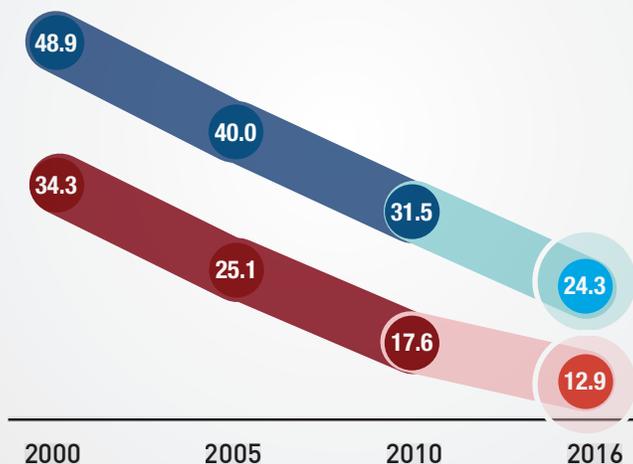




Preliminary Report on Household Income and Expenditure Survey 2016



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STATISTICS AND INFORMATICS DIVISION (SID)
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PRELIMINARY REPORT ON HOUSEHOLD INCOME AND EXPENDITURE SURVEY 2016

October, 2017



বাংলাদেশ পরিসংখ্যান বুরো
Bangladesh Bureau of Statistics
Statistics and Informatics Division
Ministry of Planning
Government of the People's Republic of Bangladesh



Minister
Ministry of Planning
Government of the People's Republic of
Bangladesh

Message

I am delighted to know that the Bangladesh Bureau of Statistics (BBS) has accomplished the Household Income and Expenditure Survey (HIES) 2016 and is going to publish the preliminary report on it. This basic household survey will provide enormous data to analyze our socio-economic perspectives at the very micro level.

HIES is the primary and largest household survey in Bangladesh which provides credible information not only on income and expenditure but also on many other socio-economic issues. Hence, HIES, 2016 will certainly support the data revolution of Sustainable Development Goal by generating information for several SDG indicators especially for SDG-1: 'End Poverty in all its forms everywhere'. Furthermore, our poverty reduction interventions, such as, social safety nets and other programmes will be benefitted from this latest household data. The findings of HIES, 2016 will also be useful to monitor the 7th Five Year Plan implementation and SDGs achievement.

I would take the opportunity to thank the Secretary, Statistics and Informatics Division; Director General, BBS and Project Director, HIES Project for conducting this substantial survey and bringing out the preliminary report. Thanks are also due to the World Bank and World Food Programme for extending their technical and financial support to the project. The contribution of the Steering Committee and Technical Committee is acknowledged for providing their guidance all through the survey.

Dhaka, October, 2017

AHM Mustafa Kamal, FCA, MP



State Minister
Ministry of Finance
and
Ministry of Planning
Government of the People's Republic of
Bangladesh

Message

I am happy to see that Bangladesh Bureau of Statistics (BBS) is going to publish the preliminary report of Household Income and Expenditure Survey (HIES) 2016. It is one of the important surveys of national interest as it provides credible information on poverty, income, expenditure, consumption and nutrition. It also provide information on housing, education, health, social safety nets, crisis coping, migration and remittance etc.

The number-1 goal of SDG is “End poverty in all its forms and everywhere”. The data of HIES will be used to generate a number of indicators of SDG-1. The finding will also be very useful in monitoring the progress of other SDGs and the 7th Five Year Plan. Other stakeholders will use the data for planning different programmes and policies for poverty reduction of the country.

I like to thank the World Bank and World Food Programme for providing technical and financial support to this important project. Thanks are also due to the Secretary Statistics and Informatics Division, Director General BBS and Project Director, HIES Project for conducting the survey and bringing out this preliminary report within the shortest possible time. The Steering and Technical Committee members deserve special thanks for their contribution in finalizing the sample design, questionnaire, and survey findings.

Dhaka, October, 2017


M.A. Mannan, MP



Secretary
Statistics and Informatics Division (SID)
Ministry of Planning
Government of the People's Republic of
Bangladesh

Foreword

Bangladesh Bureau of Statistics (BBS) of the Statistics and Informatics Division (SID) conducts a number of surveys periodically to meet the data needs of the planners, policy makers, researchers and other stakeholders. Household Income and Expenditure Survey (HIES) is one of the core surveys of BBS. It provides valuable information on income, expenditure, consumption, nutrition, coverage of social safety net, access to micro-credit and remittance. It is the standalone survey to provide data on poverty and its correlates. HIES data are also used to determine weights for the Consumer Price Index (CPI) and Expenditure based GDP.

The sample size of HIES 2016 has been extended to a large extent to provide quarterly poverty estimates and poverty rates at district level from the observed data for the first time. It is the ever large HIES conducted in Bangladesh. Latest technology is adopted for data collection and instant transfer to headquarters. Data were collected manually and entered digitally at the field level.

World Bank and World Food Programme provided technical and financial support for conducting the survey. They helped for training the master trainers, data entry programme and estimating poverty lines. We acknowledge their contribution in this important survey.

My thanks and appreciation to Director General, BBS, Director, National Accounting Wing and Project Director, HIES Project for their relentless efforts in conducting the survey and bringing out this preliminary report.

Dhaka, October, 2017

K M Mozammel Hoq



Director General
Bangladesh Bureau of Statistics
Statistics and Informatics Division
Ministry of Planning

Preface

Bangladesh Bureau of Statistics (BBS) has been conducting Household Income and Expenditure Survey (HIES) since 1973-74. The last survey was conducted in 2010 with 12,240 sample households.

The HIES 2016 was done in a very large sample of 2304 Primary Sampling Units (PSUs) comprising 46080 households. Thus, HIES 2016 covered nearly four times higher sample than 2010. This facilitated to provide quarterly estimates of poverty and poverty rates at the district level. The field operation was done during April, 2016 through March, 2017.

Special measures have been taken for quick data entry at the field level using laptops and onward transmissions to Dhaka headquarters using dropbox. Strong quality control measures were taken for getting quality data from the field. Two weeks training was arranged in the headquarter for master trainers who were trained by the experts of World Bank who in turn trained the enumerator cum data entry operators and supervisors at the division level. In addition, refreshers training was arranged for the enumerator cum data entry operators at the headquarters to address their problems in data collection.

Thanks to the World Bank and World Food Programme for their financial and technical support to HIES 2016. Thanks is also due to the Director National Accounting Wing, Project Director HIES Project, Ms. Benu Bidani, Practice Manager, World Bank (WB), Nobuo Yoshida, Lead Economist, WB, Ms. Maria Eugenia Genoni, Senior Economist, WB, Ms. Monica Yanez-Payans, Economist, WB, Mr. Faizuddin Ahmed, Senior Poverty Consultant, WB, Ms. Arifeen Akter, Senior Programme Officer, WFP, Mr. Md. Abdul Latif, Deputy Director, HIES project and Mr. Maksud Hossain, Statistical Officer, HIES project for their hard work in bringing out this preliminary report. The contribution of the Steering Committee, Technical Committee, Working Group and Local Consultant Mr. Md. Shamsul Alam is acknowledged for their valuable input in analytical improvement of the report.

Suggestions and Comments for further improvement of the report in future are encouraged.

Md. Amir Hossain

Dhaka, October, 2017

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Abbreviations

ASA	Association for Social Advancement
BBS	Bangladesh Bureau of Statistics
BRDB	Bangladesh Rural Development Board
BRAC	Bangladesh Rural Advancement Committee
CBN	Cost of Basic Needs
CPI	Consumer Price Index
CI	Corrugated Iron
CV	Co-efficient of Variation
DCI	Direct Calorie Intake
EA	Enumeration Area
FFE	Food for Education
FFW	Food for Work
FPL	Food Poverty Line
GDP	Gross Domestic Product
GOB	Government of Bangladesh
GR	Gratuity Relief
GNP	Gross National Product
HCR	Head Count Ratio/Rate
H/H	Household
HIES	Household Income and Expenditure Survey
HSC	Higher Secondary Certificate
HQ	Head Quarter
IFS	Institutional Food Support
ICF	International Classification of functioning
IMR	Infant Mortality Rate
IMF	International Monetary Fund
Kcl	Kilo Calorie
KSS	Krishok Samabay Samity
LPL	Lower Poverty Line
IMPS	Integrated Multi-purpose Sample
LFS	Labour Force Survey
MFW	Money for Work
MDG	Millennium Development Goals
NGO	Non-Government Organization
OAA	Old Age Allowance
PG	Poverty Gap
PMS	Poverty Monitoring Survey
PRS	Poverty Reduction Strategy
PSU	Primary Sampling Unit
RMP	Rural Maintenance Programme
RSE	Relative Standard Error
RSO	Regional Statistical Officer/Office
SE	Standard Error
SPG	Squared Poverty Gap
SSN	Social Safety Nets
SSNP	Social Safety Nets Programme
TR	Test Relief
TFR	Total Fertility Rate
UPL	Upper Poverty Line
VGD	Vulnerable Group Development
VGf	Vulnerable Group Feeding
WB	World Bank

KEY FINDINGS

Key Findings	HIES 2016			HIES 2010		
	Total	Rural	Urban	Total	Rural	Urban
1. Total sample household	46,076	32,096	13,980	12,240	7,840	4,400
2. Average household size (number of persons)	4.06	4.11	3.93	4.50	4.53	4.41
3. Housing structure (head of household) roof materials (in percentage)						
Brick/cement	11.06	5.32	25.73	10.37	3.65	28.71
CI Sheet/wood	84.29	89.41	71.22	81.52	86.38	68.28
Straw/hay/bamboo/others	4.65	5.27	3.05	8.11	9.97	3.01
4. Housing structure (head of household) wall materials (in percentage)						
Brick/cement	30.50	20.24	56.77	25.12	13.59	56.59
CI Sheet/brick/wood	49.33	55.73	32.95	38.46	43.24	25.40
Mud/unburnt brick	11.02	13.57	4.50	16.72	20.57	6.22
Hay/bamboo/leaf/others	9.15	10.46	5.78	19.70	22.60	11.78
5. Source of drinking water (in percentage)						
Supply	12.01	2.14	37.28	10.62	1.47	35.57
Tube well	85.18	94.94	60.18	85.37	94.97	59.18
Others	2.81	2.92	2.54	4.01	3.56	5.25
6. Access to electricity to households (in percentage)	75.92	68.85	94.01	55.26	42.49	90.10
7. Access to toilet facilities to households (in percentage)						
Sanitary/pucca	61.37	53.27	82.12	51.03	41.84	76.12
Kancha	35.67	42.98	16.94	44.54	52.40	23.11
Open space/others	2.96	3.75	0.94	4.42	5.76	0.77
8. School enrollment aged 6-10 years (based on upper poverty line)						
Below poverty line	90.2	91.3	85.8	78.33	78.48	77.53
Above poverty line	95.0	94.4	95.1	88.99	87.92	91.70
9. Literacy rate (7 years & over)						
Both sex	65.6	63.3	71.6	57.91	53.37	70.38
Male	67.8	65.5	74.0	61.12	56.67	73.10
Female	63.4	61.2	69.3	54.80	50.21	67.67
10. Income (taka per month)						
Income per household	15,945	13,353	22,565	11,479	9,648	16,475
Income per capita	3,936	3,256	5,748	2,553	2,130	3,741
11. Expenditure (taka per month)						
Total expenditure per household	15,715	14,156	19,697	11,200	9,612	15,531
Consumption per household	15,420	13,868	19,383	11,003	9,436	15,276

Key Findings	HIES 2016			HIES 2010		
	Total	Rural	Urban	Total	Rural	Urban
12. Food intake (gram per capita per day)						
Rice	367.19	386.09	316.70	416.01	441.61	344.20
Wheat	19.83	17.44	26.22	26.09	23.38	33.69
Pulses	15.60	15.12	16.88	14.30	13.23	17.30
Vegetables	167.30	164.78	174.06	166.08	170.04	154.95
Fish	62.58	60.59	67.91	49.41	45.67	59.91
Meat	25.42	22.32	30.04	19.07	14.32	31.41
Egg	13.58	12.73	15.85	7.25	5.80	11.32
Milk & milk product	27.31	26.29	30.04	33.72	31.78	39.16
Fruit	35.78	32.24	45.23	44.80	42.73	50.59
<i>Protein</i>	63.80	63.30	65.00	66.26	65.24	69.11
13. Calorie (k. cal/capita/day)	2210.4	2240.2	2130.7	2318.3	2344.6	2244.5
14. Incidence of poverty						
Lower poverty line						
Head count (%)	12.9	14.9	7.6	17.6	21.1	7.7
Poverty gap	2.3	2.6	1.3	3.1	3.7	1.3
Squared poverty gap	0.6	0.7	0.4	0.8	1.0	0.4
Upper poverty line						
Head count (%)	24.3	26.4	18.9	31.5	35.2	21.3
Poverty gap	5.0	5.4	3.9	6.5	7.4	4.3
Squared poverty gap	1.5	1.7	1.2	2.0	2.2	1.3
15. Incidence of poverty based on the literacy of household head						
Lower poverty line						
Literate	7.1	9.0	3.6	9.2	12.4	3.3
Illiterate	15.8	17.0	11.4	25.1	27.2	15.6
Upper poverty line						
Literate	15.1	17.5	10.3	19.0	23.3	11.4
Illiterate	29.5	30.1	27.3	42.8	43.5	39.4
16. Incidence of poverty based on the sex of household head						
Lower poverty line						
Male	13.2	15.3	7.5	17.9	21.5	7.9
Female	10.4	11.3	8.0	14.6	17.3	5.5
Upper poverty line						
Male	24.8	27.1	18.8	32.1	35.9	21.7
Female	19.9	20.0	19.7	26.6	29.3	17.5

Key Findings	HIES 2016			HIES 2010		
	Total	Rural	Urban	Total	Rural	Urban
17. Number of beneficiaries persons in Social Safety Net Prorgammes (in percentage)	28.7	35.7	10.9	24.6	30.1	9.4
18. Number of disabled persons (in percentage)	6.94	7.27	6.04	9.07	9.63	7.49
19. Disability arising out of (in percentage):	Some	Severe	Fully unable	Some	Severe	Fully unable
	HIES 2016			HIES 2010		
(a) Eye sight	3.89	0.42	0.08	5.58	0.53	0.08
(b) Hearing	1.75	0.28	0.09	1.93	0.33	0.06
(c) Walking and climbing	1.40	0.46	0.17	1.84	0.53	0.07
(d) Remembering & concentrating	1.07	0.33	0.19	0.94	0.24	0.08
(e) Self care	0.88	0.36	0.29	0.57	0.30	0.08
(f) Speaking & communicating	0.80	0.32	0.31	0.52	0.24	0.09
20. Migration per household (in percentage)						
Total	11.22	12.98	6.72	12.28	13.72	8.33
Within Bangladesh	2.95	3.59	1.32	3.97	4.84	1.62
Outside Bangladesh	8.27	9.39	5.40	8.60	9.25	6.85
21. Financial inclusion of the households in the last 12 months (in percentage)						
Having a bank account	7.50	7.60	7.30	7.41	5.05	13.85
Having a deposit with micro/ financial institution	15.09	17.30	12.20	14.51	15.94	10.61
Having a deposit with informal financial institution	5.30	5.10	5.70	5.64	5.80	5.22
Having a loan account with financial institution and/or friends, etc.	29.30	32.70	22.10	32.03	35.08	23.70
22. Average amount of loans taken per household (in taka)	37,743	31,332	59,728	28,062	21,804	54,122
23. Number of households faced any sort of crisis* (in percentage)	0.86	1.04	0.40	0.84	1.03	0.30

* **Crisis includes any or more than any of such vulnerabilities:** drought/irregular rains, floods, landslides/erosion, excessive crop diseases/pests, excessive livestock diseases, unusually high price of agri. Inputs, unusually low price of Agri. Products, reduction low income due to factory layoff, less earning due to job loss of household members, serious accident/illness of income earners, serious accident/illness of other members, death of income earner, death of other household members, theft of money/valuable assets, theft of agri. Assorts/output (crop/livestock), conflict/violence, Fire/earth quake/tornado etc., Others.

Household Income and Expenditure survey 2016

Executive Summary

Poverty reduced substantially between 2010-2016: According to the findings of HIES 2016 poverty reduced substantially between 2010-2016. In 2010 the poverty head count rate, using upper poverty line, was 31.5% which reduced to 24.3% in 2016. Using lower poverty line head count ratio also reduced, it was 17.6% in 2010 which reduced to 12.9% in 2016. The poverty gap which measures depth of poverty using upper poverty line was 6.5% in 2010 which reduced to 5.0% in 2016, again the poverty gap using lower poverty line reduced from 3.1% in 2010 to 2.3% in 2016. The squared poverty gap (severity of poverty) using upper poverty line was 2.0% in 2010 which reduced to 1.5% in 2016. The same using lower poverty line was 0.8% in 2010 which reduced to 0.6% in 2016. There exists wide variation in poverty incidence in quarters of the year and also among districts of the country. The survey findings shows that poverty incidence using lower poverty line, the poverty rate in 31 districts is above national average (12.9%) and using upper poverty line the poverty incidence of 36 districts is above national average (24.3%).

Income and expenditure increased in 2016 compared to 2010: The monthly income of the households increased to tk 15,945 in 2016 from tk 11,479 in 2010. Similarly monthly household expenditure increased to 15,715 in 2016 from 11,200 in 2010. There exists variation in income between rural and urban areas of the country.

Level of living improved in 2016 compared to 2010: The level of living of households improved in 2016 in comparison with 2010. The wall materials of households with durable materials increased, brick/cement wall increased from 25.12% in 2010 to 30.50% in 2016. The C.I sheet/wood wall increased to 49.32% in 2016 from 38.46% in 2010. Improvement in roof materials was also observed during the period. The improved source of drinking water like supply and tube-well increased in 2016 compared to 2010. Use of improved excreta disposal system like sanitary and pucca (water sealed) toilet increased from 35.5% to 43.7% between 2010 to 2016 and pucca (notwater sealed) toilet increased from 15.5% to 17.7% during the period. Substantial increase in access to electricity is observed in 2016. It increased from 55.3% in 2010 to 75.9% in 2016. Use of mobile phone increased from 63.7% in 2010 to 92.5% in 2016. Access to Computer and e-mail also increased.

Improvement in education and enrollment: The literacy rate for population 7 years and over increased from 57.9% in 2010 to 65.6% in 2016. Female literacy rate increased from 54.8% in 2010 to 63.4% in 2016. Primary School enrollment increased to 93.5% in compared to 84.8% in 2010 and Secondary School enrollment increased from 77.8% to 84.3% during the period 2010-2016. The percentage of Government Primary School almost doubled in 2016 compared to 2010 with the nationalization of large number of primary schools in recent years. It increased to 80.20% in 2016 from 41.99% in 2010.

Access to social safety net increased: Access to social safety net which contribute in poverty reduction increased substantially during 2010-2016. In 2010 survey, the beneficiary households were considered with at least one SSNP, but this year both households and beneficiary were considered separately. The households and programme beneficiary under different SSNP was 24.6% in HIES 2010, whereas it increased to 27.8% households and 28.7% programme beneficiaries in HIES 2016. If one household has two beneficiaries were also considered separately in HIES 2016. The increase in SSNP beneficiary contributed in the reduction of poverty by the households in HIES 2016.

Chapter 1

Introduction

In spite of substantial reduction of poverty in recent years, poverty still remains as the major challenge of development in Bangladesh. Therefore, the 7th Five Year Plan (1916-2020) is aligned with Sustainable Development Goal-1 “End Poverty in All its form and Everywhere” planned to reduce poverty and extreme poverty to 18.6% & 8.9% respectively at the end of the plan period. In light of this, the measurement of poverty is essential to formulate programmes and policies for poverty reduction.

Household Income and Expenditure Survey (HIES) is the standalone data source for estimating household income, expenditure, consumption, income inequality and incidence of poverty in Bangladesh. Household Expenditure Survey (HES) is being conducted since the pre-liberation period in the territory now constituting Bangladesh. After the liberation of the country in 1971, the first round of HES was conducted in 1973-74. In the year 2000 the scope of the survey was broadened and accordingly it was renamed as Household Income and Expenditure Survey (HIES). It is heartening to note that 15 rounds of surveys have so far been conducted after liberation of Bangladesh. The present survey is the 16th in the series.

Over the years, improvements have been made in data collection, coverage and data analysis of the HIES. Recall method was followed in HES conducted between 1973-74 and 1981-82 for collection data on sources of income, expenditure on durable and nondurable goods and other consumption items. In 1983-84 survey, both recall and diary methods were introduced. Two types of questionnaires were developed for collecting data under these two methods. Under the recall method data were collected on income and nonfood expenditure with varying reference periods. Data on food consumption were collected daily by locally recruited diary keepers for one month. These two methods were followed in HES conducted in 1983-84, 1985-86, 1988-89 and 1995-96.

Data collection as well as data entry methods were further improved in HIES. In the year 2000, trained enumerators collected income, expenditure and consumption data. Data pertaining to daily consumption of food items were collected on day to day basis by the same enumerators who were deputed to the respective Primary Sampling Units (PSUs). Another innovative technique was followed in the HIES 2000 through the introduction of data entry into laptop computers at the field level by the enumerators themselves. This method facilitated correction of errors or inconsistencies, if any, by the enumerators at the field level.

In HIES 2000 and HIES 2005, lot of measures were taken for collecting detailed information on income in addition to those on expenditure and consumption. Accordingly, from the year 2000 this survey was termed as Household Income and Expenditure Survey (HIES) as mentioned earlier. Moreover, detailed modules on education and health were introduced in HIES 2000 to assess the status of health and education in the country.

BBS conducted Household Income and Expenditure Survey 2005 during the period January 2005 to December 2005 following the same procedure as that of 2000. In HIES 2005 the health and education modules were recasted and redesigned. Minor changes were also made in other modules including the food consumption module where provision for dining out was included to capture food consumed outside by the household members. In addition, a new module on “Social Safety Net” was introduced in this round. Data collection for the HIES 2010 was started from the 1st February, 2010 and continued without any interruption up to the 31st January, 2011. Besides all the modules canvassed in 2005, four additional modules have been introduced in 2010. These were (1) Disability (2) Migration and Remittances (3) Micro Credit and (4) Crisis Management.

Data collection for the current round of HIES 2016 was started from the 1st April 2016 and continued without any interruption up to the 31st March, 2017. Almost all the modules canvassed in 2010, were retained in 2016 with some modifications on the basis of the experience gathered in 2010. The Social Safety Net module was redesigned and expanded with the support of the World Food Programme (WFP). In health section modules on child health and immunization, pre-natal and ante-natal care were excluded as this information are collected by other surveys of BBS. In order to improve the income data, the scope of the agriculture productivity was broadened to include both temporary crops and fruits as was done in 2010.

1.1 Objectives of the Survey

The main objectives of HIES 2016 are to:

- ▶ Obtain detailed data on household income, expenditure and consumption
- ▶ Determine poverty profile with urban and rural breakdown
- ▶ Provide reliable annual poverty estimates at 64 districts of the country along with national quarterly estimates
- ▶ Provide information about standard of living and nutritional status of population
- ▶ Provide data to determine the weights of consumer price indices
- ▶ Provide household level consumption data used in compiling national accounts estimate
- ▶ Provide detailed information on health status and educational level of the population

- ▶ Determine poverty estimates by administrative divisions and detailed socio-economic characteristics of the population and households
- ▶ Provide benchmark data for formulation of appropriate policy for poverty reduction, improvement in standard of living and nutritional status of the population
- ▶ Provide relevant data for monitoring of the Progress of 7 FYP and SDGs
- ▶ Provide data on nature, volume and distribution of resources under different Social Safety Net programme
- ▶ Collect data related to calculation of demand function and elasticity
- ▶ Generate data for formulating appropriate fiscal policies
- ▶ Provide data on migration and remittances
- ▶ Collect detailed data on credit and repayment situation and practices
- ▶ Collect data on crises at household level, its impact and strategy for management

1.2 Sample Design

Background:

The HIES 2016 deviates from the sampling design used in the previous round of HIES 2010 in several ways. The objectives of HIES 2016 have changed significantly from HIES 2010. In HIES 2010, sample was designed to provide reliable annual estimates at division level with urban & rural breakdown. But in HIES 2016, the sample was designed to achieve three objectives:

- i) reliable annual estimates at 64 district level
- ii) reliable quarterly estimates at the national level and
- iii) reliable annual estimates at the division level for urban and rural areas.

To achieve this multiple objectives, BBS needed to change the sample design of HIES 2016 significantly from HIES 2010. The first significant change was to increase the sample size to almost four times compared to HIES 2010. This substantial increase in the sample size also forced to use a new sampling frame instead of the previous Integrated Multi Purpose Sample (IMPS). The IMPS is a master sample updated after each Census of Population and Housing. This IMPS was used as sampling frame for the selection of Primary Sampling Units (PSUs) for HIES 2010 and also for other surveys in BBS.

Sampling frame:

The frame used in the selection of Primary Sample Units (PSUs) for HIES 2016 was based on the Census of Population and Housing 2011. PSUs for HIES 2016 are the Enumeration Areas (EAs) used for the Census of Population and Housing in Bangladesh. Each EA is a cluster of 110 households on average. The sampling frame for the selection of PSUs consists in the list of all EAs covering people residing in dwelling households (non-institutional households) in Bangladesh.

Stratification:

In the sample design of HIES 2016, two different levels of Stratification were followed:

i) As of 2016, Bangladesh had eight administrative divisions. These were Barisal, Chittagong, Dhaka, Khulna, Mymensingh, Rajshahi, Rangpur and Sylhet. First of all, these 8 divisions of the country were stratified by 3 basic localities viz. Rural, Urban and City Corporation. Thus, there should have been $8 \times 3 = 24$ strata. But as the sampling frame (Population Census 2011) does not contain Rangpur city corporation and other two city corporations viz. Barisal & Sylhet are not much different from urban characteristics of these two city corporations, BBS included only the four main city corporations (Dhaka, Chittagong, Khulna and Rajshahi) in the city corporation locality. This brought the number of main strata to 20 (8 rural divisions + 8 urban divisions + 4 main city corporations).

ii) Secondly, as the PSUs of HIES 2016 will be allocated at district (zila) level, the sample was implicitly sub-stratified at the district level. Since there are a total of 64 districts in Bangladesh, the sample design includes a total of 132 sub-strata: (64 rural, 64 urban and 4 city corporations).

Sample Size:

As the survey needs to provide district (zila) level estimates, it is obvious, the sample size need to be much higher than the previous HIES 2010. Sample size can be determined using the prevalence rate of the main indicator (poverty rate) or the coefficient of variation of per capita consumption or household consumption which are the core indicators of HIES and each one can be treated as target variable for determining the sample size. For our purpose, mean household consumption was treated as target variable.

The following formula was used to find the sample size for each district.

$$n = \left(\frac{Z_{\alpha/2} * CV_{SRS}(\bar{Y})}{r(\bar{Y})} \right)^2 * DEFF \quad (1)$$

where n is the minimum sample size required for allocation to each district in order to achieve a certain level in the accuracy statistic $r(\bar{Y})$ associated with the targeted variable \bar{y} ; $CV_{SRS}(\bar{y})$ is the coefficient of variation of the targeted variable estimated under the assumption of simple random sampling; $DEFF$ is the design effect of the target variable; and $Z_{\alpha/2}$ is the critical value of a standard normal distribution with $\alpha\%$ confidence level.

In the case of the HIES 2016, $r(\bar{Y})$ is the 10 percent RSE desired for the mean total household expenditure estimated at the district level; $DEFF$ is the average design effect of the target variable across all districts; $CV_{SRS}(\bar{y})$ is the coefficient of variation of total household expenditure estimated at the national level; and $Z_{\alpha/2}$ is set at 1.96, which corresponds to a significance level of 5 percent.

Substituting all values in equation (1), we find that the sample size needed is 715 households for each district. However, for practical consideration and to facilitate field work and survey implementation management, 720 households were allocated to each district. More specifically, 720 households is divisible by 36 (number of PSUs ultimately allocated to each district), which allows easy allocation of 20 households per PSU. Also, two enumeration teams can easily cover the 36 PSUs in each district over 12 months without having to move to a different district. Lastly, the number 36 PSUs, allocated to each district is a multiple of 4, which allows dividing into quarters.

