	0.4
N	73,841	37,807	36,034	73,257	37,533	35,724
1996 Census:						
0	33.4	32.9	33.9	47.4	47.3	47.5
1-3	22.3	20.6	24.1	18.5	17.0	20.1
4-6	21.4	21.1	21.8	20.6	20.8	20.4
7-9	11.9	12.6	11.1	9.3	9.8	8.7
10+	11.0	12.8	9.0	4.2	5.0	3.4
N	86,218	44,134	42,083	89,428	45,894	43,535
2005 Census:						
0	26.1	24.9	27.4	34.0	33.3	34.7
1-3	20.5	19.5	21.6	16.9	16.2	17.5
4-6	23.9	23.1	24.6	23.9	23.3	24.5
7-9	16.7	17.3	16.1	18.6	19.3	18.0
10+	12.8	15.2	10.3	6.6	7.8	5.3
N	88,124	44,147	43,977	99,324	49,660	49,664

Table B.4: Percentage of the household population age 7-24 years attending school, by age, sex, and area in different Censuses

Age	Male			Female		
	ICDDR,B area	Government area	Both area	ICDDR,B area	Government area	Both Area
1974 Census:						
7-10	55.0	50.5	52.8	43.1	44.6	43.8
11-15	60.8	59.5	60.1	39.4	42.1	40.7
7-15	58.3	55.8	57.1	41.0	43.1	42.0
16-20	37.6	33.6	35.6	5.0	4.3	4.7
21-24	20.8	17.4	19.1	0.4	0.3	0.4
1982 Census:						
7-10	48.6	37.9	43.4	46.2	30.4	38.6
11-15	61.3	54.0	57.7	53.6	43.5	48.7
7-15	55.3	46.4	51.0	50.1	37.4	44.0
16-20	33.8	31.6	32.7	13.4	10.3	11.9
21-24	14.6	13.7	14.2	2.0	1.0	1.5
1996 Census:						
7-10	79.3	83.0	81.2	79.2	82.4	80.9
11-15	81.7	82.5	82.2	86.3	86.6	86.4
7-15	80.6	82.8	81.7	82.9	84.5	83.7
16-20	49.9	48.3	49.1	48.2	46.0	47.1
21-24	30.2	27.2	28.8	13.9	11.5	12.8
2005 Census:						
7-10	92.5	89.3	90.8	94.6	91.9	93.3
11-15	83.5	81.4	82.3	88.5	87.2	87.8
7-15	87.6	84.8	86.2	91.3	89.2	90.2
16-20	48.3	42.7	45.4	38.1	34.3	36.2
21-24	19.7	16.4	18.0	7.4	5.1	6.3

Table B.5: Distribution of households (%) by construction material (roof) and area in four Censuses

Material	Both areas	ICDDR,B area	Government area
1974 Census:			
Tin	78.3	77.9	78.7
Others	21.7	22.1	21.3
N	28,093	14,053	14,040
1982 Census:			
Tin	83.2	82.9	83.6
Others	16.8	17.1	16.4
N	31,507	16,087	15,420
1996 Census:			
Tin	95.9	96	95.9
Others	4.1	4.0	4.1
N	39,814	20,917	18,897
2005 Census:			
Tin	99.6	99.4	99.8
Others	0.4	0.6	0.2
N	46,715	23,894	22,821

Table B.6: Distribution of households (%) by construction material (wall) and area in three Censuses

Material	Both areas	ICDDR,B area	Government area
1974 Census:			
Tin	7.5	8.0	7.0
Tin mixed	20.4	19.6	21.1
Others	72.1	72.4	71.9
N	28,078	14,041	14,037
1982 Census:			
Tin	10.5	11.1	9.9
Tin mixed	16.9	17.2	16.5
Others	72.6	71.7	73.6
N	31,507	16,087	15,421
1996 Census:			
Tin	29	31.9	25.8
Tin mixed	19.1	19	19.3
Others	51.9	49.1	54.9
N	39,775	20,896	18,879
2005 Census:			
Tin	69.7	69.0	70.4
Tin mixed	17.6	16.1	19.1
Others	12.7	14.9	10.5
N	46,715	23,894	22,821

Table B.7: No food months by asset index quintile and area, SES-2005

No food in months	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile
ICDDR,B area:					
1-3	593	395	240	112	40
4-6	430	216	143	73	25
7-9	63	34	17	7	3
10-12	324	134	54	20	7
N	1410	779	454	212	75
Government area:					
1-3	452	253	134	63	11
4-6	295	141	49	30	7
7-9	40	23	11	4	1
10-12	330	170	43	26	3
N	1117	587	237	123	22
Both areas:					
1-3	1045	648	374	175	51
4-6	725	357	192	103	32
7-9	103	57	28	11	4
10-12	654	304	97	46	10
N	2527	1366	691	335	97

APPENDIX C

Field Manuals and Coding Instructions Guidelines on SES questionnaire Matlab Socio-economic Survey, 2005

Please write down the *bari* code, household head's CID and RID in the first table of the questionnaire.

1. Information on Land

Collect information on homestead and agricultural land (cultivable). The respondent may reply using either of the two units to provide information on amount of land owned – a) decimal, b) *kani, gonda, and kora*. Record the amount of land in decimal if the respondent can provide the information in decimal unit, otherwise record it in *kani-gonda-kora*. Do not record the amount of land owned using both the units simultaneously. All the boxes must be filled up while recording the amount of land owned. The amount of land will not be fraction and be rounded up to the nearest integer. For example, write down '1' for the figures (amount of land) greater than or equal to 0.5 decimal/*kora* and '0' for less than 0.5.