Sample Allocation:

As one of our goals here is to estimate and compare Zila level means, equal allocation of PSU's to Zila may be a better choice. That is 36 PSU's will be assigned to each zila. Secondly these 36 psu's will be allocated across rural, urban & City corporation sub-strata using modified Neyman's allocation technique which not only takes into account both the size and variability (standard deviation) of interest but also uses square root of design effect (deft) to modify the standard deviation . Although, the sample design is not supposed to provide Zila level estimates by rural, urban or city corporation , the Neyman's allocation taking into account the variability of the locality (rural/urban/city corporation) will greatly improve the precision of estimates at Zila as well as aggregate (National or Divisional) level.

Sample selection:

The HIES 2016 followed a stratified two stage cluster sampling design. At the first stage, a total of 36 PSU's (EA'S) was drawn from each Zila (Domain) applying PPS systematic

sampling technique, number of households in each PSU being the measure of size. These 36 PSU's were selected independently from rural, urban and city corporation sub-stratum. Therefore, in total, there will be $64 \times 36 = 2304$ sample PSU's for the survey. Enumeration Area, a cluster of around 110 households of Population Census 2011, was treated as PSU for this sample design. The sampling frame for this purpose was developed from the Population census 2011 data. A file containing all the EAs of the population census 2011 was created. This file contains all the unique geographic codes from division down to EA and also locality code (Rural, Urban and City corporation) . In order to select the sample PSUs independently by stratum and Zila, the sampling frame was properly sorted by stratum and geo-codes. Then, at the first stage, the required number of PSUs as shown in Table-1 was selected using probability proportional to size (PPS) systematic sampling, size measure being the number of households in each PSU. After selection of the PSU's, a complete household listing in these selected PSU's was done in the field. Subsequently, this was computerized and used to draw the 20 households along with 5 reserved households from each of the selected PSU's at the second stage. Thus, total sample size for the survey stands at $2304 \times 20 = 46,080$ households.

Sampling weights and probability of selection:

Sampling probability was computed separately for each sampling stage and for each PSU within a Domain (Zila).

In the case of a two-stage, stratified clustered design, such as HIES 2016, the probability of being selected into the sample is a function of : (1) the probability of a PSU being selected in the first stage and (2) the probability of a household being selected within each PSU in the second stage. This can be calculated as follows:

$$p_{hij} = p_1 * p_2 = \frac{k_h n_{hi}}{N_h} * \frac{m_{hi}}{n'_{hi}} \quad (2)$$

where p_{hij} is the probability of household j , in stratum h , and PSU i to be included in the sample: p_1 is the probability of the PSU to be selected in the first stage: p_2 is the probability of a household being selected in the second stage; k_h is the number of PSUs selected in stratum h : m_{hi} is the number of households selected in PSU hi ; and N_h is the total number of households in stratum h .

Table 1: Allocation of PSUs for rural/urban/city corporation, HIES 2016

Zila name	Rural	Urban	City corp.	Total
Bagerhat	26	10	0	36
Bandarban	32	4	0	36
Barguna	25	11	0	36
Barisal	26	10	0	36
Bhola	29	7	0	36
Bogra	30	6	0	36
Brahmanbaria	29	7	0	36
Chandpur	29	7	0	36
Chapai Nababganj	32	4	0	36
Chittagong	4	4	28	36
Chuadanga	27	9	0	36
Comilla	31	5	0	36
Cox's Bazar	30	6	0	36
Dhaka	4	4	28	36
Dinajpur	32	4	0	36
Faridpur	28	8	0	36
Feni	26	10	0	36
Gaibandha	29	7	0	36
Gazipur	4	32	0	36
Gopalganj	24	12	0	36
Habiganj	25	11	0	36

Jalpalpur	28	8	0	36
Jessore	24	12	0	36
Jhalokati	19	17	0	36
Jhenaidah	15	21	0	36
Joypurhat	29	7	0	36
Khagrachhari	32	4	0	36
Khulna	10	4	22	36
Kishoregonj	32	4	0	36
Kurigram	29	7	0	36
Kushtia	28	8	0	36
Lakshmipur	32	4	0	36
Lalmonirhat	32	4	0	36
Madaripur	32	4	0	36
Magura	20	16	0	36
Manikganj	28	8	0	36
Maulvibazar	29	7	0	36
Meherpur	32	4	0	36
Munshiganj	22	14	0	36
Mymensingh	20	16	0	36
Naogaon	32	4	0	36
Narail	27	9	0	36
Narayanganj	4	32	0	36

Zila name	Rural	Urban	City corp.	Total
Narsingdi	20	16	0	36
Natore	30	6	0	36
Netrakona	28	8	0	36
Nilphamari	26	10	0	36
Noakhali	31	5	0	36
Pabna	25	11	0	36
Panchagarh	25	11	0	36
Patuakhali	32	4	0	36
Pirojpur	31	5	0	36
Rajbari	19	17	0	36
Rajshahi	4	4	28	36
Rangamati	32	4	0	36
Rangpur	25	11	0	36
Satkhira	27	9	0	36
Shariatpur	24	12	0	36
Sherpur	25	11	0	36
Sirajganj	29	7	0	36
Sunamganj	24	12	0	36
Sylhet	29	7	0	36
Tangail	20	16	0	36
Thakurgaon	21	15	0	36
Total	1,605	593	106	2,304

Table 1a: Number of sample PSUs, households and population covered in HIES 2016 by residence.

Division	Number of sample PSUs, household and population		
	National	Rural	Urban
No. of sample PSUs			
Barisal	216	162	54
Chittagong	396	308	88
Dhaka	468	261	207
Khulna	360	236	124
Mymensingh	144	101	43
Rajshahi	288	211	77
Rangpur	288	219	69
Sylhet	144	107	37
Total	2304	1605	699
No. of sample households			
Barisal	4320	3240	1080
Chittagong	7916	6156	1760
Dhaka	9360	5220	4140
Khulna	7200	4720	2480
Mymensingh	2880	2020	860
Rajshahi	5760	4220	1540
Rangpur	5760	4380	1380
Sylhet	2880	2140	740
Total	46076	32096	13980

Divisions	Number of sample PSUs, household and population		
	National	Rural	Urban
No. of sample population			
Barisal	17893	13462	4431
Chittagong	34681	27075	7606
Dhaka	37340	21546	15794
Khulna	26960	17478	9482
Mymensingh	11140	7771	3369
Rajshahi	21478	15548	5930
Rangpur	22472	17004	5468
Sylhet	14112	10551	3561
Total	186076	130435	55641

1.3 Training and field operation

Before starting actual survey operation, detailed training was given to the enumerators and the supervisors. There were 128 enumeration teams for the survey. Each enumeration team comprised of 1 supervising officer, 2 interviewers and 2 female facilitators. This team of five members was assigned to 1 PSU to work for a continuous period of 20 days- 14 days for collection of data and 6 days for data entry tasks and probable revisits and for the movements between PSUs.

For collection of information on food consumption, the households were divided into two groups each consisting of 10 households. Each enumerator, with the help of the female facilitator, continuously collected information on food consumption of the households for 14 days without break. After completion of data collection and data entry tasks for 3 terms, all the enumerators and the supervising officers were again trained in the headquarter, specially on those matters where some deficiencies or discrepancies were initially observed. This last training greatly enhanced the quality of data collection and data entry in the subsequent period.

1.4 Supervision and quality control

Strong supervision and quality control measures were adopted in HIES 2016. As mentioned earlier, there were 128 teams, each team comprising 2 enumerators cum data entry operators and 2 female facilitators. In order to ensure smooth collection of data and their quality, 64 supervising officers were appointed to supervise the work of 128 teams. The Deputy Directors of District Statistical Offices and officers from the HQ were engaged as supervising officers. In addition, 2 supervising officers were kept as reserve for meeting any emergency and 4 enumerators were also kept as reserve for the same purpose. Thus, the number of enumerators and supervising officers were 260 and 66 respectively. There were also senior officials from HQ who frequently visited the sample areas randomly to ensure the quality of survey data. The supervising officers were required to examine all the questionnaires completed by the field staff and also verify that each interview had been carried out in time and the questionnaires were completed correctly. They also ensured that the seasonal variations in income and expenditure pattern have been reflected in the collected data sets. In cases where further corrections were needed, the respective enumerators were instructed to do the same. The enumerators and the female facilitators used to inform the supervising officers of any problem they faced during the period and the supervising officers, in turn, helped the enumerators in solving their problems.

The enumerators, soon after completion of data collection and data entry, sent the soft copy of the data sets to the headquarters through drop box and simultaneously sent the filled-in questionnaires either through special messengers or through courier service to the headquarters. These data sets were promptly verified in the headquarters. In case any error or inconsistency was found, it was immediately communicated to the concerned enumerator and the supervising officer.

These control and supervising measures as mentioned above enhanced the quality of enumeration and the data entry system to a great extent.

1.5 Data entry, processing and validation

The data collection, entry and data transferring process for the HIES 2016 was developed using Paper and Pencil (PAPI) combined with Computer Assisted Field Entry (CAFE). With this method, the interviewers regularly collected all the information during the interview using PAPI and entered the data in to Laptop Computers at the end of the day. If they found any inconsistencies in the data, they went back to the relevant households of the PSU and

made required changes or corrections to remove the discrepancies while they were still in that locality. Once they had completed and checked the information, they also ensured that the data entered through data entry program were accurate and consistent. Thus the data were substantially cleaned and validated right at the field level.

The data entry program was developed in CSPro and contained with a cloud based data transferring system, which allowed enumerators to transfer data from the field almost in real time using mobile internet connection. After the data was transferred to BBS headquarter, this was compiled and exported to a readable version by standard statistical software using a built-in routine in the data entry program.

After the data entry was completed in the field, the filled-in questionnaires were also sent to the BBS headquarter office. The transferred data were then promptly examined and verified with the questionnaires if necessary to ensure that the errors and inconsistencies that were required to be removed by the enumerators were done properly. The data sets then re-examined by programmers and senior officials. It may be mentioned that the software for the data entry task was developed in such a manner as to detect most of the errors, omissions or inconsistencies right at the data entry level. However, some more editing specially inter record consistencies were required to be done by the senior officials at BBS headquarter.

From the data sets thus produced, dbf files were created through specially designed software. Finally, tables were generated from the cleaned data sets using data analysis software like STATA, FoxPro and SPSS.

Chapter 2

Household and Population Characteristics

This chapter deals with household and population characteristics as obtained from the survey. It includes household size and distribution of population by age, sex and residence.

2.1 Average household size

Average household size obtained from different years of Household Income and Expenditure Survey has been presented in Table 2. It is observed from the table that the average size of household has been decreasing gradually over the years. According to the population census 2001 the average size of household was 4.90 and it decreased to 4.44 in 2011. The HIES also reveal the same decreasing pattern. According to HIES 2000, the average size of household was 5.18; it decreased to 4.84 in 2005 and further decreased to 4.50 in 2010. HIES 2016 shows that the average size of household is 4.06.

Table 2: Average household size

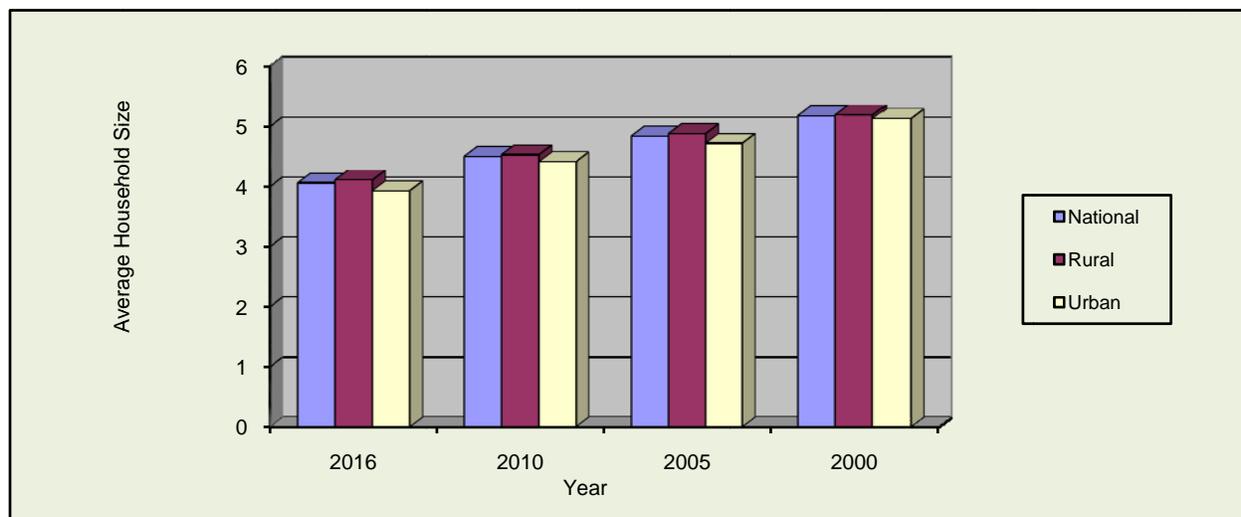
Year/Division	National	Rural	Urban
HIES 2016			
National	4.06	4.11	3.93
Barisal	4.17	4.18	4.13
Chittagong	4.47	4.53	4.32
Dhaka	3.87	4.04	3.71
Khulna	3.74	3.73	3.78
Mymensingh	3.85	3.85	3.89
Rajshahi	3.76	3.75	3.80
Rangpur	3.87	3.86	3.94
Sylhet	4.94	4.97	4.82

Year/Division	National	Rural	Urban
HIES 2010			
National	4.50	4.53	4.41
Barisal	4.56	4.57	4.52
Chittagong	4.97	5.07	4.70
Dhaka	4.39	4.47	4.28
Khulna	4.26	4.24	4.34
Rajshahi (Former)	4.21	4.18	4.36
-Rajshahi (New)	4.15	4.12	4.28
-Rangpur	4.28	4.25	4.48
Sylhet	5.50	5.56	5.17
Population Census 2011	4.44	4.46	4.37
HIES 2005			
National	4.84	4.88	4.72
Barisal	4.97	4.96	5.03
Chittagong	5.42	5.49	5.21
Dhaka	4.69	4.77	4.57
Khulna	4.71	4.73	4.62
Rajshahi	4.53	4.52	4.57
Sylhet	5.57	5.65	5.11
Population Census 2001	4.90	4.90	4.80
HIES 2000			
National	5.18	5.19	5.13
Barisal	5.44	5.46	5.23
Chittagong	5.86	5.93	5.53
Dhaka	5.00	4.99	5.00
Khulna	5.07	5.12	4.78
Rajshahi	4.77	4.71	5.23

In the rural area, the average size of household was 5.19 in HIES 2000, 4.88 in HIES 2005 and 4.53 in HIES 2010. In HIES 2016, it stands at 4.11. Similar declining trend is also observed in urban areas. In HIES 2000 the average size household was 5.13, it declined to 4.72 in 2005 and further declined to 4.41 in 2010. HIES 2016 findings show that the average size of household in urban areas is 3.93.

Among the Divisions, in 2016 the highest household size of 4.94 is reported from Sylhet division followed by Chittagong division at 4.47. The lowest household size is reported from Khulna division as 3.74 proceeded by Rajshahi 3.76 and Mymensingh 3.85. The overall size of household in rural area is still higher as compared to urban area except in Khulna division where urban household size was higher than rural household size.

Figure 1: Average size of household by HIES survey years



2.2 Age-sex structure of population

Age sex structure of population obtained from HIES 2010 and HIES 2016 has been presented in Table 3. The table shows that the highest concentration of population exists in the 10-19 years age group in both HIES 2010 and HIES 2016.

Table 3: Age-sex structure of population by residence, HIES 2010 and HIES 2005

Age Group (Years)	HIES 2016			HIES 2010		
	Both Sexes	Male	Female	Both Sexes	Male	Female
National	100.00	100.00	100.00	100.00	100.00	100.00
0-4	9.98	10.30	9.66	10.30	10.75	9.85
5-9	10.69	10.91	10.47	12.32	12.61	12.03
10-19	21.34	22.17	20.52	21.60	22.46	20.76

Age Group (Years)	HIES 2016			HIES 2010		
	Both Sexes	Male	Female	Both Sexes	Male	Female
20-29	16.96	14.89	19.00	16.99	15.20	18.75
30-39	14.99	14.79	15.18	13.60	12.92	14.26
40-49	10.84	10.96	10.72	10.78	10.94	10.64
50-59	7.38	7.77	7.00	7.02	7.48	6.56
60-64	2.88	3.05	2.70	2.59	2.62	2.55
65+	4.94	5.15	4.74	4.81	5.01	4.60
Rural	100.00	100.00	100.00	100.00	100.00	100.00
0-4	9.93	10.39	9.48	10.63	11.22	10.06
5-9	11.17	11.45	10.90	12.88	13.23	12.53
10-19	21.71	22.85	20.58	21.67	22.51	20.86
20-29	15.96	14.05	17.86	16.46	14.95	17.94
30-39	14.51	14.07	14.95	13.02	12.18	13.84
40-49	10.70	10.69	10.70	10.42	10.44	10.40
50-59	7.54	7.74	7.33	6.97	7.27	6.68
60-64	3.04	3.14	2.94	2.79	2.78	2.79
65+	5.44	5.63	5.26	5.16	5.43	4.90
Urban	100.00	100.00	100.00	100.00	100.00	100.00
0-4	10.11	10.07	10.15	9.36	9.45	9.27
5-9	9.39	9.47	9.32	10.74	10.89	10.59
10-19	20.35	20.32	20.39	21.40	22.32	20.48
20-29	19.64	17.19	22.00	18.48	15.91	21.05
30-39	16.26	16.74	15.80	15.21	14.95	15.47
40-49	11.23	11.68	10.79	11.82	12.32	11.32
50-59	6.97	7.87	6.10	7.15	8.09	6.21
60-64	2.44	2.82	2.08	2.03	2.20	1.87
65+	3.61	3.85	3.38	3.81	3.87	3.75

The percentage of population in the lowest age group (0-4) has been found to be 9.98% in 2016 as against 10.30% in 2010. In the age group 5-9, the percentage of population was 12.32% in 2010 which declined to 10.69% in 2016. This reduction in the proportion of population in the lower age group appears to be the outcome of declining growth rate and reduction in total fertility rate in the recent years.

On the other hand, the percentage of population in the upper most age group (65 years and over) is increasing. It was 4.81% in 2010 and increased to 4.94% in 2016. This increase of aging population indicates that longevity of population is increasing standard over time. In the older age group, the percentage of male population is 5.15 as against 4.74 for female, indicating more longevity of male as compared to female.

There exist urban-rural variations in age distribution of population over the years. In the rural areas, the percentage of population in the 0-4 year age group is 9.93% which marks a decline from 10.63% in 2010. However, in the urban areas an increasing trend is observed. It was 9.36% in 2010 and in 2016 it stands at 10.11%. This may be due to inclusion of some areas with rural characteristics in the urban areas and partly due to ineffective service of family planning in the urban slums. In the highest age group (65 years and over), the proportion of population shows an increasing trend in rural areas, however declining trend is observed in the urban areas. In rural areas the proportion was 5.16% in 2010 and increased to 5.44% in 2016. On the other hand, in urban areas the proportion was 3.81% in 2010 and declined to 3.61% in 2016.

The demographic dependency ratio of population in 2016 is estimated at 59.21 where, 62.34 for male and 56.23 for female at the national level. It may be noted that demographic dependency ratio is the ratio of population of 0-14 year age group plus 65 years and over age group to the population of 15-64 year age group. In 2010 such ratios were 65.34, 69.21 and 61.70 respectively at the national level. The findings show remarkable decrease of dependency ratio in 2016 in comparison to that of 2010.

In the rural areas, the demographic dependency ratio is estimated at 62.66 for both sexes, 66.63 for male and 58.93 for female in HIES 2016 which marked a sharp decline from 69.63 for both sexes, 74.03 for male and 64.98 for female in 2010. In the urban areas, the demographic dependency ratio were 55.09 for both sexes, 57.16 for male and 53.05 for female in 2010 which reduced to 50.63 for both sexes, 51.79 for male and 49.54 for female in 2016 which is commendable.

Chapter 3

Household Income and Expenditure

This chapter discusses the average household income, expenditure, consumption, food and non-food expenditure, household consumption by major items of expenditure and deciles distribution of income and expenditure from the findings of Household Income and Expenditure Survey 2016.

3.1 Household income, expenditure and consumption:

Household nominal income, expenditure and consumption from the surveys 2000 to 2016 have been presented in Table 4. The difference between expenditure and consumption is that ‘consumption’ excludes lumpy expenditures like durable goods purchases and some other expenditures such as payment of tax, insurance, expenses of pilgrimage/hajj, marriage, etc but, ‘expenditure’ includes all those expenses.

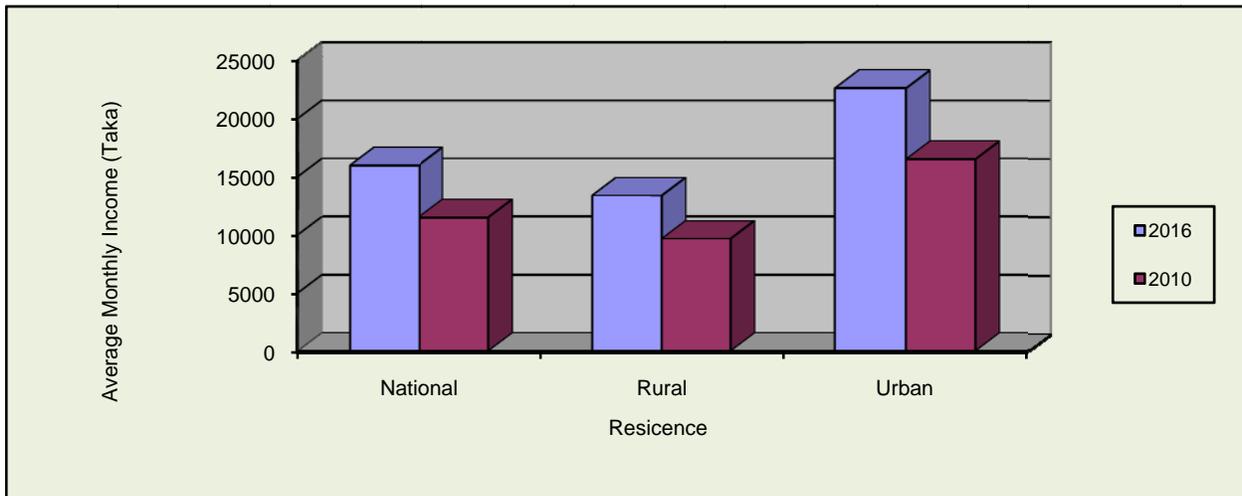
Table 4: Monthly household nominal income, expenditure and consumption by residence HIES 2000 to HIES 2016

Survey Year	Residence	Average Monthly (Taka)		
		Income	Expenditure ¹	Consumption
2016	National	15,945	15,715	15,420
	Rural	13,353	14,156	13,868
	Urban	22,565	19,697	19,383
2010	National	11,479	11,200	11,003
	Rural	9,648	9,612	9,436
	Urban	16,475	15,531	15,276
2005	National	7,203	6,134	5,964
	Rural	6,096	5,319	5,165
	Urban	10,463	8,533	8,315
2000	National	5,842	4,886	4,542
	Rural	4,816	4,257	3,879
	Urban	9,878	7,360	7,149

^{*1} Consumption plus lumpy life-cycle expenditures, income tax, interest charges and insurance.

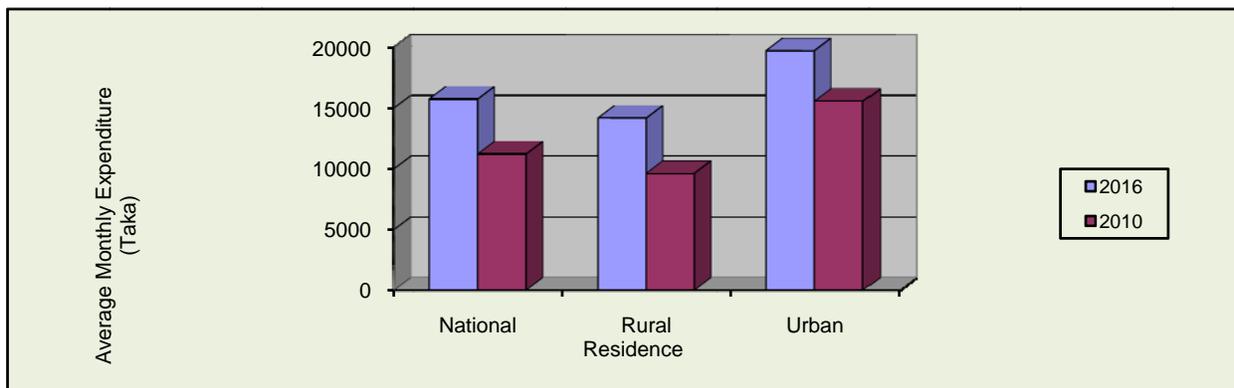
The HIES 2016 findings show that average monthly household income is Tk. 15,945 at the national level, Tk. 13,353 in rural area and Tk. 22,565 in urban area. In HIES 2010, the same was Tk. 11,479 at the national level, Tk. 9,648 in rural area and Tk. 16,475 in urban area. It has increased by 38.90% at the national level, 38.40% in rural area and by 36.96% in urban area in 2016 compared to 2010. The factors that contributed prominently for such increase of monthly household income are remittances, wide spread Social Safety Net Programmes, increased rural job opportunities and increased wage rates etc. The rate of increase is estimated at 172.94% at the national level as compared to 2000.

Figure 2: Household monthly income (TK) by residence, 2016 and 2010



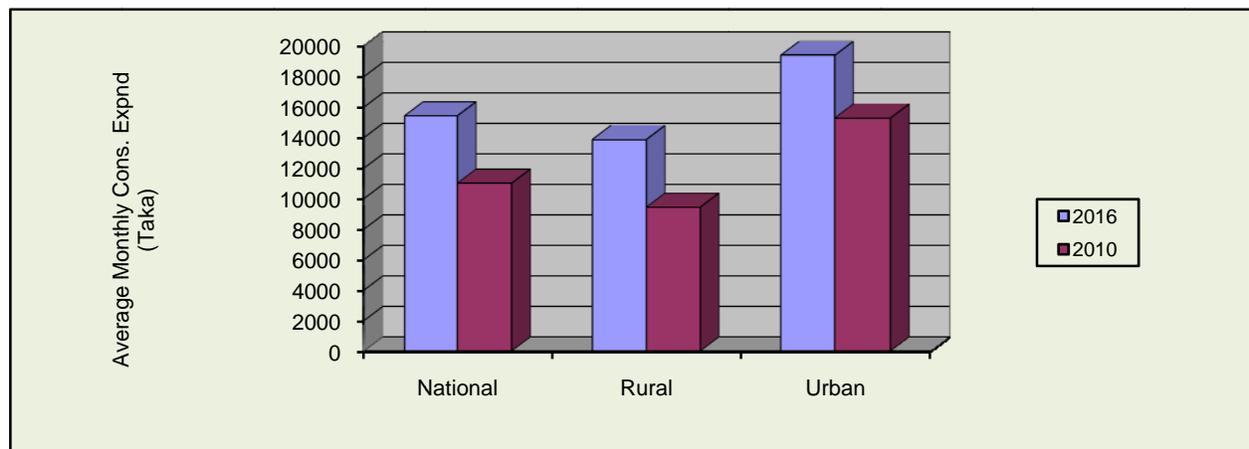
In HIES 2016, the average monthly household expenditure is estimated at Tk. 15,715 at the national level, Tk. 14,156 in rural area and Tk. 19,697 in urban area. In 2010 the same was Tk. 11,200 at the national level, Tk. 9,612 in rural area and Tk. 15,531 in urban areas. It increased by 40.31% at the national level, 47.27% in rural area and by 26.82% in urban areas compared to 2010. The rate of increase is estimated at 221.63% at the national level as compared to 2000. Figure 3 provides the graphical presentation of monthly household expenditure from HIES 2016 and HIES 2010.

Figure 3: Household Monthly Expenditure by Residence (TK), 2016 and 2010



In HIES 2016, the monthly average household consumption is estimated at Tk. 15,240 at national level, Tk 13,868 in rural area and Tk. 19,383 in the urban area. In 2010 it was Tk. 11,003, Tk. 9,436 and Tk. 15,276 at the national, rural and urban areas respectively. The monthly average consumption has increased by 38.51% in 2016 at the national level, by 46.97% in rural area and by 26.89% in urban area over 2010. On the otherhand, the nominal income increased by 38.44% at the national level, 39.32% in rural area and 34.54% in urban areas. It becomes evident from the table 4 that increases of consumptions are more than increases of income at the national level and rural areas, however, lower than consumption in the urban areas. It indicates that people in rural areas had to spend more in consumption goods, but in urban areas the consumption is lower than income which may be due to extended definition of urban areas. Figure 4 provides the graphical presentation of monthly household consumption from HIES 2016 and HIES 2010.

Figure 4: Household Monthly Consumption (TK) by Residence, 2016 and 2010



3.2 Food and non-food expenditure

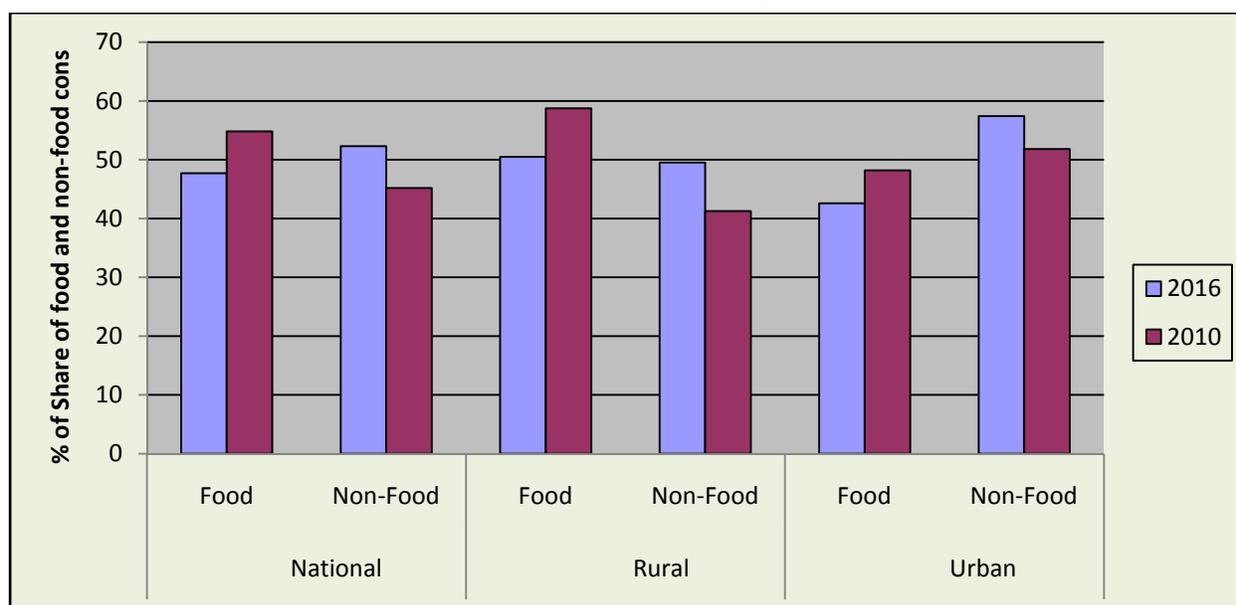
Food expenditure as percentage of household consumption has been presented in Table 5. Proportion of food and non-food consumptions provide important indication about the strength of economy of the general people.

Table 5: Food and Non-Food Expenditure as Percentage of Household Consumption 2016 and HIES 2010

Survey years	National		Rural		Urban	
	Food	Non-Food	Food	Non-Food	Food	Non-Food
2016	47.70	52.30	50.49	49.51	42.59	57.41
2010	54.81	45.19	58.74	41.26	48.19	51.81
2005	53.81	46.18	58.54	41.45	45.17	54.82
2000	54.60	45.40	59.30	40.70	44.60	55.40

In HIES 2016 the share of food expenditure is 47.70% where as that of non-food expenditure is 52.30%. In rural areas, the share of food expenditure is 50.49% where as that of non-food expenditure is 49.51%. In urban areas, the share of food expenditure is 42.59% where as that of non-food expenditure is 57.41%. It is observed from the table that for the first time in HIES history the non-food expenditure exceeded the food expenditure at the national level and urban areas whereas it is almost equal in the rural areas. This indicates the improvement in the quality of life of the people. The proportions of expenditure on food items in 2010 were 54.81% and non-food was 45.19%. The food and non-food expenditure were 53.81% and 46.18% in 2005. In 2016, the food and non-food expenditure in the rural areas were 50.49% and 49.51% which were 58.74% and 41.26% respectively in 2010. In 2016, the food and non-food expenditure were 42.59% and 57.41% in the urban areas as against 48.19% and 51.81% respectively in 2010. Figure 5 gives the graphical presentation of food and non-Food expenditure as percentage of household consumption for 2016 and 2010.

Figure 5: Percent Share of Food and Non-food Consumption in 2016 and 2010



3.3 Household consumption by major expenditure groups

The Table 6 presents percentage distribution of average monthly household consumptions by major expenditure groups, such as, food and beverage, clothing and footwear, housing and house rent, fuel and lighting, household effect, medical, education and miscellaneous (transportation, recreation, etc.)

Table 6: Percentage Distribution of Average Monthly Household Consumption by Major Expenditure Groups, HIES 2000 to HIES 2016

Year of Survey and Residence	Avg. Cons. Exp.	Major Expenditure Groups								
		Total	Food and Beverage	Cloth & Foot wear	Housing & House Rent	Fuel & Lighting	Household Effect	Medical	Education	Misce.
2016										
National	15420	100	47.69	7.12	12.43	6.07	2.93	4.54	5.42	13.80
Rural	13868	100	50.49	7.50	9.80	6.65	2.88	4.63	4.93	13.12
Urban	19383	100	42.59	6.42	17.25	5.02	3.03	4.36	6.33	15.00
2010										
National	11003	100	54.81	4.95	9.93	5.63	1.68	3.79	5.68	13.53
Rural	9436	100	58.74	5.12	7.29	6.06	1.85	4.05	4.18	12.71
Urban	15276	100	48.19	4.67	14.41	4.89	1.40	3.35	8.20	14.89

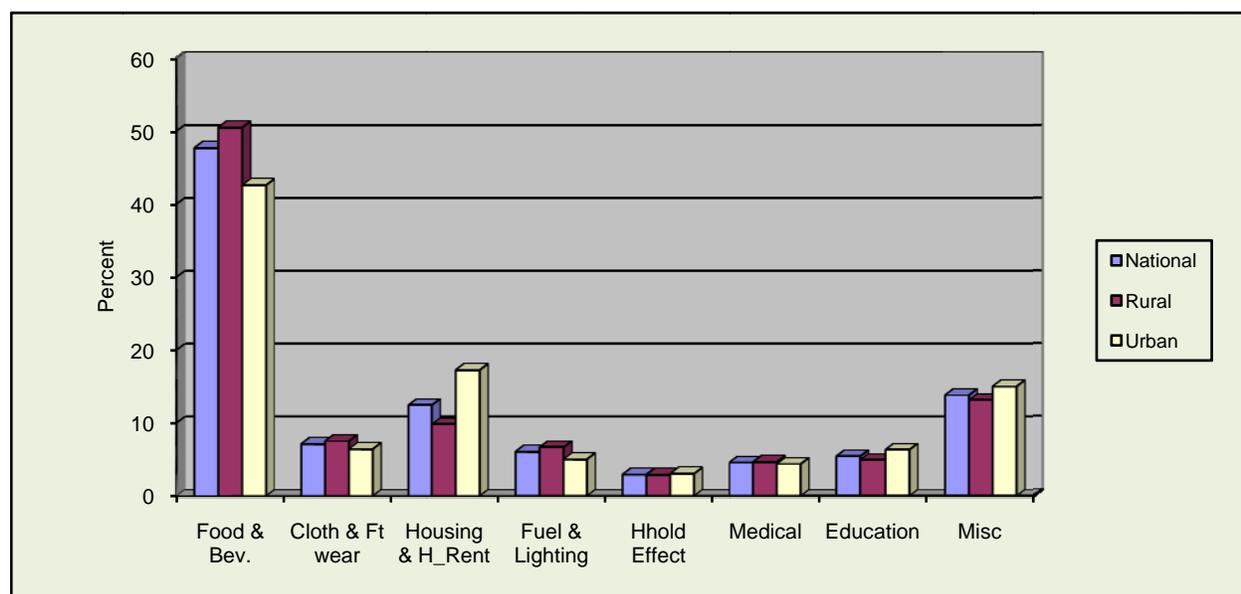
Year of Survey and Residence	Avg. Cons. Exp.	Major Expenditure Groups								
		Total	Food and Beverage	Cloth & Foot wear	Housing & House Rent	Fuel & Lighting	Household Effect	Medical	Education	Misce.
2005										
National	5964	100	53.81	5.51	12.25	5.98	2.05	-	-	20.37
Rural	5165	100	58.54	5.54	9.77	6.1	1.8	-	-	18.22
Urban	8315	100	45.17	5.48	16.78	5.76	2.49	-	-	24.29
2000										
National	4537	100	54.6	6.28	9.0	6.81	1.41	-	-	20.32
Rural	3879	100	59.29	6.53	5.7	7.19	1.22	-	-	18.23
Urban	7125	100	44.55	5.73	16.05	6.0	1.81	-	-	24.80

Note: In 2005 and 2000 Miscellaneous includes medical and education expenditure whereas in 2016 and 2010 these two items have been shown separately.

It appears from the table that the proportion of food & beverage has decreased to 47.69% in 2016 from 54.81% in 2010. In rural areas also decreases to 50.49% in 2016 from 58.74% in 2010 and in urban areas it decreased to 42.59% in 2016 from 48.19% in 2010.

The proportion of consumptions of cloth & footwear group has increased in 2016 compared to 2010. It has recorded 7.12% of total consumptions in HIES 2016, whereas, it was 4.95% in HIES 2010. The reason is very obvious. The proportion for consumption of food expenditure has gone down, so expenditure on other items will go up. It also appears from the table that the proportion of housing and house rent has gone up from 9.93% in 2010 to 12.43% in 2016. The same trend is also observed in both urban and rural areas. However, the change in proportion of fuel and lighting according to the HIES 2016 and 2010 findings were very small. At the aggregate level it was 5.63% in 2010 and increased to 6.07% in 2016. The combined proportion of miscellaneous items including medical and educational expenses increases to 23.76% in 2016 from 23.00% in 2010. Figure 6 provides the graphical presentation of monthly household consumption by major expenditure groups of HIES 2016 by rural and urban breakdown.

Figure 6: Percentage share of household consumption by major expenditure groups



3.4 Decile distribution of income and gini co-efficient.

Decile distribution of income is an important indicator to assess the pattern of distribution of percentage share of household income among ten decile groups in the country. It shows the extent of concentration of household income by the higher household income group. Gini co-efficient is the most popular and efficient composite indicator to determine the amount of concentration of household income. Gini co-efficient '0' indicates no concentration and '1' indicates total concentration. Table 7 presents the percentage share of household income by decile groups and Gini co-efficient with rural and urban breakdown for the surveys conducted during 2016 and 2010.

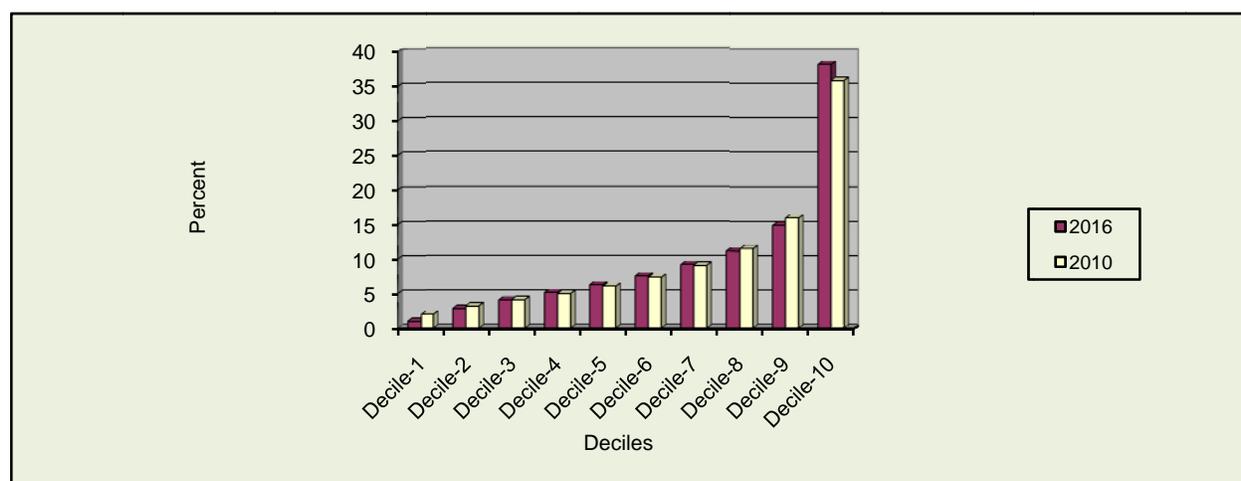
Table 7: Percentage distribution of income accruing to household in groups (decile) and gini co-efficient HIES 2016 and HIES 2010

Household Income Decile and Gini Co-efficient	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Total/Decile	100.00	100.00	100.00	100.00	100.00	100.00
Lower 5%	0.23	0.25	0.27	0.78	0.88	0.76
Decile-1	1.01	1.06	1.16	2.00	2.23	1.98
Decile-2	2.83	3.00	2.99	3.22	3.53	3.09
Decile-3	4.04	4.33	4.18	4.10	4.49	3.95

Household Income Decile and Gini Co-efficient	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Decile-4	5.13	5.47	4.99	5.00	5.43	5.01
Decile-5	6.23	6.63	5.91	6.01	6.43	6.31
Decile-6	7.51	7.95	7.17	7.32	7.65	7.64
Decile-7	9.12	9.44	8.35	9.06	9.31	9.30
Decile-8	11.13	11.78	10.49	11.50	11.50	11.87
Decile-9	14.84	15.49	13.31	15.94	15.54	16.08
Decile-10	38.16	34.84	41.44	35.84	33.89	34.77
Top 5%	27.89	24.25	32.12	24.61	22.93	23.39
Gini Co-efficient	0.483	0.454	0.498	0.458	0.430	0.452

It is evident from the above table that, income accruing to household belonging to Decile-1 to Decile-5 is recorded at 1.01%, 2.83%, 4.04%, 5.13% and 6.23% respectively at the national level in HIES 2016. The percentage share of the deciles 1-5 were 2.00%, 3.22%, 4.10%, 5.00% and 6.01% respectively in 2010. These five deciles of HIES 2016 jointly share only 19.24% of total income, although they comprise 50% of the population. These shares together were 20.33% of total income in 2010. This indicates that share of income by the lower five deciles comprising lower 50% people remain almost same in 2016 compared to 2010. The percentage share of income of the lowest 5% households has decreased to 0.23% in HIES 2016 from 0.78% in 2010. The income share of top 5% households has increased to 27.89% in 2016 from 24.61% in 2010. The income share of the households belonging to decile-10 has also increased in 2016 as compared to 2010. It was 35.84% in 2010 and increased to 38.16% in 2016. Deciles 7 to 9 have lost their share of income in 2016 compared to 2010. Changing pattern of decile distribution of income is also observed in both urban and rural areas between 2010 and 2016. Figure 7 provides the graphical presentation of decile distribution of household income from HIES 2016 and HIES 2010.

Figure 7: Decile distribution of income 2016 and 2010 (national)



The Gini co-efficient of income has increased from 0.458 in HIES 2010 to 0.483 in 2016. This indicates that concentration of income has slightly increased.

3.5 Decile distribution of consumption and gini co-efficient

The Table 8 presents deciles distribution of consumption by residence for the surveys conducted during 2016 and 2010.

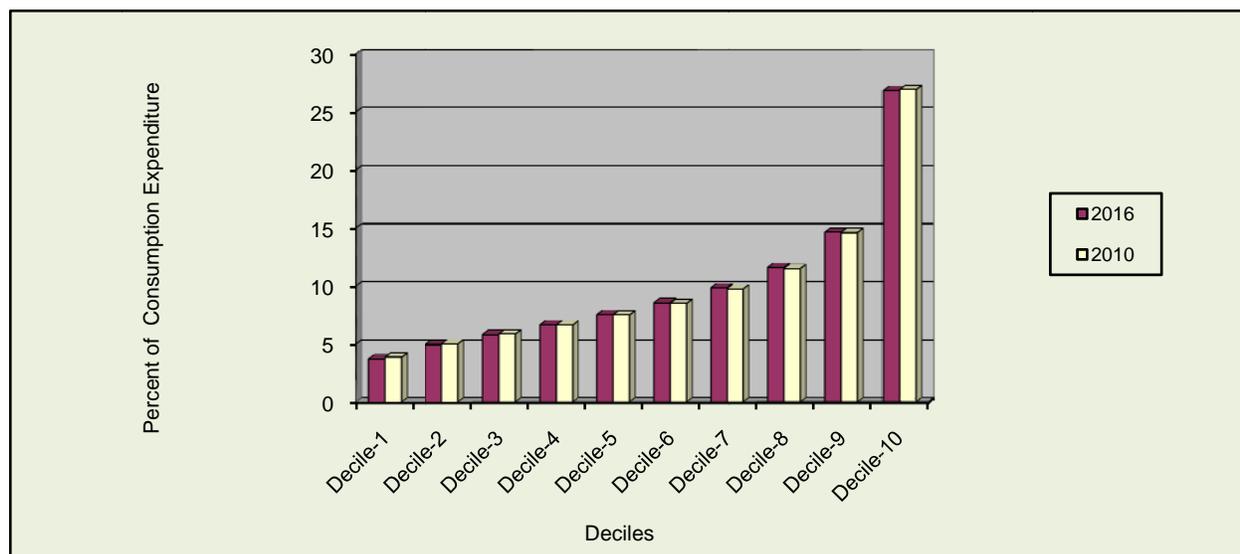
Table 8: Deciles distribution of consumption by residence HIES 2016 & HIES 2010

Deciles of Consumption and Gini Co-eff.	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Total/Deciles	100.00	100.00	100.00	100.00	100.00	100.00
Decile-1	3.70	4.0	3.44	3.85	4.36	3.40
Decile-2	4.94	5.28	4.75	5.00	5.57	4.66
Decile-3	5.80	6.14	5.67	5.84	6.41	5.54
Decile-4	6.64	6.96	6.55	6.63	7.22	6.42
Decile-5	7.51	7.81	7.51	7.48	8.03	7.37
Decile-6	8.54	8.79	8.6	8.48	8.97	8.48
Decile-7	9.84	9.94	10.07	9.73	10.01	10.01
Decile-8	11.59	11.58	11.91	11.49	11.63	12.03
Decile-9	14.61	14.15	15.26	14.59	14.07	15.06
Decile-10	26.83	25.35	26.23	26.90	23.63	27.03
Gini Co-efficient	0.324	0.300	0.330	0.321	0.275	0.338

The Table 8 presents the percentage distribution of consumption by decile group and Gini co-efficient of consumption. It appears from Table-8 that, in 2016, there are slight changes of percentage shares of consumption in the deciles corresponding to those of 2010 round of survey. In HIES 2016 the percentage shares of consumption by the deciles are 3.70% for decile-1, 4.94% for decile-2, 5.80% for decile-3, 6.64% for decile-4, 7.51% for decile-5, 8.54% for decile-6, 9.84% for decile-7, 11.59% for decile-8, 14.61% for decile-9 and 26.83% for decile-10 respectively, whereas, the corresponding estimates in HIES 2010 were 3.85% for decile-1, 5.00 % for decile-2, 5.84% for decile-3, 6.63%for decile-4, 7.48 % for decile-5, 8.48% for decile-6, 9.73% for decile-7, 11.49% for decile-8, 14.59% for decile-9 and 26.90% for decile-10 respectively. It is observed that in most of the deciles have almost similar shares of consumption both in 2016 and 2010. This indicates that expenditure pattern of all decile groups remain same over the years though the total expenditure increased in 2016 compared to 2010.

The Gini co-efficient of consumption is estimated at 0.324 in HIES 2016 at the national level, whereas, it was 0.321 in HIES 2010. It appears that, there is slight increase but not significant change of Gini co-efficient of consumption in 2016 with respect to 2010. Decile-wise shares of consumption by rural and urban areas show similar pattern as shown at the national level. In the rural area, the Gini co-efficient was 0.275 in 2010 and increased to 0.300 in 2016. It bears the evidence that there is slight increase of consumption inequality in the rural area. In the urban area, the Gini co-efficient was 0.338 in 2010 and reduced to 0.331 in 2016. This shows reduction of consumption inequality in the urban area during the period 2010 to 2016. Figure 8 provides the graphical presentation of deciles distribution of household income from HIES 2016 and HIES 2010.

Figure 8: Decile distribution of consumption 2016 & 2010 (national)



Chapter 4

Food and Nutrition

This chapter presents food and nutrition intake of the households in four consecutive surveys conducted during 2016, 2010, 2005, 2000 and 1995-96. Food is consumed by every individual as essential consumption items for survival. Every food item has its own calorie, protein and other nutritional values which are essential for health. Nutritional values vary considerably among food items. That is why, people like to take food items in combination to balance their calorie, protein and other nutritional needs. Some people could not take balanced diet due to lack of adequate knowledge about nutrient content of food intake and budget constraint. It may be mentioned that the inability of taking/acquiring necessary food items may be attributed to food poverty, although, some rich and old people may take less nutritional foods for health reasons.

4.1 Food intake

Per capita per day intake of major food items (in grams) in different survey years have been presented in Table 9.

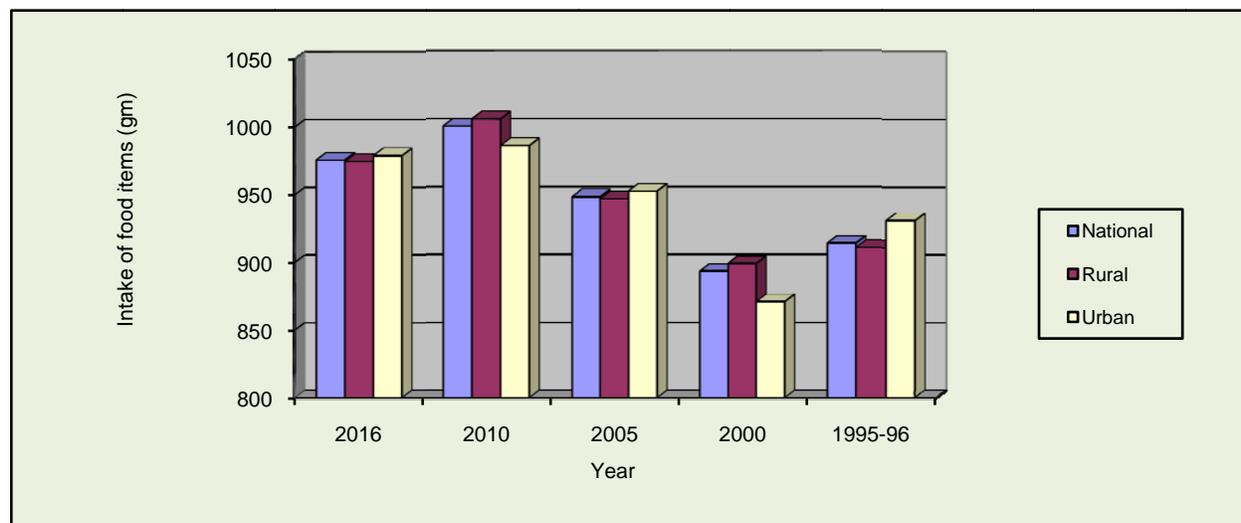
Table 9: Food intake (grams) in HIES 1995-96 to HIES 2016

Survey Years	Residence		
	National	Rural	Urban
2016	975.53	974.32	978.74
2010	1000.0	1005.2	985.5
2005	947.8	946.3	952.1
2000	893.1	898.7	870.7
1995-96	913.8	910.5	930.8

It appears from the table that per capita per day intake of food items has decreased to 975.53 grams in 2016 from 1000.00 grams in 2010 showing a decrease of 2.45% at the national level. The rates of decrease in rural and urban areas are 3.07% and 0.69% respectively in 2016 compared to 2010. It may be noted that though the intake decreased in 2016 yet it is higher than all survey years from 1995-96 to 2005. The rates of increase at the national, rural and urban areas from 2000 to 2005 were 6.1%, 5.3% and 9.3% respectively.

Figure 9 provides the graphical presentation of per capita per day food intake in grams with rural-urban breakdown from HIES 1995-96 to HIES 2016.

Figure 9: Per capita Per day intake of food items (grams) in different survey years by residence



4.2 Average daily per capita intake of major food items (in grams)

Average per capita per day intake of major food items (in grams) for the four survey years have been presented in Table 10.

Table 10: Per capita per day intake of major food items (grams) HIES 1995-96 to HIES 2016

Food Items	Survey Years				
	2016	2010	2005	2000	1995-96
Total	975.53	999.99	947.75	893.06	913.8
Rice	367.19	416.01	439.64	458.54	464.3
Wheat	19.83	26.00	12.08	17.24	33.7
Potato	64.83	70.30	63.30	55.45	49.5
Pulses	15.60	14.30	14.19	15.77	13.9
Vegetables	167.30	166.08	157.02	140.47	152.5
Edible Oil	26.75	20.51	16.45	12.82	9.8
Onion	31.04	22.00	18.37	15.41	11.6
Beef	7.54	6.84	7.78	8.30	6.6

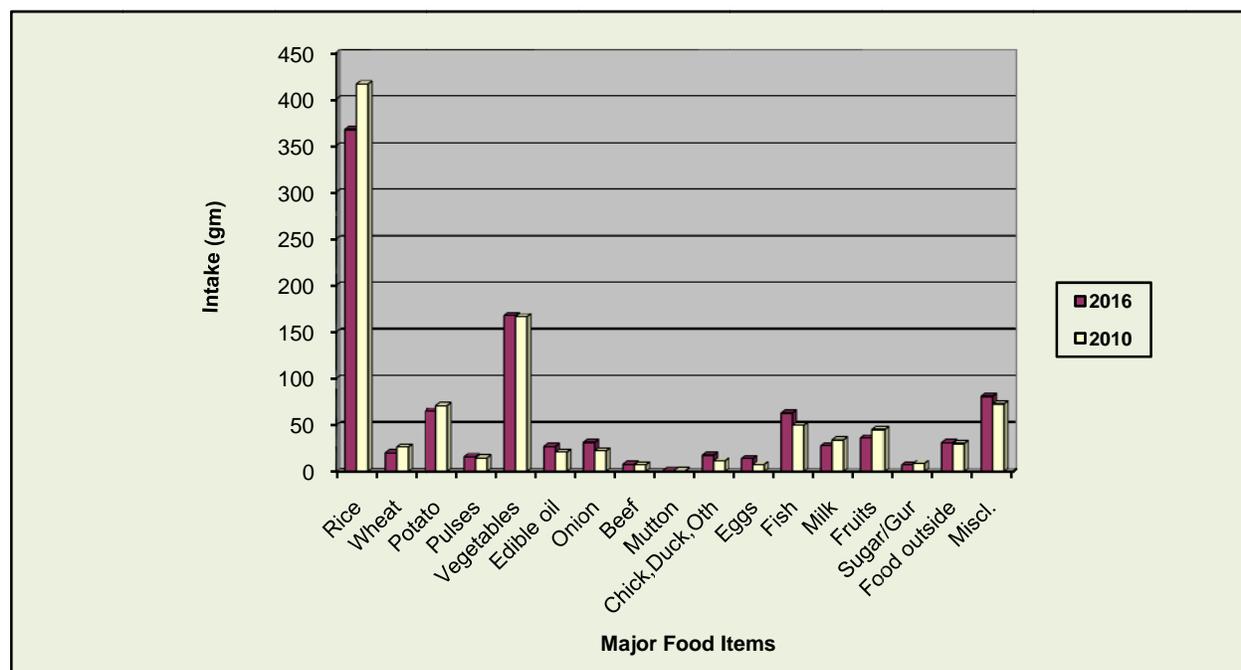
Food Items	Survey Years				
	2016	2010	2005	2000	1995-96
Mutton	0.55	0.60	0.59	0.49	1.0
Chicken/duck	17.33	11.22	6.85	4.50	4.0
Eggs	13.58	7.20	5.15	5.27	3.2
Fish	62.58	49.50	42.14	38.45	43.8
Milk & milk products	27.31	33.72	32.40	29.71	32.6
Fruits	35.78	44.70	32.54	28.35	27.6
Sugar/Gur	6.90	8.40	8.08	6.85	9.2
Food taken outside	30.77	29.83	24.76	-	-
Miscellaneous	80.62	72.78	48.38	55.44	50.9

Consumption of food items is highly dependent on the availability food, its price level and also food habits. Seasonal variations in prices of food items, especially in case of cereals, fruits and vegetables are obvious. Therefore, increase or decrease of quantity consumed may be considered in the light of these factors.