(a) Homestead: Ask the amount of homestead land owned by the household, which includes *nal*, field and ditch-pond. If the household members own more than one homestead, include those also while recording. For the persons living in rented house, record the amount of homestead land they own in somewhere else. Also include the amount of land inherited from his/her in-law's or maternal grandfather's side. If a currently living father has orally allocated the homestead among his sons/daughters and they are residing in that land then record the amount of land under respective his sons/daughters.

(b) Agricultural land: Agricultural land refers to the amount of land household members own altogether for cultivation. Even if the agricultural land is used for growing vegetables, it is to be regarded as agricultural land. Moreover, pond and garden not adjacent the *bari* will be regarded as agricultural land. If the land is rented out either for money or on the basis of sharing crop then the land will be included as agricultural land of the owner. On the other hand, if the land is rented-in either for money or on the basis of sharing crop then the land will not be included as agricultural land of the respondent. For those who are living in rented house but own agricultural land anywhere else, record the amount of agricultural land under their ownership. Also include the amount of inherited agricultural land from either of the respondent's in-law's or maternal grandfather's side. If a currently living father has orally allocated the agricultural land among his son/daughter and they are exercising their ownership, then record the amount of agricultural land under respective sons/daughters.

2. Source of Income

(a) Collect the information about sources of income of the household members in last 12 months. There may exist more than one income source and each income source circle the appropriate serial number.

- In serial number 7, handicraft includes smiths, masons and cottage industries.
- In serial number 8, tailoring refers to work with sewing machine to earn livelihood.
- In serial numbers 12 and 13, record regular/irregular monetary support to the household from someone outside the family (as per surveillance definition). Circle serial number 12 if the support comes from within the country & circle serial no.13 if it comes from outside the country.
- If a member of the household is engaged in service, business or any kinds of occupation outside the project area, then this occupation will be considered as his/her main source of income.

(b) **Main Source of Income:** Write down the serial number in the blank space of 2(b) for the household's income source that earned most among other sources in last 12 months.

3. (a) Please ask the respondent, if ~~is~~ there is any food shortage in the household in last 12 months. Ask the respondent exactly as it is written in question 3(a) (within parentheses or outside). Circle the box for 'Yes' or 'No' appropriately and if 'Yes' then skip to question 4.

(b) Record the number of days and months in last 12 months the respondent's family members could not eat three times a day with full content due to food shortage. Write it down ~~in~~ in months and days. For example, if the members of a household could not eat three times a day with full content, then record 02 in month box and 05 in day box. Note that this kind of questions is sensitive to many persons so ask this question with appropriate concern.

4. Dwelling

Dwelling refers to the room in which the family members reside (stays/sleeps at night). If the family members hold night (reside) in the 'drawing room' then it will also be considered as a dwelling. If the 'drawing room' is not owned by a single family (i.e. shared) then it will not be considered as a dwelling. Do not include the kitchen, cowshed and *Dheki* (a tool used for rice grinding) room as a dwelling.

5. Main Dwelling

If a household has more than one dwelling, the main dwelling will be the one, which is considered as main by the household members. Usually the largest room in the household is considered as the

main dwelling. If two brothers of a household live in two similar dwellings then the main dwelling will be the one in which the head of the household (of two brothers) lives in.

Record the appropriate codes in the box for the construction material of wall, roof and floor of the main dwelling. Note that if among the four walls three are *pacca* and one is made of tin, then record the construction material of wall as tin, i.e. focus on the inferior construction material.

6. Commodity and Asset of the Household

26 household items and assets are listed in the questionnaire. Read the name of all the items and circle the appropriate codes for items owned by the household.

7. (a) If the household members are involved with any of the organizations/NGOs listed here then circle 'Yes', otherwise circle 'No' box.

(b) If the household members are involved with any of the organizations/NGOs listed here, then circle the appropriate code and record the duration of membership in years and months. If the household members are involved with other organization/NGO, which is not mentioned here, then write down the name of that organization/NGO in the 'others' column. If two or more household members are involved with different organizations /NGOs, then record the duration of membership for each organization/NGO in years and months. If two or more household members are involved with the same organization/NGO, then record the information of the member with longest duration.

8. Type of Latrine

Please circle the appropriate latrine code in the male and female column according to the type of latrine used by male and female respectively. If both male and female are using same type of latrine, write down same code for both the sexes. Note that if both male and female members of the household are using both hygienic and unhygienic latrines then circle the code for unhygienic latrine. For example, if all the members of the household are using modern and *kacha* latrine then the code of *kacha* latrine will be circled.

9. Source of Drinking Water During Dry and Rainy Seasons

Please circle the appropriate code for the general source of drinking water in the 'dry' and 'rainy' columns. If the members of the family drink red tube well water or pond water filtered by three pitchers for all the year round then circle code of three pitchers for both 'dry' and 'rainy' seasons.

Respondent's Individual Number:

Write down the individual number of the household from whom most of the information is collected. Sometimes elder persons from other families may help by giving some information, especially on the amount of land ownership. In such cases do not record their individual number.