It is observed from the table that the average quantity of rice intake (fine, medium and coarse combined) has decreased to 367.19 grams in 2016 from 416.01 grams in 2010 at the national level. It is mention worthy that rice consumption is gradually decreasing in Bangladesh. It was 464.30 grams in 1995-96, 458.54 in 2000 and 439.64 in 2005. Consumption of wheat reduced between 1995-96 through 2005, but increased in 2010 and again reduced in 2016.

In case of potato, per capita per day intake has slightly decreased to 64.83 grams in 2016 from 70.30 grams in 2010. Other items which show increased consumption in 2016, compared to 2010, are vegetables, edible oil, onion, beef, chicken/duck, eggs and fish. On the other hand, intakes of items that are gone down are milk and milk products, fruits and sugar/gur. Food taken outside home slightly increased in 2016 compared to 2010. Increase of consumption of non-cereal items is a good sign for health of the people as well as for the economy. Figure 10 provides the graphical presentation of per capita per day intake of different food intake in grams for 2010 and 2016.

Figure 10: Per capita per day intake (grams) of major food items, 2016 and 2010



Variations in intake of major food items by urban and rural can be seen in Table 11 for the last two surveys 2016 and 2010.

Table 11: Per capita per day intake of major food items (in grams) by residence HIES 2016 and HIES 2010

Food Item	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Total	975.53	974.32	978.74	999.99	1005.16	985.49
Rice	367.19	386.09	316.70	416.01	441.61	344.20
Wheat	19.83	17.44	26.22	26.00	23.30	33.60
Potato	64.83	65.89	62.01	70.30	71.50	67.70
Pulses	15.60	15.12	16.88	14.30	13.23	17.20
Vegetables	167.30	164.78	174.06	166.08	170.04	154.95
Edible Oil	26.75	25.70	29.57	20.51	18.28	26.60
Onion	31.04	29.75	34.50	22.00	20.20	27.80
Beef	7.54	6.54	10.22	6.84	4.70	12.50

Food Item	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Mutton	0.55	0.48	0.76	0.60	0.50	0.89
Chicken/duck	17.33	15.30	22.73	11.22	9.01	17.42
Eggs	13.58	12.73	15.85	7.20	5.80	10.90
Fish	62.58	60.59	67.91	49.50	45.80	59.91
Milk and milk products	27.31	26.29	30.04	33.72	31.78	39.16
Fruits	35.78	32.24	45.23	44.70	42.60	50.40
Sugar/Gur	6.90	6.65	7.57	8.40	7.40	11.30
Food taken outside	30.77	27.51	39.47	29.83	28.00	34.97
Miscellaneous foods	80.62	81.23	79.00	72.78	71.41	76.99

Table 11 reveals that, per capita per day food intake was 1005.16 grams in rural areas in 2010 which reduced to 974.32 grams in 2016. In the urban areas it was 985.49 grams in 2010 which reduced to 978.74 grams in 2016. As regards items of consumption, it is observed that rice consumption in the rural areas reduced from 441.61 grams in 2010 to 386.09 in 2016. The other food items for which the consumption reduced in rural areas in 2016 compared to 2010 include wheat, potato, vegetables, mutton, milk, fruits and sugar/gur. Items for which consumption increased in 2016 include edible oil, onion, beef, chicken/duck, eggs and fish. In the urban areas, the items for which the consumption reduced in 2016 compared to 2010 include rice, wheat, pulse, potato, beef, mutton, milk and fruits. Items for which consumption increased in 2016 compared to 2010 include vegetables, edible oil, onion, chicken/duck, egg and fish.

Table 12 below provides per capita per day intake of food items by poor and non-poor households in 2016 and 2010. It is observed from the table that total intake of food items of the poor household is much lower than non-poor household. The consumption of all food items was lower for poor households than non-poor households both in 2016 and 2010. However, the rice consumption of the poor households in 2016 was a bit higher than non-poor household.

Table 12: Per capita per day intake of major food items (in grams) by poor and non-poor household, HIES 2016 and HIES 2010

Food Item	2016			2010		
	Total	Poor	Non-poor	Total	Poor	Non-poor
Total	975.53	802.34	1030.92	999.99	816.22	1084.53
Rice	367.19	369.91	366.32	416.01	406.19	420.52
Wheat	19.83	11.95	22.35	26.00	20.36	28.73
Potato	64.83	63.07	65.40	70.30	63.44	73.78
Pulses	15.60	10.73	17.16	14.30	10.15	16.22
Vegetables	167.30	142.02	175.39	166.08	141.80	177.25
Edible Oil	26.75	18.80	29.30	20.51	14.20	23.41
Onion	31.04	21.96	33.95	22.00	15.69	24.74
Beef	7.54	1.50	9.48	6.84	1.55	9.27
Mutton	0.55	0.14	0.69	0.60	0.11	0.83
Chicken/duck	17.33	8.16	20.26	11.22	4.11	15.09
Eggs	13.58	8.34	15.26	7.20	3.40	9.02
Fish	62.58	40.20	69.74	49.50	31.16	57.81
Milk	27.31	11.17	32.48	33.72	12.18	43.63
Fruits	35.78	15.19	42.37	44.70	20.46	56.00
Sugar/Gur	6.90	2.72	8.24	8.40	3.32	10.88
Food taken outside	30.77	18.93	34.55	29.83	17.70	35.41
Miscellaneous foods	80.62	57.54	88.00	72.78	50.28	81.81

4.3 Average intake of calorie

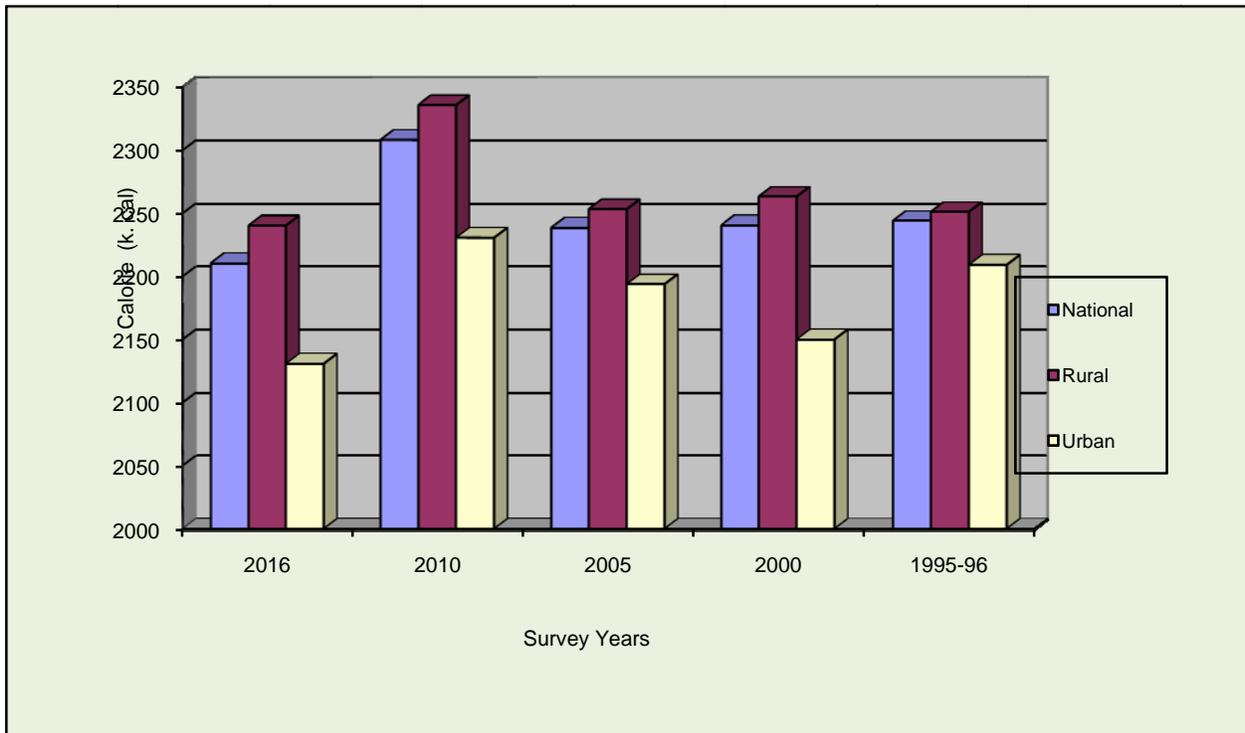
Per capita per day intake of calorie in different survey years have been presented in Table 13 with urban-rural breakdown.

Table 13: Per capita per day calorie (K. Cal) intake by residence HIES 1995-96 to HIES 2016

Survey Years	Residence		
	National	Rural	Urban
2016	2210.4	2240.2	2130.7
2010	2318.3	2344.6	2244.5
2005	2238.5	2253.2	2193.8
2000	2240.3	2263.2	2150.0
1995-96	2244.0	2251.1	2209.1

The overall calorie intake per capita per day has decreased to 2210.4 K.cal in 2016 from 2308.1 K.cal in 2010 (a decrease of 4.23%). This decrease may be due to substantial decrease of rice consumption in 2016 compared to 2010. Similar decrease also observed in rural as well as urban areas of the country during 2016 compared to 2010. It is observed from the table 13 that calorie intake was almost same in the national and rural level during 1995-96 through 2005 but increased in 2010. In the urban area it fluctuated during the period. In 2016 it substantially decreased to 2130.7 from 2244.5 k.cal in 2010. Figure 11 provides the graphical presentation of per capita per day calorie intake in kilo calories over the years.

Figure 11: Per capita per day calorie intake in different survey years



4.4 Average protein intake in grams

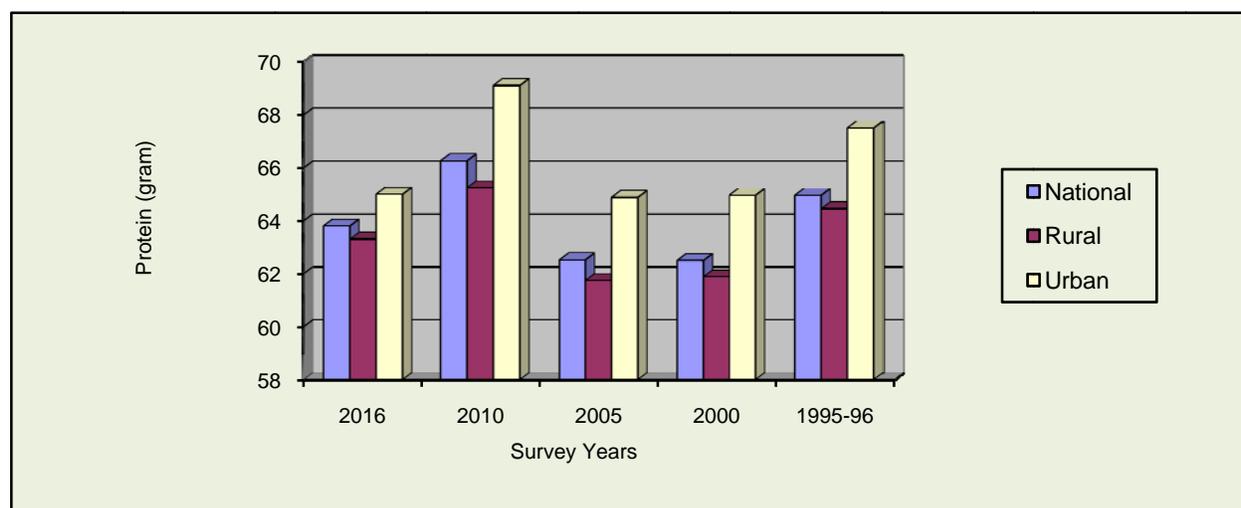
Per capita per day protein intakes (in grams) in different survey years have been presented in Table 14.

Table 14: Per capita per day intake of protein (Grams) by residence from HIES 1995-96 to HIES 2016

Survey Years	Residence		
	National	Rural	Urban
2016	63.80	63.30	65.00
2010	66.26	65.24	69.11
2005	62.52	61.74	64.88
2000	62.50	61.88	64.96
1995-96	64.96	64.45	67.50

Per capita per day protein intake (in grams) has decreased to 63.80 grams in 2016, from 66.26 grams in 2010 although it did not change in previous two surveys 2000 and 2005. In the rural areas it reduced to 63.30 grams in 2016 from 65.24 grams in 2010. In the urban area, the protein intake reduced to 65.00 grams in 2016 from 69.11 grams in 2010. In 2000 and 2005 survey, protein intake was almost the same in the urban area while it was higher in 1995-96. Figure 12 shows the protein intake by residence in different survey years.

Figure 12: Per capita per day intake of protein in different survey years



Chapter 5

Profile of Poverty

This chapter deals with incidence of poverty by different methods and socio-economic characteristics of the population. For the first time in HIES history, the quarterly estimate of poverty and poverty for the 64 districts of Bangladesh has been provided. Poverty can be estimated using different methods. The preferred method for poverty estimation is the Cost of Basic Needs (CBN). Details of the CBN method have been provided in this chapter.

5.1 Cost of Basic Needs (CBN) Method

The Cost of Basic Needs (CBN) method is the standard method for estimating the incidence of poverty. This method is recommended by the World Bank and the estimates based on it are used in the 7th Five Year Plan and also being used by the planners, policy makers and the international agencies. In this method, two poverty lines are estimated:

- I. Lower poverty line
- II. Upper poverty line

A brief description (detail is at Appendix-1) of estimating incidence of poverty using CBN method is as follows:

a) Food poverty line

- 1) A basic food basket (Eleven food items) is selected.
- 2) The quantities in the basket are scaled according to the nutritional requirement of 2122 K.cal per person per day.
- 3) Cost of acquiring the basket is calculated. This estimated cost is taken as Food Poverty Line (FPL).

b) Nonfood poverty line

A nonfood poverty line is calculated by estimating the cost of consuming non-food items by the households close to food poverty line.

Lower Poverty Line

The extreme poor households are those households whose total expenditures are equal to the food poverty line.

Upper Poverty Line

The moderate poor households are those households whose food expenditure is at the level of food poverty line.

For estimating poverty incidences several options were tested. Finally, for suitability and transparency of estimates the following option was recommended by the experts for estimating poverty incidences of HIES 2016:

Updating of poverty lines:

To maintain the proper comparability of poverty rates across time, it is desirable that the values of the poverty lines are kept constant over time in real terms. In order to ensure this, poverty lines are not re-estimated frequently but rather updated from the previous estimates of poverty lines. In HIES 2016, the upper and lower poverty lines were estimated by updating the official upper and lower poverty lines available for HIES 2010 using composite price indices. These composite price indices were constructed for each of the 16 original strata using a combination of Tornqvist food price index and the non-food CPI for urban and rural areas. The Tornqvist price index was preferred to usual Laspeyres or Paasche indexes as it (Tornqvist) uses the budget (consumption) shares of both the base and current years for weighting in index calculation which allows for changes in consumption patterns over time.

5.2 Head Count Rate Using CBN Method

Head Count Rate (HCR) provides the estimate on the percentage of people living below the poverty line. In CBN method, it is a process of counting the poor on the consumption threshold and expressed in percentage term. It is also a core SDG indicator of the Goal 1 “End Poverty in all forms and everywhere”.

Poverty rates for 2000 to 2016 have been presented in Table 15. It is observed from the table that poverty reduced more than one half during 2000 to 2016. During this period poverty reduced by 24.6 percentage points. This reduction is commendable, the rate of annual reduction is estimated at 1.5% per annum. Using lower poverty line the poverty incidence reduced from 34.3% to 12.9% during the period, a reduction of 21.4 percentage points during the period.

Table 15: Poverty Head Count Rate (HCR) 2000-2016

Poverty line	2016	2010	2005	2000
Upper Poverty Line	24.3	31.5	40.0	48.9
Lower Poverty Line	12.9	17.6	25.1	34.3

Estimates of Head Count Rate of HIES 2016 and HIES 2010 for upper and lower poverty lines are given in the Table 16.

Table 16: Head Count Rate (CBN) of Incidence of Poverty HIES 2016 and HIES 2010 by Residence

Residence	Upper Poverty Line		Lower Poverty Line	
	2016	2010	2016	2010
National	24.3	31.5	12.9	17.6
Rural	26.4	35.2	14.9	21.1
Urban	18.9	21.3	7.6	7.7

Using the upper poverty line, in HIES 2016 the Head Count Rates (HCR) of incidence of poverty are estimated at 24.3% at the national level, 26.4% in rural areas and 18.9% in urban areas. In HIES 2010, these rates were 31.5% at the national level, 35.2% in rural areas and 21.3% in urban areas respectively. It has recorded a reduction of HCR by 7.2% percentage point (approximately 1.2% per annum) at national level, 8.8% point in rural areas and 2.4% point in urban areas during the period 2010 to 2016. It is notable to mention that poverty reduction was higher in rural areas compared to urban areas. In rural areas, the reduction was 3.7 times higher than urban areas. This may be due to higher poverty reduction interventions, such as social safety Net, in the rural area compared to urban areas.

Using the lower poverty line, in HIES 2016 the HCR of incidence of poverty are estimated at 12.9% at the national level, 14.9% in rural areas and 7.6% in urban areas. In HIES 2010 these rates were 17.6% at the national level, 21.1% in rural areas and 7.7% in urban areas respectively. It recorded a reduction of HCR by 4.7% at the national level, 6.2% in rural areas and 0.1% in urban areas during the period 2010 to 2016.

5.3 Head Count Ratio by Quarter, HIES 2016

The quarterly estimates of poverty for the year 2016 have been presented in Table 17. As mentioned earlier, the poverty incidence by quarter has been estimated for the first time in the history of HIES. For this the sample size was increased to a large extent from 12,240 in 2010 to 46,080 in 2016 and 11,520 households were covered in each quarter throughout the country. This sample size is quite representative to provide poverty estimates quarterly at the national, urban and rural levels.

It is observed from the table that, during the first two quarters, April-June, 2016 and July-September, 2016, poverty rates were lower than the October-December, 2016 and January-March, 2017 Quarters. This is true for national and rural areas. For the urban area, the poverty

rates for Q1 and Q4 were lower than Q2 and Q3. This pattern is also observed for the lower poverty line.

Table 17: Head Count Rate (CBN) of Incidence of Poverty, HIES 2016 by Quarter

Quarters	Using Upper Poverty Line			Using Lower Poverty Line		
	National	Rural	Urban	National	Rural	Urban
Year, 2016	24.3	26.4	18.9	12.9	14.9	7.6
Q1	22.5	25.3	15.5	12.4	14.6	6.9
Q2	23.0	23.6	21.2	12.3	13.8	8.2
Q3	26.1	27.9	21.0	13.5	15.4	8.1
Q4	27.1	30.4	18.5	14.1	16.5	7.5

Note: Q1=April-June, 2016, Q2=July-September, 2016, Q3=October-December, 2016 and Q4=January-March, 2017

5.4 Head Count Rate (HCR) by Division

The Head Count Rates of incidence of poverty by eight administrative divisions with rural and urban breakdown are presented in table 18.

Table 18: Incidence of Poverty (HCR) by CBN Method by Division HIES 2016 and HIES 2010

Poverty Line and Division	2016			2010		
	National	Rural	Urban	National	Rural	Urban
1. Using the Lower Poverty Line						
National	12.9	14.9	7.6	17.6	21.1	7.7
Barisal	14.5	14.9	12.2	26.7	27.3	24.2
Chittagong	8.7	9.6	6.5	13.1	16.2	4.0
Dhaka	7.2	10.7	3.3	15.6	23.5	3.8
Khulna	12.4	13.1	10.0	15.4	15.2	16.4

Poverty Line and Division	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Mymensingh	17.6	18.3	13.8	-	-	-
Rajshahi	14.2	15.2	10.7	16.8	17.7	13.2
Rangpur	30.5	31.3	26.3	27.7	29.4	17.2
Sylhet	11.5	11.8	9.5	20.7	23.5	5.5

Poverty Line and Division	2016			2010		
	National	Rural	Urban	National	Rural	Urban
2. Using the Upper Poverty Line						
National	24.3	26.4	18.9	31.5	35.2	21.3
Barisal	26.5	25.7	30.4	39.4	39.2	39.9
Chittagong	18.4	19.4	15.9	26.2	31.0	11.8
Dhaka	16.0	19.2	12.5	30.5	38.8	18.0
Khulna	27.5	27.3	28.3	32.1	31.0	35.8
Mymensingh	32.8	32.9	32.0	-	-	-
Rajshahi	28.9	30.6	22.5	29.8	30.0	29.0
Rangpur	47.2	48.2	41.5	42.3	44.5	27.9
Sylhet	16.2	15.6	19.5	28.1	30.5	15.0

NB: Mymensingh was under Dhaka division during HIES 2010

The estimates of Head Count Rates by divisions using the upper poverty line in HIES 2016 reveal that, Rangpur division has the highest incidence of poverty (HCR) at 47.2%, followed by Mymensingh division 32.8% and Rajshahi division 28.9% and Khulna division 27.5%. On the other hand, Dhaka division has recorded the lowest HCR of 16.0% preceded by Sylhet division 16.2% and Chittagong division 18.4%.

It is seen from the findings that, incidence of poverty has significantly reduced in Dhaka division compared to other divisions. It has reduced to 16.0% in 2016 from 30.5% in 2010. Sharp reduction of HCR in Dhaka division using the upper poverty line can be attributed to high reduction of poverty in the rural areas of Dhaka division, 19.4% point during this period. Urban HCR of Dhaka division came down to 12.5% in 2016 from 18.0% in 2010, a reduction of 5.5% point during that period. The reduction of HCR is significant in the other urban areas also except

Chittagong and Rangpur division. The incidence of poverty increased in Rangpur division in 2016 compared to 2010. However, the poverty estimate of Rangpur division in 2010 suffers from some limitations as it was not considered as separate division (domains) in sampling design of HIES 2010. Later, the estimates were prepared splitting Rajshahi division. Therefore, the estimate of poverty for Rangpur division for 2016 is not directly comparable with 2010.

5.5 Poverty Gap (PG) and Squared Poverty Gap (SPG)

Poverty Gap (PG) and Squared Poverty Gap (SPG) have been calculated by CBN method using lower and upper poverty lines and presented in table 19.

**Table 19: Poverty Gap and Squared Poverty Gap (in percent) by Cost of Basic Needs
Method HIES 2016 and HIES 2010**

Poverty Line and Division	Poverty Gap			Squared Poverty Gap		
	National	Rural	Urban	National	Rural	Urban
2016						
1. Using the Lower Poverty Line						
National	2.3	2.6	1.3	0.6	0.7	0.4
Barisal	2.7	2.7	2.6	0.8	0.8	0.9
Chittagong	1.5	1.7	1.1	0.4	0.4	0.3
Dhaka	1.2	1.9	0.5	0.3	0.5	0.1
Khulna	1.9	2.0	1.7	0.5	0.5	0.5
Mymensingh	2.8	2.9	2.5	0.7	0.7	0.7
Rajshahi	2.3	2.5	1.6	0.6	0.7	0.4
Rangpur	6.3	6.4	5.6	2.0	2.0	1.8
Sylhet	1.8	1.8	1.7	0.4	0.4	0.4
2. Using the Upper Poverty Line						
National	5.0	5.4	3.9	1.5	1.7	1.2
Barisal	5.5	5.1	7.6	1.8	1.6	2.9
Chittagong	3.5	3.8	2.9	1.0	1.1	0.8
Poverty Line and Division	Poverty Gap			Squared Poverty Gap		

	National	Rural	Urban	National	Rural	Urban
2016						
Dhaka	3.2	3.9	2.4	0.9	1.2	0.7
Khulna	5.2	5.0	5.7	1.5	1.4	1.7
Mymensingh	6.4	6.2	7.7	1.9	1.7	2.7
Rajshahi	5.6	5.9	4.2	1.6	1.8	1.2
Rangpur	11.9	12.1	10.6	4.2	4.2	3.8
Sylhet	2.6	2.4	3.8	0.7	0.6	1.2
2010						
1. Using the Lower Poverty Line						
National	3.1	3.7	1.3	0.8	1.0	0.4
Barisal	5.4	5.4	5.2	1.6	1.6	1.7
Chittagong	2.2	2.7	0.8	0.6	0.7	0.2
Dhaka	2.7	4.1	0.5	0.7	1.1	0.1
Khulna	2.7	2.7	2.6	0.8	0.8	0.7
Rajshahi	2.8	2.9	2.3	0.7	0.7	0.6
Rangpur	5.0	5.6	2.9	1.2	1.3	0.7
Sylhet	3.3	3.7	1.2	0.9	1.0	0.4
2. Using the Upper Poverty Line						
National	6.5	7.4	4.3	2.0	2.2	1.3
Barisal	9.8	9.2	12.6	3.4	3.0	5.2
Chittagong	5.1	6.1	2.1	1.5	1.8	0.6
Dhaka	6.2	8.1	3.3	1.8	2.4	0.9
Khulna	6.4	6.1	7.4	2.0	1.9	2.3
Rajshahi	6.2	6.4	5.6	1.9	1.9	1.7
Rangpur	10.1	10.7	6.3	3.2	3.4	1.9
Sylhet	4.7	5.0	2.7	1.3	1.3	0.9

The Poverty Gap (PG) estimates the depth of poverty in the population. The HCR gives only the percentage value of poverty incidences, but it does not measure the distance of the

poverty prone households from the poverty line. The Foster, Grear and Thorbecke (FGT) method provides the technique to estimate average distance of the poor households from the poverty line.

Using the lower poverty line in HIES 2016, PG is estimated at 2.3% at the national level in 2016. It has recorded a reduction of 0.8% point during the period 2010 to 2016. Using the upper poverty line the PG is estimated at 5.0% in 2016. It has recorded a 1.5% point reduction over the year 2010. All these reductions of PG indicate that average consumption or income level of the people below the poverty lines are improving during the period 2010 to 2016.

It reveals from the above table that, using the lower poverty line Dhaka division has recorded the lowest Poverty Gap. It is estimated at 1.2% in HIES 2016. It was 2.7% in HIES 2010. The same was the highest for Rangpur division both in 2016 and 2010 and the corresponding rates were 6.3% and 5.0% respectively. Using the upper poverty line, Sylhet division has recorded the lowest PG and estimated at 2.6% in 2016. The highest PG using upper poverty line was recorded in Rangpur in 2016 and 2010 and the rates were 11.9% and 10.1% respectively. PG decreased for all other divisions during the period 2010 to 2016.

The Squared Poverty Gap (SPG) measures the severity of the poverty. It has been estimated by FGT method using both lower and upper poverty lines. At national level, using the lower poverty line, it is estimated at 0.6% in HIES 2016, whereas, it was 0.8% in HIES 2010. Using the upper poverty line, the SPG is estimated at 1.5% in HIES 2016, whereas, it was 2.0% in 2010. It indicates that, severity of poverty has reduced during the period 2010 to 2016. Using the upper poverty line, Sylhet division has recorded the lowest SPG and estimated at 0.7% in 2016 whereas it was the highest 4.2% in Rangpur division. Using the lower poverty line the SPG was observed the lowest 0.3% in Dhaka division and the highest 2.0% in Rangpur division.

5.6 Incidence of Poverty (CBN) by Size of Household

Estimation of incidence of poverty by size of household has been presented in the Table 20.

Table 20: Incidence of Poverty (CBN) by Size of Household HIES 2016 and HIES 2010

Household Size (Number of Person)	Percentage of Population Below Poverty Line					
	2016			2010		
	National	Rural	Urban	National	Rural	Urban
1. Using the Lower Poverty Line						
All size	12.9	14.9	7.6	17.6	21.1	7.7
1-2	4.4	5.4	2.1	7.5	9.3	2.8
3-4	9.6	11.5	5.3	11.8	14.5	5.1
5-6	16.2	18.4	9.4	19.7	23.4	9.0
7-8	20.2	20.6	18.7	28.2	32.5	12.4
9-10	17.9	19.9	11.1	21.9	24.6	14.2
11+	21.0	21.8	17.9	15.6	19.9	1.5
2. Using the Upper Poverty Line						
All size	24.3	26.4	18.9	31.5	35.2	21.3
1-2	9.9	11.8	5.5	15.1	18.0	7.6
3-4	19.9	22.2	14.6	24.4	27.5	16.9
5-6	29.6	31.3	24.5	35.1	38.8	24.4
7-8	34.2	35.0	31.7	44.0	47.0	33.0
9-10	29.5	29.6	29.1	37.2	41.8	24.4
11+	28.3	26.6	34.8	25.2	29.9	9.5

The estimates of Head Count Rate of incidence of poverty using the lower poverty line by household size (number of members in the household) in HIES 2016 show that, the lowest HCR is 4.4% at the national level for the households having number of household members 1-2, 5.4% in rural areas and 2.1% in urban areas. In 2010, the corresponding rates were 7.5%, 9.3% and 2.8% showing improvement of HCR of this size of family all over the country. On the other hand, HCR using lower poverty line was the highest for the family size 11 members and above which is recorded at 21.0% in 2016 and it was for 7-8 member households (28.2%) in 2010.

Interestingly, it is appeared from the table that, the HCR increases with the increase of household size up to member size 7-8. It again falls down for the household size 9-10 and increased for 11+.

The estimates using the upper poverty line show the similar correlation of HCR with household size as showed the HCR estimates using the lower poverty line.

5.7 Incidence of Poverty (CBN) by Age of Head of Household

Estimates of incidence of poverty (HCR) by age of head of household are presented in the table 21.

Table 21: Incidence of Poverty (CBN) by Age of Head of Household HIES 2016 and HIES 2010

Age of Head in Years	Percentage of Population Below Poverty Line					
	2016			2010		
	National	Rural	Urban	National	Rural	Urban
1. Using the Lower Poverty Line						
All Age	12.9	14.9	7.6	17.6	21.1	7.7
<=29	13.0	15.6	7.4	19.4	22.8	9.1
30-39	15.7	18.5	8.4	21.6	26.4	9.3
40-49	12.9	14.9	7.8	17.3	21.2	7.3
50-59	10.1	11.6	6.0	13.7	16.9	5.4
60+	11.1	12.0	7.6	15.6	17.6	8.0
2. Using the Upper Poverty Line						
All Age	24.3	26.4	18.9	31.5	35.2	21.3
<=29	24.5	27.1	18.9	35.6	39.5	24.1
30-39	28.8	31.9	20.9	37.0	42.0	24.1
40-49	24.6	26.4	20.1	31.4	34.9	22.4
50-59	20.1	22.2	14.2	25.8	29.4	16.4
60+	20.6	21.4	17.7	28.1	30.5	19.2

The estimates of HCR of incidence of poverty by age of head of households have been presented in Table 20. The incidence of poverty using lower poverty line for the age <=29 was 13.0%, then it increased to 15.6% for age group 30-39, thereafter, it decreased for age group

40-49 and 50-59 and again increased for age 60 years and above. Similar pattern was observed for poverty incidence by age of head of household by using upper poverty line.

5.8 Incidence of Poverty (CBN) by Selected Household Characteristics

Estimates of Incidence of Poverty (CBN) by selected household characteristics using both upper and lower poverty lines have been presented in Table 22.

Table 22: Incidence of Poverty (CBN) by Selected Household Characteristics HIES 2016 and HIES 2010

Characteristics of Households	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Using the Lower Poverty Line						
National	12.9	14.9	7.6	17.6	21.1	7.7
Gender of head:						
Male	13.2	15.3	7.5	17.9	21.5	7.9
Female	10.4	11.3	8.0	14.6	17.3	5.5
Marital Status:						
Married	12.9	14.9	7.5	17.5	21.1	7.6
Unmarried	8.5	8.6	8.3	10.7	9.6	13.5
Widowed/Divorced	15.2	17.4	9.8	19.4	22.9	7.6
Religion:						
Muslim	12.6	14.5	7.6	17.8	21.4	8.0
Non Muslim	14.9	17.5	7.1	15.5	18.8	4.5
Using the Upper Poverty Line						
National	24.3	26.4	18.9	31.5	35.2	21.3
Gender of head:						
Male	24.8	27.1	18.8	32.1	35.9	21.7

Characteristics of Households	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Female	19.9	20.0	19.7	26.6	29.3	17.5
Marital Status:						
Married	24.4	26.5	18.7	31.4	35.1	21.1
Unmarried	15.6	16.4	13.9	23.3	22.4	25.5
Widowed/Divorced	27.4	28.8	24.0	33.9	37.2	22.8
Religion:						
Muslim	24.0	26.0	18.9	31.6	35.2	21.6
Non Muslim	26.6	29.3	18.5	31.1	34.7	18.7

The HCR of incidence of poverty is found significantly less for the female headed households than that of male headed households. Using the upper poverty line, in 2016, the HCR of incidence of poverty by sex of head of household is estimated at 19.9% for the female headed household, whereas, it is 24.8% for the male heads. In the rural areas, HCR is 20.0% for the female head and 27.1% for the male head. In the urban areas, the HCR of male household is lower than female headed household. It is 18.8% for the male headed household and 19.7% for the female headed household. In 2010, the HCR of incidence of poverty using the lower poverty line is estimated at 14.6% for the female headed households, whereas, it is 17.9% for the male headed households. In 2016, in the rural areas, the HCR of female headed households is 11.3%, whereas, it is 15.3% for the male headed households. In urban areas these rates are 8.0% for female headed households as against 7.5% for male headed households.

It appears from the findings that, HCR of incidence of poverty by marital status using the upper poverty line are 24.4% for the married, 15.6% for the unmarried and 27.4% for the widowed/divorced. Using the lower poverty line, the HCR of incidence of poverty by marital status are 12.9% for the married, 8.5% for the unmarried and 15.2% for the widowed/divorced. HCR reduced for all these categories during the period 2010 to 2016.

Using the upper poverty line in 2016, the HCR is 24.0% for the Muslims and 26.6% for the non-Muslims. Using the lower poverty line, the HCR is 12.6% for the Muslims and 14.9% for the non-Muslims.

5.9 Incidence of Poverty (CBN) by Educational Status

Estimates of incidence of poverty (CBN) by educational status using lower and upper poverty line have been presented in table 23.

Table 23: Incidence of Poverty (CBN) by Educational Status HIES 2016 and HIES 2010

Characteristics of Households	2016			2010		
	National	Rural	Urban	National	Rural	Urban
1. Using the Lower Poverty Line						
National	12.9	14.9	7.6	17.6	21.1	7.7
Literacy status:						
Illiterate	15.8	17.0	11.4	25.1	27.2	15.6
Literate	7.1	9.0	3.6	9.2	12.4	3.3
Educational level:						
No education	16.0	17.2	11.6	25.1	27.1	15.6
Completed class I-IV	12.6	13.4	9.5	15.8	18.4	7.9
Completed class V-IX	7.9	9.4	4.5	11.4	13.8	5.4
Completed class SSC+	2.7	4.5	0.9	3.4	6.1	0.8
2. Using the Upper Poverty Line						
National	24.3	26.4	18.9	31.5	35.2	21.3
Literacy status:						
Illiterate	29.5	30.1	27.3	42.8	43.5	39.4
Literate	15.1	17.5	10.3	19.0	23.3	11.4
Educational level:						
No education	29.8	30.4	27.4	42.8	43.5	39.4
Completed class I-IV	25.1	25.3	24.3	35.7	38.1	28.3
Completed class V-IX	16.5	17.9	13.1	22.6	24.9	16.7
Completed class SSC+	6.6	9.6	3.6	7.5	11.2	3.9

Historically, incidence of poverty is high among the illiterates. The 2016 survey findings revealed the same fact. In 2016, the estimates of HCR by literacy status, using the upper poverty line are 29.5% for the illiterate and 15.1% for the literate. It is 14.4% point higher among the illiterate than the literate. In 2010, it was 42.8% for the illiterate and 19.0% for the literate. It shows a 13.3% point reduction of HCR among the illiterates during the period 2010 to 2016.

Using the lower poverty line HCR by educational status are 15.8% for the illiterate and 7.1% for the literate. HCR is 8.7% point higher among the illiterate than that of the literate. In 2010, it was 25.1% for the illiterate and 9.2% for the literate.

The HCR of incidence of poverty by educational status shows a high negative correlation with educational status. HIES 2016 findings show that, poverty incidence decreases as educational status increases. The estimates of HCR using the upper poverty line show that 29.8% for no education, 25.1% for grade I-IV, 16.5% for grade V-IX and 6.6% for SSC and above. The estimates of HCR using the lower poverty line have recorded 16.0% for no education, 12.6% for grade I-IV, 7.9% for grade V-IX and 2.7% for the SSC passed and above.

5.10 Incidence of Poverty (CBN) by Ownership of Land

Estimates of incidence of poverty (CBN) by ownership of land using both lower and upper poverty lines have been presented in Table 24.

Table 24: Incidence of Poverty (CBN) by Ownership of Land HIES 2016 and HIES 2010

Size of Land Holding (Acres)	Percentage of Population below Poverty Line					
	2016			2010		
	National	Rural	Urban	National	Rural	Urban
1. Using the Lower Poverty Line						
All size	12.9	14.9	7.6	17.6	21.1	7.7
No land	17.6	24.6	10.6	19.8	33.8	9.9
<0.05	16.1	19.6	8.2	27.8	35.9	12.3
0.05-0.49	12.9	14.8	7.1	17.7	22.1	5.4
0.50-1.49	8.2	9.2	3.9	13.3	15.2	2.4
1.50-2.49	5.5	6.0	2.4	7.6	8.6	1.8
2.50-7.49	6.5	6.9	4.2	4.1	4.3	2.7
7.50+	3.8	4.9	0.8	3.7	4.2	0.0

Size of Land Holding (Acres)	Percentage of Population below Poverty Line					
	2016			2010		
	National	Rural	Urban	National	Rural	Urban
2. Using the Upper Poverty Line						
All size	24.3	26.4	18.9	31.5	35.2	21.3
No land	32.9	38.3	27.4	35.4	47.5	26.9
<0.05	29.5	33.6	20.4	45.1	53.1	29.9
0.05-0.49	24.4	26.8	16.8	33.3	38.8	17.4
0.50-1.49	16.9	18.5	9.9	25.3	27.7	12.1
1.50-2.49	13.0	13.8	8.1	14.4	15.7	6.6
2.50-7.49	11.6	12.3	8.1	10.8	11.6	5.5
7.50+	9.8	12.4	2.5	8.0	7.1	14.6

Historically, the poor are land poor i.e. the poor had less amount of land to support their family. There are always strong negative correlation with the land ownership and incidence of poverty. Bangladesh is a land of agriculture; where still about 43% people live on agriculture. That is, as land size increases, the incidence of poverty decreases with some exception for very large land owning households. In 2016, the estimates of HCR of incidence of poverty by ownership of land using the upper poverty line, are found to be 32.9% for landless households, 29.5% for the owner of land less than 0.05 acre, 24.4% for owner of 0.05-0.49 acre land, 16.9% for 0.50-1.49 acre land, 13.0% for 1.50-2.49 acre land, 11.6% for 2.50-7.49 acre land and 9.8% for the owner of 7.50 acre or more land. In 2016, the estimates of HCR by ownership land using the lower poverty line are found to be 17.6% for no land, 16.1% for land size 0.05 acre or less, 12.9% for 0.05 to 0.49 acre, 8.2% for 0.50-1.49 acre, 5.5% for 1.50-2.49 acre, 6.5% for 2.50-7.49 acre and 3.8% for 7.50 acre or more land. The comparatively high HCR of high land owning group may be due to absentee land lords who do not operate their land themselves. In the urban and rural areas similar trend is also observed.

5.11 Incidence of Poverty (CBN) by Main Occupation of Head of Household

Estimates of incidence of poverty by main occupation of head of household using both lower and upper poverty lines have been presented in table 25.

Table 25: Incidence of Poverty by Main Occupation of Head of Household HIES 2016 and HIES 2010

Residence and Occupation of Head	Percentage of Population the below poverty line			
	2016		2010	
	Lower	Upper	Lower	Upper
National				
Total	12.9	24.3	17.6	31.5
Professional, Technical and Related Works	7.6	16.2	10.6	19.5
Administrative & Management Works	2.3	4.0	0.5	0.8
Clerical, Related Works & Govt. Executive	11.8	24.4	8.5	17.7
Sales Workers	8.3	17.7	10.3	22.3
Service Workers	14.0	26.6	26.1	44.2
Agriculture, Forestry & Fisheries	18.2	32.0	22.2	37.0
Production, Transport and Related Workers	11.3	22.8	21.5	41.0
Head not Working/NAD	14.9	20.8	12.6	24.2
Rural				
Total	14.9	26.4	21.1	35.2
Professional, Technical and Related Works	9.4	18.8	15.0	24.8
Administrative & Management Works	9.3	11.0	1.2	1.8
Clerical, Related Works & Govt. Executive	15.6	28.6	15.5	23.5
Sales Workers	9.8	19.8	14.6	27.1
Service Workers	15.9	26.8	30.9	49.1
Agriculture, Forestry & Fisheries	18.4	31.7	22.5	36.8
Production, Transport and Related Workers	14.0	25.3	28.9	47.9
Head not Working/NAD	12.6	20.5	15.7	28.1
Urban				
Total	7.6	18.9	7.7	21.3
Professional, Technical and Related Works	3.7	10.8	4.3	11.9
Administrative & Management Works	0.5	2.2	0.0	0.0
Clerical, Related Works & Govt. Executive	7.5	19.6	4.6	14.5
Sales Workers	6.2	14.8	4.7	16.0
Service Workers	10.9	26.3	16.6	34.4
Agriculture, Forestry & Fisheries	16.0	35.3	16.7	40.0
Production, Transport and Related Workers	6.7	18.5	10.7	30.7
Head not Working/NAD	19.2	21.4	4.0	13.6

The estimates of HCR using the upper poverty line show that the incidence of poverty is the highest for “Agriculture, Forestry and Fisheries” with a HCR of 32.0% followed by “ Service Workers” with 26.6% and “Clerical, Related Works and Govt. Executives” with 24.4%. The lowest HCR is observed for “Administrative and Management Works” with only 4.0%. In 2010, the incidence of poverty was the highest for “Service Workers” with HCR of 44.2% followed by “Production, Transport and Related Workers” 41.0% and “Agriculture, Forestry and Fisheries”, 37.0%. The estimates of HCR using the lower poverty line shows that the incidence of poverty is the highest for “Agriculture, Forestry and Fisheries” with 18.2% followed by “Head not Working/NAD” with 14.9% and “Service Workers” with 14.0%. In 2010, the highest HCR using lower poverty line belonged to “Service Workers” with 26.1% followed by “Agriculture Forestry and Fisheries ” with 22.2%.

Chapter 6

Level of Living Indicators

This chapter deals with some selected indicators on level of living of the people in Bangladesh. These indicators include housing condition in terms of material of wall and roofs, excreta disposal facility of the household, sources of drinking water, availability of electricity, use of phone, computer and e-mail services in the households.

6.1 Distribution of Households by Materials of Wall

Distribution of households by materials of wall has been presented in Table 26. In HIES 2016, at the national level, 30.50% of the households has reported to have used brick/cement in the walls of main dwelling structure, 49.32% used C.I. sheet/wood, 11.02% used mud/brick/wood, 8.80% hay/straw/bamboo/leaves and only 0.35% other materials. At the national level in 2010, 25.12% of the households reported brick/cement wall in their main dwelling structure, 38.46% used C.I. sheet/wood, 16.72% used mud/brick/wood, 19.29% used hay/straw/bamboo/leaves and 0.41% used other materials.

Table-26: Percentage Distribution of Main Dwelling Structure by Materials of Wall and Residence HIES 2016 and HIES 2010

Residence and Materials of Walls	2016	2010
National	100.00	100.00
Brick/Cement	30.50	25.12
C.I. Sheet/Wood	49.33	38.46
Mud/Brick/Wood	11.02	16.72
Hay/Straw/Bamboo/leaves	8.80	19.29
Other	0.35	0.41
Rural	100.00	100.00
Brick/Cement	20.24	13.59
C.I. Sheet/Wood	55.73	43.24
Mud/Brick/Wood	13.57	20.57

Residence and Materials of Walls	2016	2010
Hay/Straw/Bamboo/leaves	10.04	22.12
Other	0.42	0.48
Urban	100.00	100.00
Brick/Cement	56.77	56.59
C.I. Sheet/Wood	32.95	25.40
Mud/Brick/Wood	4.50	6.22
Hay/Straw/Bamboo/leaves	5.62	11.57
Other	0.16	0.21

It appears from the table that the overall housing condition has improved in 2016 compared to 2010. Use of brick/cement has increased both in rural and urban areas. Use of hay/straw/bamboo/leaves as wall materials has decreased substantially.

6.2 Distribution of households by materials of roof

Distribution of households by materials of roof has been presented in Table 27. From the table it appears that in 2016 11.06% households has roofs made of concrete in the main living structure at the national level, 5.32% in rural areas and 25.73% in urban areas. The highest proportion of households reported to have roofs made of C.I. sheet/wood. At the national level its proportion is 84.30% and in rural and urban areas the proportions are 89.41% and 71.21% respectively.

In 2010, at the national level, 10.37% households reported to have concrete roofing. It was 3.65% in rural areas and 28.71% in urban areas respectively. Roofs made of C.I. sheet/wood was 81.52% at the national level, 86.38% in rural and 68.28% in urban areas respectively. Roof made of mud/tally/wood was observed in 2.35% households at the national level. The same was 2.79% households in the rural areas and 1.16% households in the urban areas in 2010. In 2016 roofs made of mud/tally/wood was 2.28% at the national level, 2.54% in the rural areas and 1.59% in the urban areas. Such percentages were 2.35%, 2.79% and 1.16% at the national, rural and urban areas respectively in 2010.

Table 27: Percentage Distribution of Main Dwelling Structure by Materials of Roofs and Residence HIES 2016 and HIES 2010

Residence and Materials of Roofs	2016	2010
National	100.00	100.00
Concrete	11.06	10.37
C.I. Sheet/Wood	84.29	81.52
Mud/Tally/Wood	2.28	2.35
Hay/Straw/Bamboo.	2.08	5.24
Others	0.29	0.52
Rural	100.00	100.00
Concrete	5.32	3.65
C.I. Sheet/Wood	89.41	86.38
Mud/Tally/Wood	2.54	2.79
Hay/Straw/Bamboo	2.43	6.63
Others	0.30	0.55
Urban	100.00	100.00
Concrete	25.73	28.71
C.I. Sheet/Wood	71.22	68.28
Mud/Tally/Wood	1.59	1.16
Hay/Straw/Bamboo	1.18	1.44
Others	0.28	0.41

6.3 Households Access to Toilet Facilities:

Households' access to different types of toilet facilities has been presented in Table 28. The table reveals that, 25.61% households use sanitary latrine, 18.09% use pucca (water sealed) and 17.67% use pucca but not water sealed as in HIES 2016. These three types of toilets combined accounts for 61.27% as against 51.05% in 2010. This indicates considerable improvement in excreta disposal facility in 2016 compared to 2010.

In 2010, 18.37% households at the national level reported to have access to sanitary latrine, 17.14% pucca (water sealed) toilet, 15.54% pucca toilet (not water sealed), 24.51% kancha (permanent) toilet, 20.03% household kancha (temporary) toilet and 4.40% used open space for discharge of human waste. In view of data of HIES 2016, all the hygienic excreta disposal facility increased which indicate significant improvement in the sanitation system of the country.

There exists urban-rural variation in access to toilet facilities. In the rural areas, only 19.32% households have reported to have sanitary latrine while 41.73% households reported the same in the urban areas in 2016. Water sealed pucca latrine is reported to own by 25.25% by urban households compared to 15.30% rural households. Pucca (not sealed) is reported by 15.14% urban households as against 18.65% rural households. Use of open space is 3.75% in the rural areas as against 0.94% in urban areas.

Table 28: Percentage distribution of households access to toilet by type and residence HIES 2016 and HIES 2010

Residence and Toilet Facilities	2016	2010
National	100.00	100.00
Sanitary	25.61	18.37
Pucca (Water sealed)	18.09	17.14
Pucca (Not sealed)	17.67	15.54
Kancha (permanent)	22.28	24.51
Kancha (temporary)	13.39	20.03
Open Space	2.96	4.40
Rural	100.00	100.00
Sanitary	19.32	13.90
Pucca (water sealed)	15.30	12.99
Pucca (Not sealed)	18.65	14.98
Kancha (permanent)	26.53	27.93
Kancha (temporary)	16.45	24.46
Open Space	3.75	5.73

Residence and Toilet Facilities	2016	2010
Urban	100.00	100.00
Sanitary	41.73	30.56
Pucca (water sealed)	25.25	28.48
Pucca (Not sealed)	15.14	17.08
Kancha (permanent)	11.39	15.17
Kancha (temporary)	5.55	7.94
Open Space	0.94	0.77

6.4 Distribution of households by sources of drinking water:

Distribution of households by sources of drinking water is given in Table 29. It is observed from the table that about 12.01% households use supply water in 2016 as against 10.62% in 2010. The highest proportion of 85.18% has reported to use tube well water. Its proportion was also the highest in 2010 as 85.37%. Sources of drinking water from various other sources contribute only 2.82% at the national level.

In 2010, at the national level, 85.37% households used tube well water, 10.62% used supply water and the rest 4.01% used other sources of drinking water. The other sources include ponds, rivers, canals, wells and indra etc. It is encouraging that percentage of households availing of supply water is increasing.

Table 29: Percentage distributions of households by sources of drinking water and residence HIES 2016 and HIES 2010

Residence and Sources of Water	2016	2010
National	100.00	100.00
Supply Water	12.01	10.62
Tube-Well	85.17	85.37
Pond/River/Canal	1.15	0.94
Well/Indara	0.47	0.99
Water falls	0.13	0.08
Others	1.07	2.00

Residence and Sources of Water	2016	2010
Rural	100.00	100.00
Supply Water	2.14	1.47
Tube-Well	94.93	94.97
Pond/River/Canal	1.46	1.27
Well/Indara	0.53	1.29
Water falls	0.14	0.11
Others	0.8	0.89
Urban	100.00	100.00
Supply Water	37.28	35.57
Tube-Well	60.18	59.18
Pond/River/Canal	0.36	0.05
Well/Indara	0.32	0.15
Water falls	0.09	0.01
Others	1.76	5.04

There exists rural-urban variation in the sources of drinking water. It is revealed from the table that, 2.14% rural households use supply water compared to 37.28% urban households. In the rural areas 94.94% households use tube-well water compared to 60.18% urban households. It is observed that 2.93% households in rural areas use water from all other sources (mostly unsafe) beyond supply water and tube well as compared to 2.53% in the urban areas.

6.5 Household with access to electricity, telephone and mobile phone, computer, e-mail and arsenic contamination in water:

Distribution of households with access to electricity, telephone, mobile phone, computer, e-mail services and arsenic contamination in tube-well water has been presented in Table 30. It is observed from the table that, at the national level 40.87% households has reported to have tested presence of arsenic contamination in their tube-wells. Of these only 2.69% household has found the result to be positive. In the year 2010, 56.62% households reported to have tested presence of arsenic and 7.32% was found to be positive. The rate of presence of arsenic is 3.08%

in rural area and 1.12% in urban area in 2016. Households with access to electricity show an increase to 75.92% in 2016 from 55.26% in 2010. In rural areas, it increased from 42.49% in 2010 to 68.85% in 2016, whereas in urban areas it has increased to 94.01% in 2016 from 90.10% in 2010.

In case of using mobile phones, a phenomenal increase is observed in HIES 2016. It has increased to 92.50% in 2016 from 63.74% in 2010. As many as 91.20% rural households reported its use in 2016 as against 56.77% households in 2010. In urban areas its use has also been increased to 95.90 % in 2016 from 82.74% in 2010. However, use of land phones decreased from 5.79% in 2010 to 1.04% in 2016. It was 0.62% in the rural areas and 2.12% in the urban areas.

Uses of computers have increased in rural areas, but decreased in urban areas. In 2016, 3.04% households have reported its use as against 3.01% in 2010. In urban and rural areas the proportions stand at 7.29% and 1.38% respectively. Similarly uses of e-mail services have also increased to 7.74% in 2016 from 1.39% in 2010.

Table 30: Percentage of households having electricity and other facilities HIES 2016 and HIES 2010

Residence and Facilities	2016	2010
National		
Arsenic Test (Yes)	40.87	56.62
Arsenic Found	2.69	7.32
Electricity (Yes)	75.92	55.26
Telephone (Yes)	1.04	2.07
Mobile Phone (Yes)	92.50	63.74
Computer (Yes)	3.04	3.01
E-mail (Yes)	7.74	1.39

Rural		
Arsenic Test (Yes)	41.28	56.47
Arsenic Found	3.08	8.08
Electricity (Yes)	68.85	42.49
Telephone (Yes)	0.62	0.70
Mobile Phone (Yes)	91.20	56.77
Computer (Yes)	1.38	0.97
E-mail (Yes)	5.09	0.39
Urban		
Arsenic Test (Yes)	39.2	57.28
Arsenic Found	1.12	4.03
Electricity (Yes)	94.01	90.10
Telephone (Yes)	2.12	5.79
Mobile Phone (Yes)	95.90	82.74
Computer (Yes)	7.29	8.58
E-mail (Yes)	14.54	4.10

Chapter 7

Education

This chapter deals with educational status of the population. It provides information on different aspects of education like literacy rate by sex and residence, gross Enrollment, and types of schools attended by the students at the primary level.

7.1 Literacy Rate

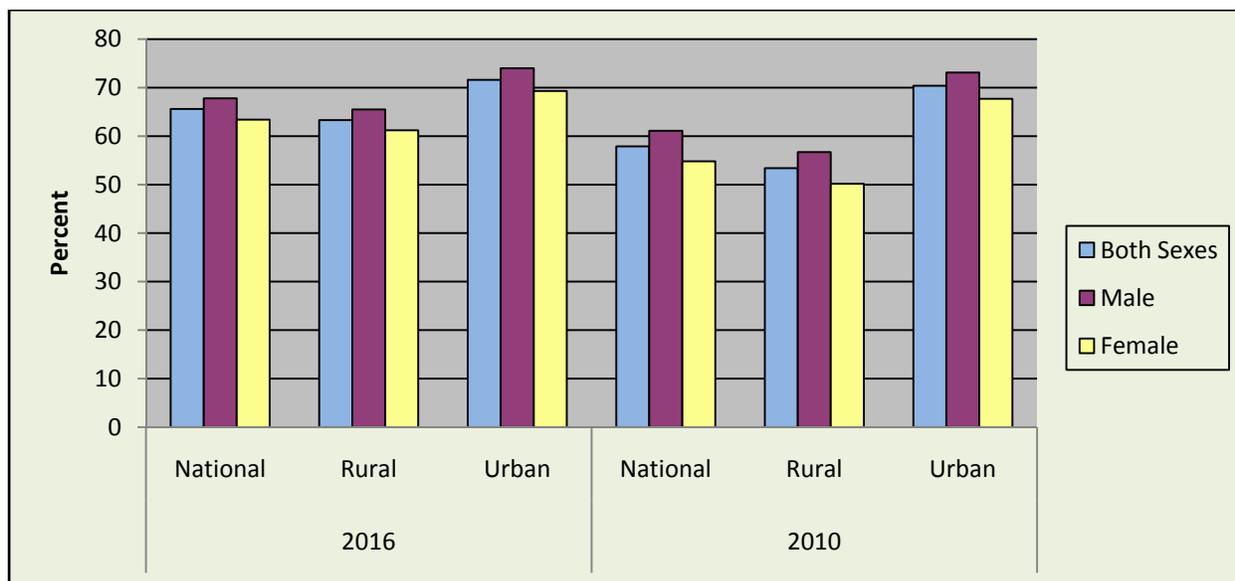
Literacy rate of population aged 7 years and over by sex and residence has been presented in Table 31. In HIES 2016 literacy rate stands at 65.6% at the national level where 67.8% for the male and 63.4% for the female population. In rural areas, literacy rates of population of both sexes, male and female are 63.3%, 65.5% and 61.2% respectively. In urban areas, literacy rates of population of both sexes, male and female are 71.6%, 74.0% and 69.3% respectively. In 2010, literacy rate was 57.9% at the national level for both sexes with 53.4% in rural areas and 70.4% in urban areas. Literacy rate of male was 61.1% and that of female population was 54.8%. In rural areas male literacy rate was 56.7% compared to 73.1% in urban areas. Similarly, female literacy rate was 50.2% in rural areas as compared to 67.7% in urban areas.

Table 31: Literacy Rate (7 Years +) by Sex and Residence, HIES 2016 and HIES 2010

Gender	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Both Sexes	65.6	63.3	71.6	57.9	53.4	70.4
Male	67.8	65.5	74.0	61.1	56.7	73.1
Female	63.4	61.2	69.3	54.8	50.2	67.7

The Table 31 indicates a positive trend of literacy status for both male and female. It may be mentioned here that HIES uses international definition of literacy, where a person is treated as literate if he/she can write a letter in any language. Figure 13 shows literacy rate by sex and residence in 2016 and 2010.

Figure 13: Literacy Rate of Population (7+) by Sex, 2016 and 2010



7.2 School Enrollment

Percentages of children aged 6-10 years and 11-15 years enrolled in schools by sex and residence are given in Table 32. In 2016 Enrollment of children aged 06-10 was 93.5% for both sexes, 92.9% for boys and 94.2% for girls. The Enrollment of both boys and girls was higher in rural areas compared to urban areas. In HIES 2010, Enrollment rate of children aged 6-10 years for both sexes at the national level stands at 84.8%. The Enrollment rate for the girls is higher than that of the boys. The rate of Enrollment of boys was 82.6% and that of the girls is 87.0%. The rate of Enrollment is higher in urban areas as compared to rural areas. The rate for both sexes stands at 87.9% in urban areas as against 83.8% in rural areas. The rate of Enrollment of girls is found to be higher than that of boys both in urban and rural areas.

Figure 14: School Enrollment of Children aged 6-10 by Sex and Residence, 2016

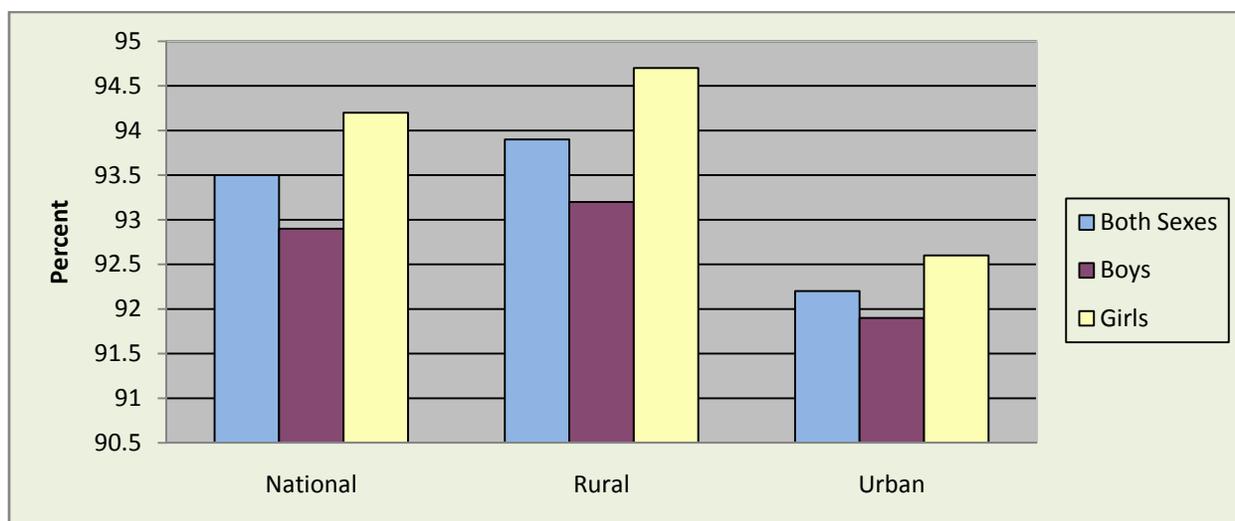
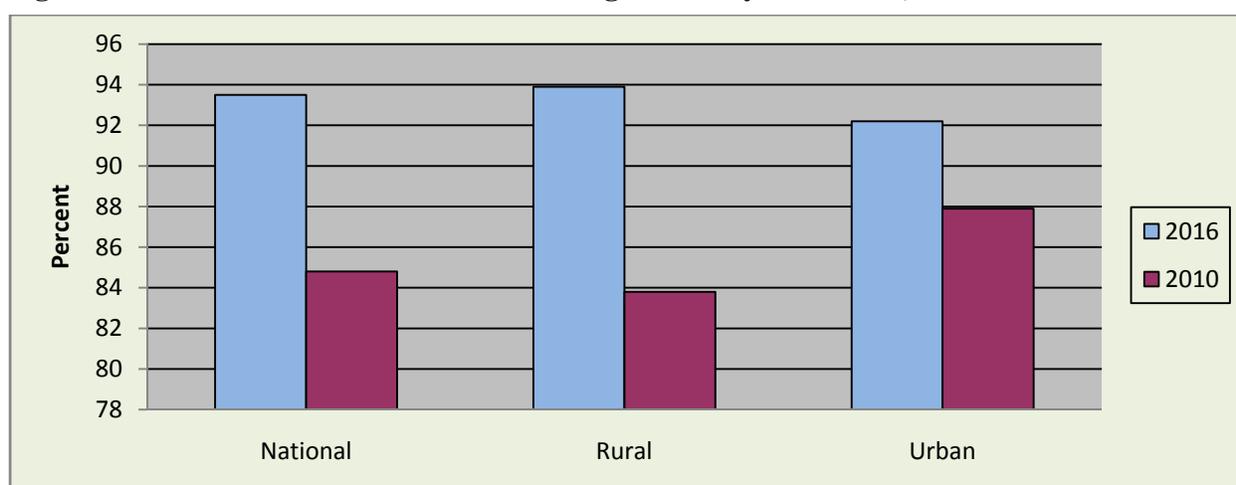


Figure 15: School Enrollment of Children Aged 6-10 by Residence, 2016 and 2010



The rate of Enrollment of children aged 11-15 years has increased to 84.3% in HIES 2016 from 77.8% in 2010. The rate of increase is almost same in both urban and rural areas. The increase in boys was higher than girls which was reverse in 2010. In case of boys the rate has increased to 80.7% in HIES 2016 from 72.4% in 2010 showing an increase of 8.3 percentage points, whereas for girls it has increased to 88.3% in 2016 from 83.7% in 2010 showing an increase of 4.6 percentage point. However, the Enrollment for girls is higher than boys. This is true for both rural and urban areas. On the other hand, Enrollment is higher in rural areas than urban areas.

**Table 32: Percentage Distribution of children Enrolled in Schools by Sex and Residence
HIES 2016 and HIES 2010**

Gender	Children aged 6-10 years			Children aged 11-15 years		
	National	Rural	Urban	National	Rural	Urban
2016						
Both Sexes	93.5	93.9	92.2	84.3	85.4	81.0
Boys	92.9	93.2	91.9	80.7	81.3	78.8
Girls	94.2	94.7	92.6	88.3	90.0	83.3
2010						
Both Sexes	84.8	83.8	87.9	77.8	77.9	77.5
Boys	82.6	81.3	87.0	72.4	72.5	72.2
Girls	87.0	86.4	88.9	83.7	83.8	83.4

7.3 School Enrollment by Poor and Non-poor Households

School Enrollment of children aged 6-10 years by poor and non-poor households has been presented in Table 33 from HIES 2016. It is observed from the table that Enrollment of children from non-poor households is comparatively higher than that of children for poor households. At the national level, using upper poverty line school Enrollment of children from poor households stands at 90.2% for both sexes, 89.0% for males and 91.5% for females. On the other hand, for the non-poor households such rates were 95.0%, 94.6% and 95.4% respectively. In rural area, Enrollment of children aged 6-10 years from poor households are 91.3% for both sexes, 89.5% for males and 93.2% for females compared to 95.1%, 94.9% and 95.4% respectively for non-poor households. In urban area, school Enrollment rate for both sexes, males and females of poor households are 85.8%, 86.6% and 85.0% compared to 94.4%, 93.6% and 95.2% respectively for non-poor households.

There also exist some divisional variations in school Enrollment pertaining to poor and non-poor households using upper poverty line. HIES 2016 findings reveal that, Enrollment from poor households is the highest in Khulna division as 93.9% followed Rangpur and Rajshahi division (92.5%) and lowest for Chittagong division (85.3%). For non-poor households, the highest Enrollment is also observed in Khulna division at 98.6% followed by Rajshahi division 97.6% and Mymensingh division 96.9%. The lowest Enrollment for non-poor households using upper poverty line was observed for Chittagong division. The Enrollment using lower poverty line for poor and non-poor households also follow the same pattern as upper poverty line with slightly lower Enrollment for poor and non-poor household. It is praiseworthy that both poor and non poor households enroll their children in the school. Poverty is not a high barrier in school Enrollment. This is due to governments free book distribution and scholarship programme.

Table 33: Enrollment of Children Aged 6-10 years by Sex Division and Poverty Status, HIES 2016

Gender and Division	Poor			Non-poor		
	National	Rural	Urban	National	Rural	Urban
Using Upper Poverty Line						
Both Sexes	90.2	91.3	85.8	95.0	95.1	94.4
Barisal	91.2	91.4	90.6	94.2	93.7	96.8
Chittagong	85.3	85.8	83.5	93.0	93.4	92.0
Dhaka	88.8	92.2	83.3	94.9	94.9	94.9
Khulna	93.9	94.5	92.1	98.5	98.7	97.8
Mymensingh	92.1	92.2	90.9	96.9	97.1	96.1

Rajshahi	92.5	92.4	93.4	97.6	97.8	96.8
Rangpur	92.5	93.1	88.3	96.7	96.8	96.0
Sylhet	88.0	91.9	69.6	93.3	93.5	91.7
Male	89.0	89.5	86.6	94.6	94.9	93.6
Barisal	90.1	89.9	90.6	94.6	94.0	97.7
Chittagong	82.4	82.2	82.9	93.7	94.9	90.0
Dhaka	88.2	88.5	87.7	93.4	92.8	94.1
Khulna	91.5	92.3	89.2	98.2	98.4	97.6
Mymensingh	90.6	91.0	87.5	96.4	96.7	94.6
Rajshahi	90.9	90.0	97.9	96.9	96.8	97.6
Rangpur	92.8	93.0	90.8	96.3	96.3	96.3
Sylhet	87.0	92.4	63.0	92.6	92.7	91.6
Female	91.5	93.2	85.0	95.4	95.4	95.2
Barisal	92.4	92.9	90.5	93.7	93.4	95.7
Chittagong	88.1	89.3	84.0	92.4	91.8	94.0
Dhaka	89.3	95.5	79.5	96.5	97.3	95.5
Khulna	96.4	96.5	95.8	98.7	98.9	98.0
Mymensingh	93.8	93.7	94.2	97.5	97.5	97.7
Rajshahi	94.0	94.7	89.6	98.4	99.0	95.9
Rangpur	92.2	93.1	85.8	97.0	97.3	95.7
Sylhet	89.0	91.4	76.9	94.0	94.3	91.9
Using Lower Poverty Line						
Both Sexes	89.9	90.6	86.4	94.3	94.7	92.9
Barisal	90.5	90.6	89.8	93.9	93.6	95.4
Chittagong	83.2	82.7	85.0	92.2	92.7	90.7
Dhaka	89.8	91.1	85.9	94.0	94.8	93.0
Khulna	94.1	95.1	90.2	97.4	97.6	96.6

Mymensingh	91.6	92.7	82.7	95.9	95.8	96.6
Rajshahi	91.7	92.2	87.7	96.8	96.7	97.2
Rangpur	91.5	92.0	87.6	96.2	96.4	94.7
Sylhet	89.8	90.8	81.0	92.6	93.7	86.8
Male	88.1	88.5	86.1	93.9	94.3	92.6
Barisal	86.6	86.2	89.3	94.6	94.3	96.1
Chittagong	77.8	76.7	82.3	92.7	93.8	89.3
Dhaka	87.1	87.1	87.1	92.9	92.6	93.4
Khulna	93	94.7	87.2	96.4	96.6	95.4
Mymensingh	89.8	91.5	70.9	95.2	95.1	95.6
Rajshahi	89.5	88.9	96.3	96.2	95.8	97.8
Rangpur	92.0	92.5	88.4	95.7	95.7	96.2
Sylhet	89.6	89.9	86.9	91.7	93.1	83.6

Gender and Division	Poor			Non-poor		
	National	Rural	Urban	National	Rural	Urban
Using Lower Poverty Line						
Female	91.8	92.7	86.7	94.7	95.2	93.3
Barisal	94.3	95.1	90.1	93.1	92.8	94.7
Chittagong	88.1	88.2	87.6	91.8	91.6	92.2
Dhaka	92.3	94.5	84.4	95.1	97.3	92.7
Khulna	95.3	95.5	94.3	98.4	98.7	97.7
Mymensingh	93.6	93.9	91.5	96.7	96.5	97.6
Rajshahi	94.0	95.9	82.7	97.4	97.6	96.5
Rangpur	91.0	91.6	86.9	96.7	97.3	93.2
Sylhet	90.0	91.6	76.4	93.5	94.2	89.9

School Enrollment of children aged 11-15 years by poor and non-poor households using upper and lower poverty line has been presented in Table 34. Alike the Enrollment of children 6-10, Enrollment of children 11-15 from non-poor households is also comparatively higher than that of children from poor households. At the national level, using upper poverty line Enrollment of children from poor households stands at 76.8% for both sexes, 70.5% for males and 83.4% for females. On the other hand, for the non-poor households such rates are 86.9%, 84.1% and 90.0% respectively. In rural area, Enrollment of children aged 11-15 years from poor households is 79.0% for both sexes, 72.7% for males and 85.7% for females compared to 87.8%, 84.4% and 91.7% respectively for non-poor households. In urban areas, Enrollment rate for both sexes, males and females of poor households are 68.1%, 61.8% and 74.3% compared to 84.3%, 83.0% and 85.7% respectively for non-poor households.

There also exist some divisional variations in school Enrollment pertaining to poor and non-poor households using upper poverty line. HIES 2016 findings reveal that, Enrollment from poor households is the highest in Khulna division as 85.7% followed by Rangpur division 84.2% and Barisal division 82.4%. The lowest Enrollment for poor households using upper poverty line was observed in Chittagong division (67.8%) and preceded by Sylhet division (69.3%). For non-poor households, the highest Enrollment is also observed in Khulna division (92.7%) followed by Rangpur division (91.1%) and Rajshahi division (90.4%). The lowest Enrollment for non poor households using upper poverty line was observed in Sylhet division (80.4%) preceded by Dhaka division (84.8%).

The Enrollment of children aged 11-15 using lower poverty line also shows the same pattern as upper poverty line.

Table 34: Enrollment of Children Aged 11-15 years by Sex Division and Poverty Status, HIES 2016

Gender and Division	Poor			Non-poor		
	National	Rural	Urban	National	Rural	Urban
Using Upper Poverty Line						
Both Sexes	76.8	79.0	68.1	86.9	87.8	84.3
Barisal	82.4	82.3	83	89.8	89.4	92.2
Chittagong	67.8	70.7	57	86.2	87.9	81.2
Dhaka	69.7	77.4	55.6	84.8	86.8	82.4
Khulna	85.7	87.1	81.2	92.7	92.5	93.3

Mymensingh	78.3	77.7	82.3	87.8	87.7	88.5
Rajshahi	80.2	80.9	76.6	90.4	90.8	89.2
Rangpur	84.2	84.1	85.1	91.1	90.6	93.5
Sylhet	69.3	71.9	59.4	80.4	80.4	80.1
Male	70.5	72.7	61.8	84.1	84.4	83.0
Barisal	76.4	77.0	73.8	85.9	84.9	92.3
Chittagong	62.0	66.2	47.4	83.0	84.4	79.2
Dhaka	65.0	70.1	53.6	83.6	84.0	83.1
Khulna	78.0	80.3	71.0	88.9	88.7	89.7
Mymensingh	73.5	73.9	70.8	86.0	86.5	83.3
Rajshahi	71.5	70.9	74.1	85.9	86.1	85.3
Rangpur	78.7	78.8	77.9	88.5	87.9	92.0
Sylhet	59.0	60.0	55.7	75.5	76.0	71.7
Female	83.4	85.7	74.3	90.0	91.7	85.7
Barisal	88.7	87.6	94.2	94.1	94.4	92.1
Chittagong	74.2	75.5	69.2	89.4	91.6	83.2
Dhaka	74.4	85.7	57.2	86.2	90.1	81.6
Khulna	92.5	92.8	91.5	97.3	97.2	97.7
Mymensingh	83.9	82.5	91.1	89.9	89.0	94.2
Rajshahi	88.9	93.6	79.4	95.7	96.1	93.9
Rangpur	90.5	90.1	93.0	94.1	93.9	95.5
Sylhet	78.5	81.7	63.6	85.4	85.1	87.2
Using Lower Poverty Line						
Both Sexes	74.8	76.4	66.7	85.8	87.0	82.3
Barisal	78.0	77.1	82.9	89.6	89.4	90.3
Chittagong	66.3	70.9	51.3	84.0	85.5	79.5
Dhaka	69.1	71.4	61.2	83.3	86.5	79.2
Khulna	81.5	84.0	70.4	92.0	92.0	91.8
Mymensingh	76.5	76.7	74.6	86.3	85.9	88.3

Rajshahi	77.8	78.7	73.7	89.0	89.2	88.0
Rangpur	81.0	80.8	82.5	90.8	90.5	92.9
Sylhet	66.2	68.4	51.9	80.1	80.5	77.9
Male	67.4	69.4	57.4	82.7	83.3	80.8
Barisal	73.4	73.1	74.5	85.2	84.7	88
Chittagong	58.2	65.0	40.8	80.8	81.9	77.1
Dhaka	64.2	65.5	57.7	81.9	83.3	80.1
Khulna	74.2	77.9	60.9	87.6	87.7	87.3
Mymensingh	72.9	74.5	59.3	83.6	83.7	82.9
Rajshahi	66.7	66.6	67.0	83.9	83.8	84.5
Rangpur	73.8	73.8	74.4	88.6	88.2	90.6
Sylhet	50.8	52.7	40.1	75.5	76.2	70.9
Female	82.7	83.9	76.8	89.2	91.1	83.9
Barisal	83.0	81.2	94.2	94.3	94.7	92.5
Chittagong	75.4	76.8	69.2	87.4	89.3	81.9
Dhaka	74.5	78.8	63.4	84.8	90.4	78.3
Khulna	88.7	89.3	85.0	96.8	96.9	96.7
Mymensingh	80.6	79.4	88.7	89.3	88.4	93.8
Rajshahi	86.8	88.5	78.8	94.9	95.5	92.3
Rangpur	89.8	89.6	91.2	93.4	93.1	95.7
Sylhet	79.6	81.9	63.9	84.8	84.9	84.2

7.4 Gross Enrollment

Gross Enrollment ratio is defined as the ratio of the number of students enrolled at the primary level (class I-V) to the total population aged 6-10 years multiplied by 100. It is seen from Table-35 that in HIES 2016, gross Enrollment ratio at the primary level stands at 113.72% for both sexes at the national level. Gross Enrollment ratio of boys and girls are 114.26% and 113.15% respectively. The corresponding rates for 2010 were 108.81%, 105.77% and 111.99%. In rural areas, gross Enrollment ratio of both sexes, boys and girls are 115.56%, 115.39% and 115.75% respectively, compared to 108.04%, 104.82% and 111.36% in HIES 2010, showing an

increasing trend. In urban areas, gross Enrollment ratio in HIES 2016 for both sexes, boys and girls stand at 107.91%, 110.57% and 105.31% respectively. It was 111.34%, 108.79% and 114.11% for both sexes, male and female in 2010.

Table 35: Gross Enrollment Ratio at Primary Level by Sex and Residence, HIES 2016 and HIES 2010

Gender	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Both sexes	113.72	115.56	107.91	108.81	108.04	111.34
Boys	114.26	115.39	110.57	105.77	104.82	108.79
Girls	113.15	115.75	105.31	111.99	111.36	114.11

7.5 Types of Schools Attended at the primary level

Types of schools attended by the students at the primary level disaggregated by gender have been presented in Table 36. In HIES 2016, at the national level 80.20% of the students attended government primary schools, 10.45% in government subsidized primary schools, 4.60% non-subsidized primary schools, 0.98% in NGO run schools, 2.29% government approved madrashas and 1.49% in Qaomi madrashas.

According to HIES 2016, 79.63% of the boys attended government primary schools whereas 80.80% of the girls attended these schools. The proportion of boys attending government subsidized primary schools is 10.10% as against 10.82% of girls. Enrollment of boys in non-government non subsidized schools is 4.90% compared to 4.27% of girls. NGO run schools covered .98% boys and the same percentage of girls. The proportion of students attending government approved madrashas is 2.64% for boys and 1.92% for girls. Qaomi madrashas drew 1.75% of boys and 1.21% of girls for primary education.

**Table 36: Percentage of Children Attending Different Types of Schools at Primary Level
By Sex HIES 2016 and HIES 2010**

Type of Schools	2016			2010		
	Both Sex	Boys	Girls	Both Sex	Boys	Girls
Total	100.00	100.00	100.00	100.00	100.00	100.00
Government	80.20	79.63	80.8	81.64	80.73	82.53
Govt. Subsidized	10.45	10.1	10.82	11.89	12.46	11.34
Non-government	4.60	4.90	4.27	1.77	1.79	1.74
NGO Run	0.98	0.98	0.98	2.52	2.32	2.73
Madrasha (Recognized)	2.29	2.64	1.92	1.72	2.02	1.43
Madrasha (Qaomi)	1.49	1.75	1.21	0.45	0.69	0.23

The share of Govt. primary schools has decreased to 80.2% in 2016 from 81.64% in 2010 and the share of Govt. subsidized school has gone down to 10.45% in 2016 from 11.89% in 2010 (Table-36). The percentage of Non-Govt. school increased to 4.60% in 2016 from 1.77% in 2010. It is notable that the share of Madrashas (Recognized) has increased to 2.29% in 2016 from 1.72% in 2010, while the share of NGO run schools decreased to 0.98% in 2016 from 2.52% in 2010.

7.6 Types of Schools Attended by Residence

Students attending different types of schools in rural and urban areas are given in Table 37. It appears from the table that the share of students enrolled in Government primary schools in rural area is higher than urban areas, 81.57% versus 75.88%. On the other hand, the percentage share of Govt. subsidized schools is higher in urban areas 12.11%, as compared to rural areas 9.92%. This is also true for the year 2010. The share of non-government school was also higher in urban areas compared to rural areas in 2016. The corresponding percentages were 8.57% and 3.34%. This was also true in 2010 where the percentage of non-government school in the urban areas was 3.60% as against 1.21% in the rural areas. The share of the NGO run schools has come down to 0.98% in 2016 from 2.52% in 2010. Enrollment in both types of madrashas (Recognized and Qaomi) is higher in rural areas (4.16%) than the urban areas (2.58%). The combined rate for madrashas (Recognized and Qaomi) at the national level increased to 3.78% in 2016 from 2.17% in 2010.

Table 37: Percentage of Children Attending Different Types of Schools at Primary Level by Residence HIES 2016 and HIES 2010

Type of Schools	2016			2010		
	National	Rural	Urban	National	Rural	Urban
Total	100.00	100.00	100.00	100.00	100.00	100.00
Government	80.2	81.57	75.88	81.64	83.59	75.18
Govt. Subsidized	10.45	9.92	12.11	11.89	10.25	17.33
Non-government	4.60	3.34	8.57	1.77	1.21	3.60
NGO Run	0.98	1.02	0.86	2.52	2.56	2.41
Madrasha (Recognized)	2.29	2.51	1.59	1.72	1.88	1.21
Madrasha (Qaomi)	1.49	1.65	0.99	0.45	0.51	0.27

Chapter 8

Health

Bangladesh Bureau of Statistics has been using a detailed health module in the HIES questionnaire since 1995-96 to collect health related data. In HIES 2016, health module is reduced as some of the topics are covered in Health and Morbidity Status Survey (HMSS). The topics that are excluded are child health and immunization, ante-natal and post-natal care and individual disability. Topics in HIES 2016 include illness and injuries suffered, types of illness and injuries, methods of treatment, sources of medicine, health expenditure etc.

8.1 Population Suffered from Chronic Illness in Preceding 12 Months by Type of Disease

Chronic illness of patients in the preceding 12 months by type of illness has been presented in Table 38. It is revealed from the survey that 17.4% people suffered from any kind of chronic disease in 2016, such percentage was 18.0% in the rural areas and 15.6% in the urban areas. In 2016, the highest proportion of population suffered from the gastric ulcer is 20.54%, followed by rheumatism/rheumatic fever disease 13.15%, and asthma/respiratory disease 10.62%. For the males also, the highest proportion 21.44% suffered from gastric ulcer, followed by asthma/respiratory disease 12.80% and rheumatism/rheumatic fever 9.91%. On the other hand, among female patients, the highest proportion suffered from gastric ulcer 19.81% followed by rheumatism/rheumatic fever 15.81%, high/low blood pressure 11.56%.

In 2010, at the national level, the highest proportion of population suffered from gastric ulcer 24.02%, followed by rheumatism/rheumatic fever 14.01% and high/low blood pressure 10.53%. The highest proportion of males suffered from the gastric ulcer 23.77% followed by rheumatism/rheumatic fever 11.42% asthma/respiratory disease 10.22% among females, the highest proportion suffered from gastric ulcer 24.23%, followed by rheumatism/rheumatic fever 16.22% and high/low blood pressure 12.91%.

There exist rural-urban variations in chronic illness by type of disease and sex. In rural areas, the highest proportion of patients suffered from gastric ulcer 20.63% followed by rheumatism 14.18% and asthma/respiratory disease 11.03%. On the other hand, in urban areas, the highest proportion of patients suffered from gastric ulcer 20.27% followed by diabetes disease, 12.37% and high/low blood pressure 11.06%.

Table 38: Distribution of Population who suffered from Chronic Illness in preceding 12 Months by Type of Illness HIES 2016 and HIES 2010

Type of Illness	2016								
	National			Rural			Urban		
	Both Sex	Male	Female	Both Sex	Male	Female	Both sex	Male	Female
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Chronic fever	4.72	5.33	4.23	5.08	5.69	4.57	3.63	4.21	3.16
Injury/disability	5.31	6.76	4.11	5.43	6.8	4.29	4.93	6.64	3.55
Chronic heart disease	7.05	7.55	6.64	6.86	7.46	6.37	7.62	7.81	7.46
Asthma/respiratory diseases	10.62	12.8	8.83	11.03	13.49	9.00	9.35	10.65	8.30
Chronic dysentery	1.14	1.51	0.84	1.21	1.54	0.95	0.92	1.43	0.52
Gastric ulcer	20.54	21.44	19.81	20.63	21.35	20.04	20.27	21.72	19.1
High/low blood Pressure	9.52	7.03	11.56	9.02	6.55	11.05	11.06	8.49	13.13
Rheumatism/Rheumatic fever	13.15	9.91	15.81	14.18	10.92	16.88	9.97	6.78	12.55
Skin problem	2.84	3.01	2.71	2.98	3.13	2.86	2.42	2.63	2.25
Diabetes	6.90	6.61	7.14	5.12	4.62	5.54	12.37	12.8	12.02
Cancer	0.37	0.39	0.35	0.36	0.37	0.36	0.37	0.45	0.31
Kidney Diseases	1.31	1.03	1.55	1.34	1.07	1.57	1.23	0.90	1.50
Liver diseases	0.89	1.15	0.67	0.85	1.13	0.62	1.01	1.23	0.83
Mental health	1.62	2.12	1.21	1.48	1.87	1.15	2.08	2.91	1.4
Paralysis	1.21	1.57	0.9	1.27	1.68	0.93	1.00	1.24	0.81
Ear/ENT problem	2.37	2.27	2.46	2.61	2.51	2.69	1.64	1.53	1.73
Eye problem	2.98	2.79	3.14	3.19	2.94	3.41	2.33	2.31	2.34
Other (Specify)	7.46	6.75	8.04	7.35	6.90	7.72	7.81	6.29	9.03

2010									
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Chronic fever	2.85	3.18	2.56	2.98	3.34	2.67	2.45	2.72	2.21
Injury/disability	3.91	5.00	2.98	4.46	5.74	3.38	2.25	2.82	1.73
Chronic heart disease	7.34	7.46	7.23	7.23	7.17	7.27	7.68	8.34	7.09
Asthma/respiratory diseases	8.87	10.22	7.70	8.94	10.30	7.79	8.64	10.01	7.42
Chronic dysentery	1.48	1.88	1.13	1.64	2.11	1.24	0.98	1.17	0.82
Gastric ulcer	24.02	23.77	24.23	24.50	24.54	24.47	22.54	21.48	23.47
High/low blood Pressure	10.53	7.76	12.91	9.41	6.48	11.90	13.93	11.54	16.04
Rheumatism/Rheumatic fever	14.01	11.42	16.22	15.06	12.70	17.06	10.81	7.64	13.61
Eczema	1.59	1.58	1.60	1.77	1.70	1.83	1.03	1.21	0.88
Diabetic	5.40	6.70	4.29	3.40	4.09	2.83	11.45	14.42	8.82
Cancer	0.42	0.29	0.53	0.40	0.35	0.44	0.47	0.11	0.78
Leprosy	0.36	0.50	0.25	0.42	0.58	0.28	0.19	0.23	0.14
Paralysis	2.22	2.56	1.93	2.34	2.69	2.04	1.87	2.18	1.59
Epilepsy	0.43	0.53	0.34	0.47	0.64	0.33	0.29	0.21	0.36
Other	16.59	17.16	16.11	16.98	17.58	16.46	15.44	15.91	15.02

8.2 Methods of Treatment

Distribution of patients by methods of treatment has been presented in Table 39. It may be mentioned that the methods of treatment used in 2016 and 2010 are not same. In 2010, the number of methods were 13, whereas, it was 22 in HIES 2016. In HIES 2016, the highest proportion of patients received treatment from pharmacy/ dispensary/ compounder was 33.11% followed by non-qualified doctor's chamber 22.51% and qualified doctor's 15.44%. In 2010 the highest proportion of patient received treatment from pharmacy/dispensary/compounder was 40.21% followed by private doctor 24.46% and government doctor in private practice 14.34%.

There exist noticeable rural-urban variations in methods of treatment. In HIES 2016, in rural areas, the highest proportion of patients received treatment from pharmacy/dispensary/compounder 32.79% followed by non-qualified doctor's chamber 25.06% and qualified doctor's chamber 14.43%. In the urban areas the highest 34.09% received treatment from pharmacy/dispensary/compounder followed by qualified doctor's chamber 18.49% and non-qualified

doctor's chamber 14.81%. Patients received treatment from private clinic/hospital was 7.99% for rural area as against 10.47% for urban areas. Patients received treatment from qualified doctor's chamber was 14.43% for the rural areas as against 18.49% for the urban areas.

Table 39: Distribution of Method of Treatment by Sex and Residence HIES 2016 and HIES 2010

Type of treatment	National			Rural			Urban		
	Both Sex	Male	Female	Both Sex	Male	Female	Both Sex	Male	Female
2016									
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Govt. health worker	1.44	1.23	1.61	1.42	1.26	1.55	1.49	1.14	1.77
Govt. Satellite Clinic/EPI outreach centre	0.19	0.18	0.20	0.20	0.18	0.22	0.16	0.19	0.13
Community Clinic	1.70	1.45	1.90	2.14	1.80	2.44	0.34	0.37	0.32
Union Health & Family Welfare Center	0.33	0.26	0.39	0.41	0.33	0.48	0.11	0.07	0.14
Upazila Health Complex	5.22	4.88	5.50	5.38	5.02	5.68	4.74	4.45	4.97
Maternal & Child Welfare Centre	0.33	0.19	0.44	0.27	0.13	0.39	0.48	0.37	0.57
Govt. District/Sadar General Hospital	3.24	3.41	3.11	2.93	3.11	2.78	4.18	4.32	4.07
Govt. Medical College and Specialized Hospital	1.87	1.72	2.00	1.20	1.24	1.16	3.91	3.19	4.50
Other Govt. Hospital	0.09	0.07	0.11	0.08	0.05	0.10	0.12	0.11	0.12
NGO health worker Satellite Clinic	0.14	0.11	0.16	0.14	0.1	0.18	0.13	0.14	0.11
NGO Clinic/ Hospital	0.30	0.21	0.37	0.26	0.18	0.33	0.41	0.30	0.50
NGO Medical College Specialized Hospital	0.12	0.14	0.12	0.12	0.14	0.10	0.15	0.12	0.17
Private Clinic/Hospital	8.61	7.99	9.13	7.99	7.41	8.48	10.47	9.78	11.03
Private medical College/ Specialized Hospital	1.13	1.07	1.18	0.87	0.89	0.85	1.91	1.64	2.14
Qualified Doctor's Chamber	15.44	15.00	15.82	14.43	13.97	14.83	18.49	18.19	18.74
Non-Qualified Doctor's Chamber	22.51	23.88	21.35	25.06	25.92	24.33	14.81	17.54	12.6
Pharmacy/Dispensary/Compounder	33.11	34.43	32.00	32.79	34.39	31.42	34.09	34.56	33.7
Homoeopathic doctor	2.36	1.86	2.77	2.47	1.98	2.89	2.02	1.50	2.44
Kabiraj/Hekim/Ayurved	0.76	0.78	0.74	0.73	0.76	0.71	0.84	0.86	0.83
Other Traditional Peer/Fakir/Tantric/Ojha/Boidya	0.04	0.04	0.04	0.04	0.05	0.04	0.02	0.02	0.03
Family/Self Treatment	0.96	0.97	0.95	0.96	0.95	0.96	0.98	1.04	0.92
Other (Specify)	0.13	0.15	0.11	0.12	0.16	0.09	0.16	0.11	0.2

Type of treatment	National			Rural			Urban		
	Both Sex	Male	Female	Both Sex	Male	Female	Both Sex	Male	Female
2010									
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Govt. health worker	2.41	2.38	2.43	2.57	2.50	2.64	1.70	1.85	1.57
NGO health worker	0.37	0.31	0.43	0.31	0.28	0.33	0.64	0.41	0.84
Homoeopathic doctor	3.44	3.18	3.68	3.49	3.19	3.75	3.26	3.12	3.37
Kabiraj/Hekim/Ayurved	1.00	1.28	0.75	1.13	1.44	0.86	0.41	0.55	0.29
Peer/Fakir/Tantric/Ojha/Boidya	0.36	0.40	0.32	0.31	0.37	0.26	0.56	0.55	0.57
Govt.Doctor (Govt. Institution)	9.28	0.14	0.41	8.52	8.59	8.45	12.53	11.58	13.34
Govt.Doctor (private practices)	14.34	13.43	15.16	13.11	12.22	13.92	19.57	18.72	24.31
NGO Doctor	0.20	0.20	0.20	0.22	0.23	0.20	0.13	0.08	0.17
Private Doctor	24.46	24.37	24.54	25.00	24.80	25.21	22.00	22.25	21.79
Pharmacy/dispensary/Compounder	40.21	41.35	39.20	41.20	42.19	40.30	36.05	37.68	34.66
Family Treatment	0.88	0.89	0.87	0.90	0.93	0.89	0.78	0.75	0.80
Self Treatment	0.61	0.56	0.65	0.58	0.56	0.59	0.74	0.57	0.89
Other	2.43	2.50	2.37	2.62	2.64	2.60	1.63	1.89	1.42

Chapter 9

Social Safety Net Programme

Social Safety Net Programme (SSNP) is one of the best measures for alleviating poverty. It is generally targeted to the poor. According to the HIES 2016 estimates (CBN) using the upper poverty line 24.3% people is poor and using the lower poverty line 12.9% people is extreme poor. Most of the extreme poor suffer from chronic poverty. Most of them live on charity or below subsistence level. Therefore, Government operates SSNP to support this kind of families in cash or kind to make provision to overcome hunger.

The SSNP module was first introduced in HIES 2005 where 11 programmes were included. But, in HIES 2010 its scope is widened to include 30 programmes and in it is further extended to 37 programmes in 2016. The questionnaire has been revised and extended to include some more information on SSNP.

9.1 Household and Beneficiary Receiving Benefits

Distribution of households and programme beneficiaries receiving benefits from SSNP has been presented in Table 40.

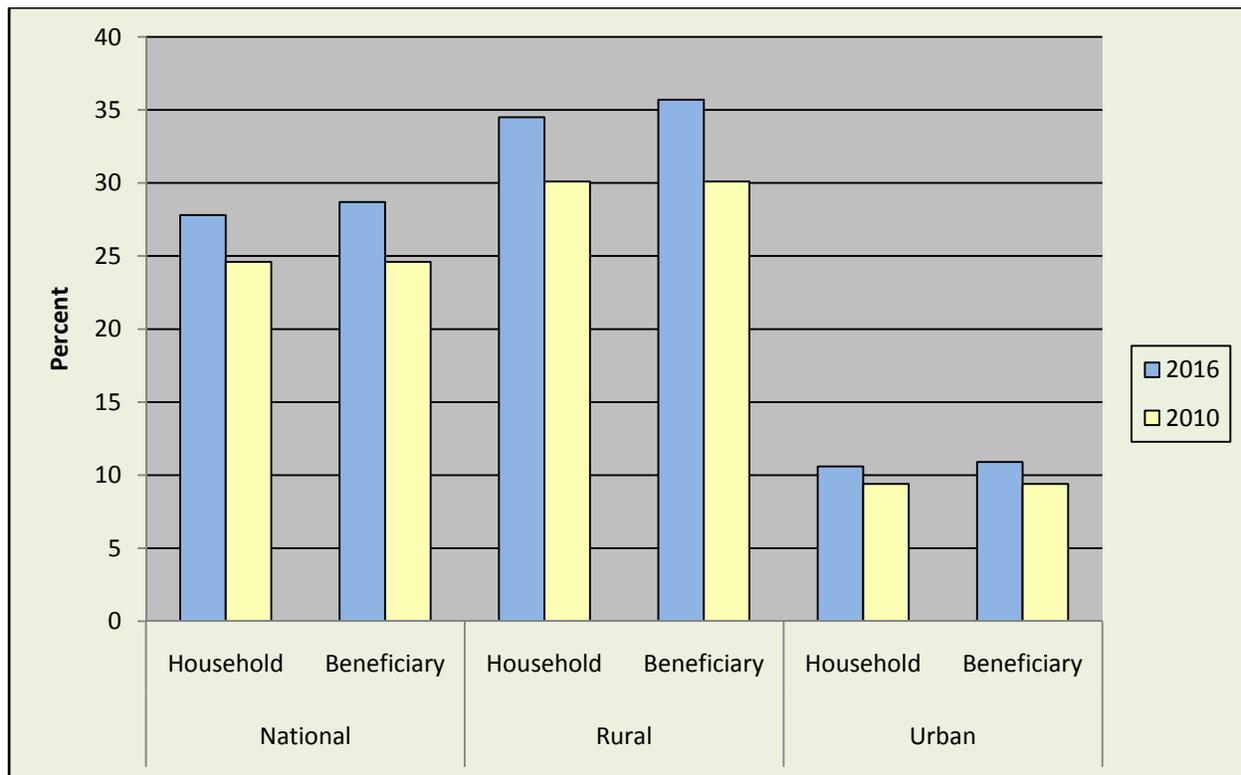
Table 40: Percentage Distribution of Households and Programme Beneficiaries Received Benefits from SSNP HIES 2016 and HIES 2010

Survey Year	National		Rural		Urban	
	Household	Programme Beneficiary	Household	Programme Beneficiary	Household	Programme Beneficiary
2016	27.8	28.7	34.5	35.7	10.6	10.9
2010	24.6	24.6	30.1	30.1	9.4	9.4

There exists difference in data collection system on SSNP between 2016 and 2010. In 2010, the beneficiaries were not taken into account, only households received any kinds of SSNP were considered. In 2016, both households and beneficiaries were accounted. Thus, the numbers of beneficiaries were higher than households. Therefore, data of the two surveys are not strictly comparable.

It is observed from the table that 27.8% of the households have received benefit during the last 12 months from SSNP programmes. In contrast, 24.6% households received benefit from SSNP in 2010. In rural areas 34.5% households received benefits from SSNP as against 30.1% households in 2010. In urban areas it was 10.6 in 2016 compared to 9.4% 2010. The total number of programme beneficiaries increased in 2016 compared to 2010. In 2010, the estimated number of programme beneficiary household was 8.0 million which increased to 11.0 million in 2016. The percentage of beneficiaries was 28.7%, 35.7% and 10.9% at the national, rural and urban areas in 2016.

Figure 16: Households and Beneficiary in SSNP 2010 and 2016

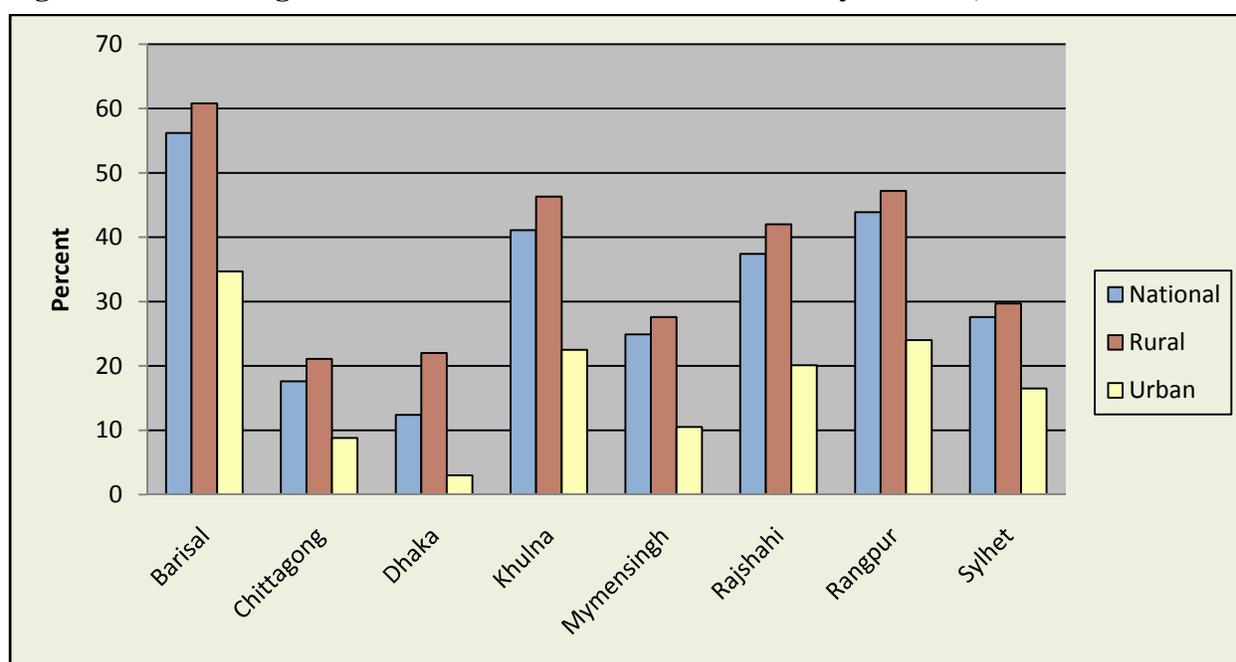


The percentage of households and programme beneficiaries received benefit from SSNP by division of the country has been presented in Table 41. It is observed from the table that, the highest percentage of beneficiary household and programme beneficiary were found in Barisal division 56.2% and 59.9%, followed by Rangpur division 43.9% and 45.2% and Khulna division 41.1% and 42.8%. The lowest percentage of households and beneficiary received such benefit was observed in Dhaka division 12.4% and 12.8% preceded by Chittagong division 17.6% and 18.0% and Mymensingh division 24.9% and 27.7%. The same pattern is observed in rural and urban areas of the divisions.

Table 41: Distribution of Households Receiving Benefits from Social Safety Net Programmes by Division HIES 2016

Division	% of Households and Beneficiaries Receiving Benefit In 2016					
	Total		Rural		Urban	
	Household	Beneficiary	Household	Beneficiary	Household	Beneficiary
National	27.8	28.7	34.5	35.7	10.6	10.9
Barisal	56.2	59.9	60.8	64.5	34.7	38.0
Chittagong	17.6	18.0	21.1	21.6	08.8	09.0
Dhaka	12.4	12.8	22.0	22.3	03.0	03.1
Khulna	41.1	42.8	46.3	48.4	22.5	22.9
Mymensingh	24.9	27.7	27.6	30.9	10.5	10.5
Rajshahi	37.4	37.7	42.0	42.3	20.1	20.1
Rangpur	43.9	45.2	47.2	48.7	24.0	24.3
Sylhet	27.6	27.9	29.7	29.9	16.5	16.9

Figure 17: Percentage of Household Received SSNP Benefit by Division, 2016



Average amount received (tk) per household by division of the country has been presented in Table 42. At the national level the average amount received from all SSNP programme in last 12 months were tk 2927.2. The amount was tk 2815.4 for rural areas and 3781.4 for urban areas. The highest amount of average benefit for last 12 months was observed in Dhaka division (tk 4204.4) followed by Mymensingh division (tk 3240.2), Barisal division (tk 3080.9). The lowest average amount was observed in Rangpur division (tk 2394.4) preceded by Rajshahi division (tk 2615.4) and Khulna division (tk 2766.7).

Table 42: Average Amount Received (tk) per Household in 12 Months by Division

Division	National	Rural	Urban
National	2927.2	2815.4	3781.4
Barisal	3080.9	2923.9	4288.7
Chittagong	2776.2	2690.2	3278.0
Dhaka	4204.3	4096.8	4930.7
Khulna	2766.7	2776.2	2707.6
Mymensingh	3240.2	2690.2	10001.6
Rajshahi	2615.4	2539.7	3168.2
Rangpur	2394.4	2275.2	3757.4
Sylhet	2972.3	3019.8	2543.8

9.2 Average Amount Received from Different SSNP in Last 12 Months

The average amount received from different sources by the household from different SSNP has been presented in Table 43. It is seen from the table that that the highest amount of SSNP benefit received in last twelve months was observed from the honoraria for the insolvent freedom fighters (tk 66081.5), followed by rural employment opportunity for the protection of public asset (tk 54,000.00) and rural employment for road maintenance programme (tk 24798.4). The lowest amount of SSNP benefit came from gratuitous relief (tk 605.50) preceded by Vulnerable Group Feeding (VGF) (tk679.4) and general relief activities (tk 805.5).

Table 43: Average Amount received in last 12 Months from Different Social Safety Net Programmes, HIES 2016

Type of programme	Tk. In 12 Months	Monthly Amount
Ananda School (ROSC) [Cash/kind]	1593.4	132.8
Stipend for Primary Students	1247.8	104.0
School Feeding Program	2682.0	223.5
Stipend for Secondary and Higher Student	1553	129.4
Stipend for Dropout Students	1505	125.4
Stipend for Disabled Students	4250.2	354.2
Old age allowance (MOSW)	3510.1	292.5
Widow, Deserted & Destitute Women Allowances	3584	298.7
Maternity allow. program for the poor lactating	4629.8	385.8
Maternal health voucher allowance	3950.2	329.2
Honorarium for insolvent freedom fighters	66081.5	5506.8
Honoraria & Medical Allowances for injured freedom fighters	31375.5	2614.6
Ration for Martyred Family and Injured freedom fighters	6489.1	540.8
Allowances for distressed cultural personnel	8620.1	718.3
Allowances for financially insolvent	4740.4	395.0
Vulnerable Group Development (VGD)	3481.3	290.1
Vulnerable Group Feeding (VGF)	679.4	56.6
General Relief Activities	805.5	67.1
Gratuitous relief (GR)-Food/Cash	605.5	50.5
Allow. For beneficiaries in Ctg. Hill tract area	3346	278.8
Food Assistance in CTG Hill Tracts Area	12750.9	1062.6
Employment gen. Programme for hard-core poor or 100 days	2290.7	190.9
Food/Cash for Work (FFW/CFW)	6306.4	525.5

Type of programme	Tk. In 12 Months	Monthly Amount
Test Relief (TR) food (Cash)	2463.8	205.3
Rural emp. opportunity for protection of public	54000	4500.0
Rural emp. and Road Maintenance for protection of public	24798.4	2066.5
One Household One Farm	9801.7	816.8
Housing support	1293.6	107.8
Agriculture rehabilitation (MOA)	5403.2	450.3
Targeted Ultra Poor (TUP) (BRAC)	8500.9	708.4
Char Livelihood	5567.6	464.0
Economic Empowerment for the poor/shiree	7367.3	613.9
Urban Partnership for Poverty Reduction	6996.7	583.1
Shouhardo Programme	10492.6	874.4
Nabojibon Programme (Save the Children)	10845.9	903.8
Proshar Programme (ACDI VOCA)	1000	83.3
Others	2704.3	225.4

9.3 Distribution of Households receiving Benefits by Types of Programmes

Among the households covered by SSNPs, the highest proportion is benefited from stipend for primary students 36.14%, followed by old age allowance (14.22%) and higher secondary students (11.42%), vulnerable group feeding (7.38%), gratuitous relief (GR) 5.88%. All other programmes are small except school feeding programme (4.44%).

Table 44: Percentage distribution of households by type of programme by Division HIES 2016

Type of programme	%
Ananda School (ROSC) [Cash/kind]	2.13
Stipend for Primary Students	36.14
School Feeding Program	4.44
Stipend for Secondary and Higher Secondary Student	11.42
Stipend for Dropout Students	0.64

Stipend for Disabled Students	0.48
Old age allowance (MOSW)	14.22
Widow, Deserted & Destitute Women Allowances	4.2
Maternity allow. program for the poor lactating mothers	0.18
Maternal health voucher allowance	0.03
Honorarium for insolvent freedom fighters	0.46
Honoraria & Medical Allowances for injured freedom fighters	0.44
Ration for Martyred Family and Injured freedom fighters	0.05
Allowances for distressed cultural personnel	0.06
Allowances for financially insolvent disabled persons.	1.4
Vulnerable Group Development (VGD)	1.86
Vulnerable Group Feeding (VGF)	7.38
General Relief Activities	1.03
Gratuitous relief (GR)- Food/Cash	5.88
Allow. For beneficiaries in Ctg. Hill tract area	0.04
Food Assistance in CTG Hill Tracts Area	0.2
Employment gen. Programme for hard-core poor or 100 days	0.43
Food/Cash for Work (FFW/CFW)	0.32
Test Relief (TR) food (Cash)	2.57
Rural emp. opportunity for protection of public asset	0.03
Rural emp. and Road Maintenance programme	0.03
One Household One Farm	0.07
Housing support	0.19
Agriculture rehabilitation (MOA)	0.03
Targeted Ultra Poor (TUP) (BRAC)	0.07

Char Livelihood	0.03
Economic Empowerment for the poor/shiree	0.04
Urban Partnership for Poverty Reduction	0.03
Shouhardo Programme	0.04
Nabojibon Programme (Save the Children)	0.02
Proshar Programme (ACDI VOCA)	0.01
Other (Specify)	3.40
Total	100.0

Chapter 10

Disability, Migration & Remittance, Micro Credit and Crisis Management

This chapter deals with disability, migration, indebtedness, opening bank account and saving, crisis encountered by the household and management. Brief descriptions of the findings on these items are discussed in the following sections.

1. Disability

The individual disability is covered in module 1 which contains six types of disabilities. To collect information about all these types of disabilities every person of the household was inquired irrespective of age. In some cases, however, children below 2-3 years were not included for obvious reasons (mainly because of absence of necessary cognizable symptoms). The six categories of disabilities are:

1. Eye sight difficulty
2. Hearing difficulty
3. Walking and climbing difficulty
4. Remembering and concentrating difficulty
5. Self-care difficulty
6. Speaking and communicating difficulty

It has been observed that the percentage of population suffering from any type of disability is 6.94% at the national level. Such percentage for male is 6.27% and for female is 7.59%. In rural areas, the percentage of population who suffered from any sorts of disability is 7.27% for both sexes, 6.53% for male and 8.0% for female. In the urban areas, 6.04% suffered from any sorts of disability for both sexes, 5.57% for male and 6.5% for female.

Table D1: Percentage of People who suffered from any Type of Disability by Sex and Residence

Residence	Both Sex	Male	Female
National	6.94	6.27	7.59
Rural	7.27	6.53	8.0
Urban	6.04	5.57	6.5

The six type of difficulty or disability mentioned above has been categorized into three category namely some difficulty, a lot of difficulty and unable. Table D2 below provides information on the six types of difficulty. As regards some difficulty eye sight was the highest (3.89%) followed by hearing (1.75%) and walking & climbing (1.4%). Regarding severe difficulty walking and climbing was the highest (0.46%) followed by eye sight (0.42%) and self care (0.36%). In case of fully unable speaking and communicating was the highest 0.31% followed by self care 0.29% and remembering and concentrating 0.19%. Figure 18 shows the intensity of different types of difficulty in 2010 and 2016.

Table D2: Percentage Distribution of Population (All ages) having any Difficulty (Disability) even with an Aid by Type and Intensity of Difficulty HIES 2016 and HIES 2010

Type of Difficulty	Intensity of Difficulty		
	Some	Severe	Fully Unable
2016			
Total	9.79	2.17	1.13
Eye sight	3.89	0.42	0.08
Hearing	1.75	0.28	0.09
Walking and climbing	1.40	0.46	0.17
Remembering and concentrating	1.07	0.33	0.19
Self-care	0.88	0.36	0.29
Speaking and communicating	0.8	0.32	0.31
2010			
Total	11.38	2.17	0.46
Eye sight	5.58	0.53	0.08
Hearing	1.93	0.33	0.06
Walking and climbing	1.84	0.53	0.07
Remembering and concentrating	0.94	0.24	0.08
Self-care	0.57	0.30	0.08
Speaking and communicating	0.52	0.24	0.09

Figure 18: Percentage Distribution of Disabled Population by Type and Severity of Difficulty 2010 and 2016

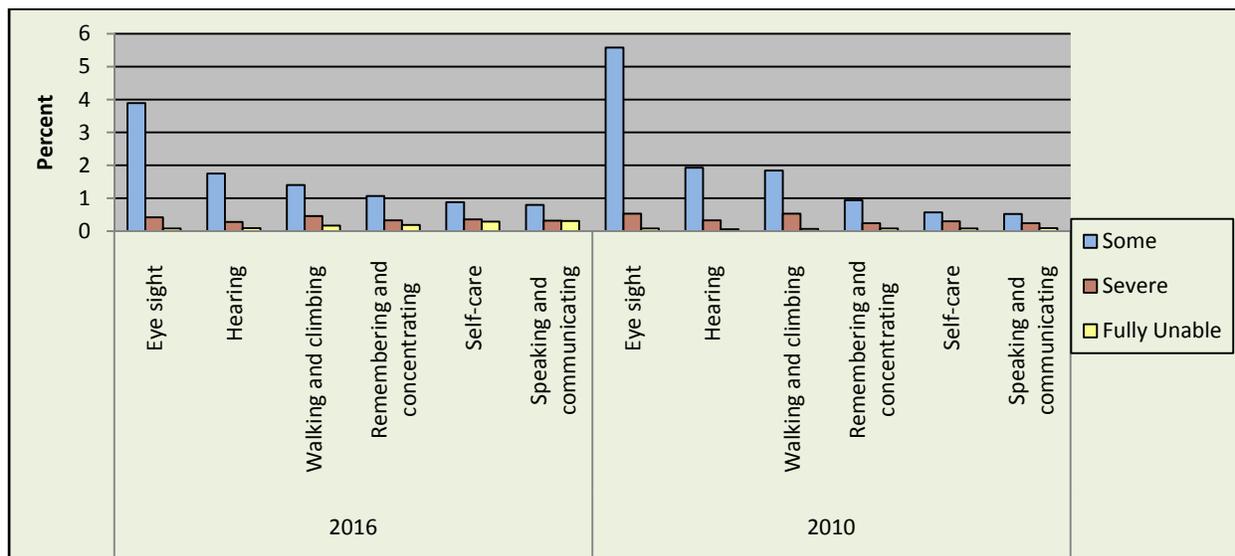


Table D3 shows the urban and rural variation by types and intensity of disabilities in 2010 and 2016. It is observed from the table that some, severe and fully unable nature of disability is higher in rural areas compared to urban areas in 2016 which is also true for 2010.

However, the extent of disability was higher in 2010 compared to 2016. Disability in the categories of 'some', 'severe' and 'fully unable' in rural area is reported to be 10.42%, 2.41% and 1.16% respectively as against 8.04%, 1.50% and 1.09% in urban areas in 2016.

Table D3: Percentage Distribution of Population (All ages) having any Difficulty Even with Aid by Type, Residence and Intensity of Difficulty HIES 2016 and HIES 2010

Type of difficulty	Rural			Urban		
	2016					
	Some	Severe	Fully unable	Some	Severe	Fully unable
Total	10.42	2.41	1.16	8.04	1.5	1.09
Eye sight	4.02	0.44	0.08	3.54	0.36	0.09
Hearing	1.91	0.33	0.08	1.31	0.14	0.1
Walking and climbing	1.5	0.51	0.18	1.11	0.33	0.16
Remembering and concentrating	1.19	0.37	0.19	0.75	0.23	0.18
Self-care	0.93	0.41	0.3	0.74	0.22	0.29
Speaking and communicating	0.87	0.35	0.33	0.59	0.22	0.27

2010						
Total	12.26	2.42	0.64	8.91	1.46	0.24
Eye sight	5.73	0.58	0.09	5.15	0.37	0.04
Hearing	2.20	0.37	0.08	1.18	0.20	0.02
Walking and climbing	2.07	0.60	0.09	1.19	0.33	0.03
Remembering and concentrating	1.06	0.28	0.09	0.58	0.15	0.04
Self-care	0.63	0.34	0.09	0.42	0.21	0.06
Speaking and communicating	0.57	0.25	0.11	0.39	0.20	0.05

Percentage distribution of population by type, sex and intensity of difficulty in HIES 2016 and 2010 has been presented in Table D4. It is observed that for males, in 2016 overall 8.18% suffered from some sort of difficulty, 2.18% suffered from severe type of difficulty and 1.21% was unable. For females 11.36% suffered from some sort of difficulty, 2.15% suffered from severe type of difficulty and 1.07% were unable. Difficulty related to eye sight was comparatively higher for both male and female. Similar pattern of disability was also observed in case of male and female in 2010.

Table D4: Percentage Distribution of Population (All ages) having any Difficulty Even with Aid by Type, Sex and Intensity of Difficulty HIES 2016 and HIES 2010

Type of difficulty	Male			Female		
	Some	Severe	Fully unable	Some	Severe	Fully unable
2016						
Total	8.18	2.18	1.21	11.36	2.15	1.07
Eye sight	3.19	0.37	0.10	4.58	0.46	0.07
Hearing	1.42	0.28	0.09	2.07	0.28	0.08
Walking and climbing	1.22	0.51	0.2	1.57	0.41	0.15
Remembering and concentrating	0.94	0.33	0.21	1.20	0.34	0.17
Self-care difficulty	0.73	0.37	0.29	1.03	0.34	0.30
Speaking and communicating	0.68	0.32	0.32	0.91	0.32	0.30

Type of difficulty	Male			Female		
	Some	Severe	Fully unable	Some	Severe	Fully unable
2010						
Total	9.63	2.18	0.46	13.10	2.14	0.46
Eye sight	4.54	0.50	0.06	6.59	0.55	0.09
Hearing	1.70	0.34	0.06	2.16	0.31	0.07
Walking and climbing	1.65	0.57	0.07	2.03	0.48	0.07
Remembering and concentrating	0.82	0.25	0.09	1.05	0.24	0.07
Self-care difficulty	0.45	0.30	0.08	0.69	0.31	0.08
Speaking and communicating	0.47	0.23	0.10	0.58	0.25	0.08

2. Migration and Remittance

Information regarding migration of any member of the household was collected through HIES 2016 and HIES 2010. It related to any member who migrated within the country or abroad during the last 5 years. Data variables are: age, sex, education, occupation, name of district, country of migration, duration of stay, amount of remittances during last 12 months etc.

It appears from the table that in 2016 11.22% of households reported any kind of migration from their household either within the country (From one district to other district) or abroad, such percentage was 12.28% in 2010. Of these, in 2016, 8.27% households reported migration abroad which was 8.60% in 2010. The proportion of rural households belonging at least one migrant is much higher (12.98%) than that of the urban households (6.72%) in 2016. The corresponding percentages were 13.72% and 8.33% in 2010. It is also observed from the table that the proportion of migration from rural areas is higher than that of urban areas in case of both types of migration. This is true for 2016 and 2010 Table M2 shows the proportion of number of person by sex and residence.

Table M1: Percentage Distribution of Households Reporting Migration of any Member by Residence HIES 2016 and HIES 2010

Residence	Total	Within Country	Abroad
2016			
National	11.22	2.95	8.27
Rural	12.98	3.59	9.39
Urban	6.72	1.32	5.40
2010			
National	12.28	3.97	8.60
Rural	13.72	4.84	9.25
Urban	8.33	1.62	6.85

Note: Within country and Abroad added together does not equal to total because one household might have reported both the categories.

Table M2: Percentage of Migrated Persons by Sex and Residence HIES 2016 and HIES 2010

Residence	Both Sexes	Male	Female
2016			
National	100.00	95.44	4.56
Rural	83.79	95.49	4.45
Urban	16.21	94.91	5.09
2010			
National	100.00	97.17	2.83
Rural	82.49	97.08	2.92
Urban	17.51	97.60	2.40

It is observed from the table that at the national level 95.44% of the people migrated is male and the rest of 4.56% is female. Sex wise variations in rural and urban areas are nearly the same. However, urban rural variation in total number of migrated persons appears to be very high

showing 83.79 % from rural areas and 16.21 % from urban areas. In 2010, 82.49% migrated from rural areas and 17.51% migrated from urban areas. The percentage of male and female migrants was 97.17% and 2.83% at the national level. The proportion is similar in both urban and rural areas. Table M3 gives the proportion of migrated persons by sex and place of migration.

Table M3: Percentage of Persons Migrated by Sex and Place of Migration HIES 2016 and HIES 2010

Sex	Total	Within Country	Abroad
2016			
Both sexes	100.00	28.59	71.41
Male	100.00	27.5	72.50
Female	100.00	51.76	48.24
2010			
Both sexes	100.00	33.30	66.70
Male	100.00	32.51	67.48
Female	100.00	60.17	39.83

It is observed from the table that among the migrated persons 28.59% migrated from one district to another within the country and 71.41% migrated abroad. The proportion of the male migrated persons is somewhat similar to that of both sexes, because most of the migrants (95.44%) are male. But in case of female the proportion of migration within the country is higher (51.76%) than that of migration abroad (48.24%). It is praiseworthy that the percentage of female migrants were higher in 2016 compared to 2010. The percentage was 39.83% in 2010 which increased to 48.24% in 2016. Table M4 provides the percentage distribution of persons who migrated abroad during the last 5 years classified by broad age group.

Table M4: Percentage of Migrants Abroad by Broad Age Group, Sex and Residence HIES 2016 and HIES 2010

Age group of migrant workers	National			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
2016									
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
15-24	18.99	18.68	25.87	19.82	19.53	26.39	14.7	14.24	23.52
25-34	37.68	37.64	38.62	37.75	37.8	36.91	37.3	36.84	46.24
35-44	28.04	28.34	21.62	27.63	27.84	23.11	30.1	30.93	15.02
45-54	11.77	11.86	9.4	11.33	11.44	8.51	14	14.04	13.37
55-64	2.93	2.88	4.2	2.82	2.74	4.72	3.52	3.61	1.85
65 +	0.59	0.61	0.29	0.65	0.66	0.36	0.33	0.34	-
2010									
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
15-24	19.17	19.28	12.37	20.30	20.53	6.82	14.94	14.65	33.16
25-34	41.50	41.65	32.60	42.71	42.86	33.32	37.00	37.12	29.93
35-44	26.21	26.24	24.11	25.04	25.02	26.54	30.54	30.80	14.98
45-54	10.54	10.28	26.30	9.14	8.74	33.32	15.76	16.02	0.00
55-64	2.06	2.02	4.62	2.17	2.21	0.00	1.64	1.30	21.94
65 +	0.53	0.54	0.00	0.64	0.65	0.00	0.12	0.12	-

It appears from the table M4 that the highest percentage of the migrants in 2016 was in the age group 25-34 (37.68%) which was also found in 2010 where the highest (41.50%) was in the same age group. This holds true for both male and female in 2016 as well as in 2010. Age group 35-44 claims the second position with 28.04% in 2016 and 26.21% in 2010. In 2016, in the urban areas, the highest 46.24% females of age 25-34 went abroad, on the other hand in 2010, the highest 33.16% females of age group 15-24 went abroad.

Table M5: Percentage of Migrants working Abroad who sent Remittance to Households during Last 12 Months by Division and Amount of Remittance HIES 2016 and HIES 2010

Remittance (in '000' Tk.)	Total	Division							
		Barisal	Chittagong	Dhaka	Khulna	Mymnsingh	Rajshahi	Rangpur	Sylhet
HIES 2016									
National	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<25	29.91	40.00	27.86	23.14	50.11	37.24	27.75	37.24	27.75
25-49	18.31	21.64	19.5	18.65	15.92	15.53	17.8	15.53	17.8
50-99	31.99	25.43	36.61	32.53	19.31	30.98	28.38	30.98	28.38
100-149	10.59	7.31	8.56	13.74	8.61	10.29	15.14	10.29	15.14
150-199	4.31	2.65	4.16	4.78	2.68	1.9	5.24	1.9	5.24
200-299	2.87	0.66	2.17	3.68	1.36	0.96	4.01	0.96	4.01
300-399	0.89	1.44	0.65	1.51	0.74	0.39	0.63	0.39	0.63
400-499	0.45	0	0.06	1.11	0.11	1.26	0.35	1.26	0.35
500+	0.68	0.87	0.43	0.85	1.17	1.45	0.7	1.45	0.7
Average amount per household in '000'	133.78	110.77	128.96	158.46	92.91	146.57	125.09	72.87	134.58
% of total remittance in number	100.00	3.18	43.35	26.16	6.71	3.02	4.74	1.57	11.28
% of total remittance in amount	100.00	2.63	41.78	30.98	4.66	3.31	4.43	0.85	11.34

Remittance (in '000' Tk.)	Total	Division							
		Barisal	Chittagong	Dhaka	Khulna	Mymnsingh	Rajshahi	Rangpur	Sylhet
HIES 2010									
National	100.00	100.00	100.00	100.00	100.00	-	100.00	100.00	100.00
<25	9.94	22.63	10.98	5.55	6.69	-	14.70	28.57	14.56
25-49	8.74	20.06	8.86	6.56	11.79	-	7.58	28.57	9.12
50-99	25.57	19.91	29.37	21.79	40.76	-	18.31	0.00	24.38
100-149	28.57	18.30	28.12	33.66	20.15	-	24.37	14.29	24.08
150-199	10.74	9.63	7.59	13.09	10.76	-	13.76	14.29	13.90
200-299	10.30	6.90	8.14	14.17	6.87	-	11.66	0.00	7.41
300-399	3.01	0.81	2.86	3.78	0.00	-	3.03	0.00	3.98
400-499	1.36	1.76	1.14	1.26	0.00	-	3.03	14.29	0.86
500+	1.77	0.00	2.95	0.15	2.97	-	3.56	0.00	1.71
Average per household (in '000')	151.89	94.93	167.90	146.43	120.12	-	146.49	136.83	163.60
% of total remittance (Number)	100.00	4.07	39.82	35.47	5.64	-	7.16	0.76	7.08
% of total contribution in remittance (Amount)	100.00	2.71	42.37	34.97	4.74	-	7.56	0.69	6.95

It is seen from the table that, average amount of remittance received per household in last 12 months was tk 133.78 thousand in 2016 as against tk 151.89 thousand in 2010. Thus average amount received in 2016 was 13.54% lower than 2010.

It appears from the table that in 2016 the highest percentage of the amount of remittances falls in the category of 50-99 thousand taka and estimated at 31.99%. The second position goes to the category <25 thousand with 29.91%. These two groups occupy more than 50.00% share of the remittances in all the divisions. So far, the average amount of remittances per recipient household is concerned Dhaka division claims the top position (158.46 thousand taka) followed by Mymensingh division (146.57 thousand taka). The lowest position goes to Rangpur division with 72.87 thousand taka per household. Out of the total number of remittances and total amount

of remittances Chittagong division is on the top followed by Dhaka division and Sylhet division. The lowest position goes to Rangpur division.

Table M6 gives the percentage distribution of migrants working abroad who sent their remittances during the last 12 months classified by media of sending remittances.

It appears from the table that more than one half of the remittances (57.49%) are sent through banks. Other & not elsewhere classified stands at the second position with 25.04%. Post office is the least preferred medium of sending remittances with only 0.24% of the total number of remittances.

In respect of average amount per household banks claims the highest position with 165.08 thousand taka and the position of others& not elsewhere classified sources is the lowest with 54.67 thousand taka.

Banks also handle the highest percentage of remitted amount which is estimated at 70.94%. They are followed by others & not elsewhere classified with 10.23% and western union with 9.59%. The combined shares of remittances from all other sources contribute only 9.24%.

Table M6: Percentage of Migrants Persons working abroad who sent Remittance to Household per annum Classified by Media of Sending Remittances HIES 2016 and HIES 2010

Remittance (in '000' Tk.)	Total	Source of Sending Remittances							
		Western Union	Money gram	Post Office	Banks	Friends	Travel Agencies	Brokers	Others & Not elsewhere classified
2016									
National	100	100	100	100	100	100	100	100	100
<25	29.91	15.91	44.58	21.79	14.9	41.11	34.74	18.02	69.75
25-49	18.31	15.06	14.97	46.56	20.6	26.46	20.98	20.71	12.83
50-99	31.99	37.82	19.6	25.17	40.31	20.12	30.36	38.2	11.38
100-149	10.59	19.38	17.24	0	12.6	2.56	13.93	12.26	3.05
150-199	4.31	5.65	3.6	0	5.27	7.08	0	4.87	1.51
200-299	2.87	4.71	0	6.48	3.73	0.62	0	2.94	0.65
300-399	0.89	0.39	0	0	1.37	1.26	0	0.54	0.06
400-499	0.45	0	0	0	0.29	0	0	2.11	0.7

500+	0.68	1.07	0	0	0.95	0.79	0	0.34	0.07
Average per household in '000'	133.78	158.97	91.74	93.79	165.08	88.96	91.93	162.25	54.67
% of total remittance in number	100	8.07	1.39	0.24	57.49	1.9	0.5	5.37	25.04
% of total remittance in amount	100	9.59	0.95	0.17	70.94	1.27	0.34	6.51	10.23
2010									
National	100.00								
<25	9.94	6.50	0.00	15.44	8.78	23.68	7.58	16.62	26.43
25-49	8.74	7.02	0.00	32.65	7.76	23.65	0.00	14.32	12.18
50-99	25.57	36.47	43.08	51.91	24.80	25.97	40.00	20.77	18.48
100-149	28.57	26.18	13.83	0.00	29.43	17.63	39.06	30.63	19.94
150-199	10.74	2.79	14.63	0.00	11.99	4.84	0.00	5.85	16.30
200-299	10.30	7.58	14.63	0.00	10.97	4.23	13.37	8.67	6.66
300-399	3.01	1.40	0.00	0.00	3.40	0.00	0.00	3.14	0.00
400-499	1.36	5.08	13.83	0.00	1.20	0.00	0.00	0.00	0.00
500+	1.77	6.98	0.00	0.00	1.68	0.00	0.00	0.00	0.00
Av. per HH (in '000')	151.89	205.26	158.25	53.22	158.31	74.59	99.79	101.78	88.90
% of total remittance (number)	100.00	6.03	0.61	0.55	80.34	3.23	0.95	6.28	2.02
% of total remittance (Amount)	100.00	8.21	0.75	0.22	82.81	1.63	0.73	4.41	1.25

Table M7: Use of Remittance by Residence

Residence	Use of Remittance				
	Total	Expenditure on basic needs	Expenditure on investment	Expenditure on durable goods	Savings
National	100.00	70.07	26.06	2.17	1.70
Rural	100.00	68.44	27.98	2.13	1.45
Urban	100.00	76.48	18.48	2.35	2.70

Use of remittance by the household has been presented in Table M7. It is seen from the table that of the total remittance, at the national level 70.07% is incurred on basic needs, 26.06% is incurred on investment, 2.13% on durable goods and only 1.70% on saving. In the rural areas, 68.44% are incurred on basic needs, 27.98 on investment, 2.13% on durable goods and 1.45% on saving. In the urban areas, 76.48% are incurred on basic needs, 18.48% on investment, 2.35% on durable goods and 2.70% on saving.

3. Micro Credit

Microcredit modules was first introduced in HIES 2010 and continued in HIES 2016. The microcredit questionnaire is related to loans and saving habits. The main topics included are; opening new bank account, transactions in money matters, amount of loan, duration of repayment, interest rate, repayment status and purposes of taking loans etc. Table C1 provides some basic information regarding opening of a new account, depositing money in any micro finance or financial institutions, depositing money in any informal financial institutions for saving and receipt of loans from any quarter.

Table C1: Percentage Distribution of Households Opening Bank Account, Depositing Money and Receiving Loans during the last 12 Months by Residence, HIES 2016 and HIES 2010

Residence	National	Rural	Urban
2016			
Opening new bank account	7.50	7.60	7.30
Deposited money in any micro finance or financial institutions	15.09	17.3	12.2
Deposited money for saving in any informal financial institutions	5.30	5.10	5.70
Received loans from financial institutions, friends, etc.	29.70	32.70	22.10
2010			
Opening new bank account	7.41	5.05	13.85
Deposited money in any micro finance or financial institutions	14.51	15.94	10.61
Deposited money for saving in any informal financial institutions	5.64	5.80	5.22
Received loans from financial institutions, friends, etc.	32.03	35.08	23.70

It is observed from the Table C1 that any member of 7.50% households opened bank account in 2016 and such percentage for rural and urban areas were 7.60% and 7.30%. In 2010 7.41% opened bank account and the percentages for rural and urban areas and 13.85%. It is notable that opening of bank accounts increased in the rural areas in 2016.

It is observed from the Table C2 that 29.70% of the households received loans from micro financial or non-financial institutions, friends, etc. during the last 12 months preceding the day of enumeration in 2016 as against 32.03% in 2010. The proportion is higher in rural areas (32.70%) than that of the urban areas (22.10%). It is observed that 15.09% households deposited money in any micro-finance or financial institutions as against 14.51% in 2010. The proportion of such households in urban areas and the rural areas are 17.3% and 12.20% respectively in 2016 corresponding to 15.94% and 10.61% in 2010. Depositing money for saving in any informal financial institution has been reported to be 5.30% of the households. The proportion in urban area was 5.70% and that of rural areas was 5.10%. The urban and rural percentages of such depositing households were 5.22% and 5.80% in 2010. Division wise percentage distribution of households taking loans from any kind of institutions including friends and relatives is given in Table C2.

Table C2: Percentage of Households where any Member Received Loan from Friends, Financial or Non-financial Institutions during last 12 Months by Residence and Division HIES 2016 and HIES 2010

Division	Locality		
	Total	Rural	Urban
2016			
Total	29.7	32.7	22.1
Barisal	32.1	31.9	32.8
Chittagong	30.5	30.2	31.4
Dhaka	19.2	29	9.4
Khulna	38.1	38.9	35.2
Mymensingh	18.3	18.1	19.3
Rajshahi	41.4	41.9	39.2
Rangpur	42.1	42.9	37.7
Sylhet	22.0	22.3	20.5
2010			
Total	32.03	35.08	23.70
Barisal	41.95	42.21	40.67
Chittagong	26.45	30.00	16.57
Dhaka	26.12	32.62	16.74
Khulna	41.72	41.55	42.33
Rajshahi	38.58	38.60	38.47
Rangpur	39.44	38.46	51.67
Sylhet	19.97	20.45	17.50

It appears from the table that in 2016 the highest proportion of loan taking households is from Rangpur division as 42.1% followed by Rajshahi division as 41.4%. Their proportions in urban and rural areas were close with higher percentage for rural areas than the urban areas. Sylhet division reported the lowest proportion with a total of 22.0% with a share of 22.3% in rural areas as against 22.5% in urban areas.

On the other hand in 2010 the highest proportion of loan taking households was from Barisal Division as 41.95% followed by Khulna division as 41.72%. Their proportions in urban and rural areas were very close. Sylhet division reported the lowest proportion with a total of 19.97% with a share of 20.45% in rural areas as against 17.50% in urban areas.

Table C3 provides the percentage distribution of loan takers classified by sources and the main reason for taking loan.

Table C3: Percentage Distribution of Loan Recipients by Source and Reasons for Taking Loan, HIES 2016 and HIES 2010

Source	Total	Edu- cation	Health	Agri- culture	Business	Housing	Food Expenditure	Marriage	Others
HIES 2016									
Total	100.00	3.17	7.79	18.03	22.13	17.09	12.43	4.2	15.16
Private Com. Bank	1.52	3.22	9.93	7.74	30.72	25.94	2.68	4.11	15.67
Public Com. Bank	1.08	4.8	5.51	18.6	26.04	18.79	5.07	5.99	15.21
Krishi/Rajshahi ADB	2.78	3.6	7.13	42.11	16.45	11.87	5.25	3.37	10.23
Cooperative Bank	0.25	0	11.8	17.87	43.84	13.06	10.24	3.2	0
Cooperative Society	2.51	2.63	9.78	20.47	24.37	15.77	10.42	3.21	13.33
B S C I C	0.04	0	0	37.48	32.22	15.81	5.16	0	9.33
Youth Development	0.13	2.71	7.62	11.5	25.37	21.39	22.51	5.7	3.19
Grameen Bank	20.23	3.56	7.16	19.68	20.79	17.87	13.62	4.04	13.27

B R A C	12.72	2.53	6.51	18.95	24.07	17.66	11.06	3.72	15.51
B R D B	1.01	4.28	7.79	22.26	17.56	14.91	15.33	3.76	14.1
Other Govt. Department	0.94	5.53	5.09	21.55	26.04	20.56	7.01	3.82	10.4
A S A	23.51	2.62	6.29	16.14	24.34	18.99	13.09	4.21	14.31
Proshika	0.51	2.24	8.8	8.23	20.6	13.5	33.42	4.68	8.54
Other NGOs	16.16	3.14	7.3	16.5	23.84	15.87	12.11	4.4	16.84
Other Micro Finance Org.	5.42	2.74	6.81	20.3	20.7	16.86	12.56	4.82	15.22
Input supplier	0.06	0	0	7.48	71.74	15.83	0	0	4.95
Money Lender	2.67	3.11	16.59	14.1	11.94	11.48	16.17	7.8	18.81
Land Lord	0.09	0	9.19	35.72	0	7.06	8.37	9.93	29.72
Employer	0.07	0	17.56	0	0	67.25	0	0	15.19
Friends	1.42	6.02	22.84	13.44	15.54	8.47	11.21	2.91	19.57
Relatives	3.03	6.28	18.25	9.83	9.75	16.87	10.24	5.05	23.73
Grocery Store	0.56	0	2.85	1.09	4.87	3.13	85.17	1.46	1.43
Others (specify)	3.29	3.76	8.08	19	23	14.07	6.68	3.31	22.1

Source	Total	Edu- cation	Health	Agri- culture	Business	Housing	Food Expenditure	Marriage	Others
HIES 2010									
Total	100.0 0	1.91	4.12	21.09	23.73	12.53	11.04	3.99	21.55
Private Com. Bank	1.52	2.70	3.97	19.20	29.85	19.32	5.09	4.34	15.48
Public Com. Bank	1.55	2.40	2.94	36.34	18.34	17.89	4.22	1.42	16.40
Krishi/Rajshahi ADB	7.01	1.81	2.36	44.85	18.10	6.67	6.87	2.13	17.17
Cooperative Bank	0.23	0.00	0.00	10.14	39.18	19.04	12.61	0.00	19.00
Cooperative Society	1.79	4.61	4.95	14.93	24.78	11.20	9.46	1.76	28.28
B S C I C	0.10	0.00	0.00	0.00	0.00	0.00	49.37	0.00	50.62
Youth Development	0.22	0.00	13.01	39.12	31.80	0.00	0.00	0.00	16.05
Grameen Bank	21.11	2.53	3.74	20.68	23.39	13.51	12.66	3.85	19.61
B R A C	11.47	1.96	3.11	22.19	24.00	15.07	11.51	4.28	17.85
B R D B	1.60	2.77	2.21	24.77	24.56	12.53	6.69	4.54	21.89
Other Public Org.	0.55	4.25	0.00	18.27	24.93	20.14	11.93	0.00	20.45
A S A	18.37	1.52	3.53	16.97	27.90	12.89	11.13	4.08	21.93
Proshika	0.50	8.16	10.11	11.45	31.62	9.07	0.00	4.41	25.16

Other NGOs	14.29	0.94	4.77	17.81	25.90	13.49	8.65	3.76	24.65
Other Micro Finance Org.	6.64	0.91	2.92	18.52	28.64	11.79	10.70	6.37	20.11
Leasing Organization	0.08	0.00	25.00	25.00	0.00	25.00	0.00	25.00	0.00
Money Lender	4.36	2.62	7.03	23.72	13.12	6.03	26.37	4.69	16.37
Land Owner	0.21	0.00	10.31	13.35	0.00	8.83	10.31	44.36	12.81
Employer	0.13	0.00	0.00	21.49	0.00	12.51	30.28	0.00	35.71
Friends	1.17	7.92	9.71	14.31	15.17	9.49	7.67	0.73	34.95
Relatives	3.80	0.84	11.13	10.46	13.84	11.39	8.39	4.23	39.67
Grocery Shop	0.08	0.00	0.00	8.31	26.59	0.00	53.19	0.00	11.89
Others	3.13	1.34	2.73	21.00	22.31	11.51	10.89	3.75	26.43

Note: In the table given above, sum of row other than "total" line is approximately 100.

It appears from the table that in 2016, the highest 22.13% households took loan for business followed by agriculture 18.03% and housing 17.09%. In 2010, the highest 23.73% households took loan for business followed by others 21.55% and agriculture 21.09%. As regards sources of loan, in 2016 the highest 23.51% took loan from ASA followed by Grameen Bank 20.23% and other NGOs 16.16%. In 2010, the highest 21.11 % of the loan takers took loan from the Grameen Bank followed by ASA 18.37% and other NGOs 14.29%. The lowest reported source in 2016 was employer 0.07% and in 2010 was grocery shop and leasing organization with only 0.08% of loan takers. Table C4 provides the average amount of loan taken per household who took loan during the last 12 months classified by division and residence.

Table C4: Average Amount (Taka) of Loan Taken by Division and Residence HIES 2016 and HIES 2010

Residence	Total	Barisal	Chittagong	Dhaka	Khulna	Mymensingh	Rajshahi	Rangpur	Sylhet
2016									
National	37743	28874	39052	57533	31548	22026	30423	28440	36359
Rural	31332	27221	34982	46046	25658	19144	28215	19919	36834
Urban	59728	32771	45904	92714	57938	33271	40227	79833	28449
2010									
National	28062	24569	36902	36085	22071	-	24894	15242	22558
Rural	21804	22836	33435	24196	17486	-	18409	11999	24175
Urban	54122	34090	55701	70067	37741	-	57690	38795	13711

According to the table C4, the average amount of loan taken per reporting household in 2016 is Tk. 37,743 at the national level, where it is Tk. 31,332 in the rural areas and Tk. 59,728 in urban areas. Average amount of loan taken in Dhaka division is the highest at Tk. 57,533 followed by Chittagong division at Tk. 39,052 and Sylhet division 36,359. Mymensingh division comes with the lowest average at Tk. 22,026 preceded by Rangpur division 28,440 and Barisal division 28,874. In the rural areas, the Dhaka division claims the top position with an average of Tk. 46,046 and Mymensingh division is at the bottom with Tk. 19,144. In the urban areas the highest average of loan taken at Tk. 92,714 is reported in Dhaka division followed by surprisingly Rangpur division at Tk. 79,833, Sylhet division reports the lowest average of Tk. 28,449. In terms of average, urban areas get about 58.0% more amount than the rural areas.

In 2010, the average amount of loan taken per reporting household was Tk. 28,062 at the national level, where Tk. 21,804 in the rural areas and Tk. 54,122 in urban areas. Average amount of loan taken in Chittagong division was the highest at Tk. 36,902 closely followed by Dhaka division at Tk. 36,085. Rangpur division comes with the lowest average at Tk.15,242. In the rural areas Chittagong division claims the top position with an average of Tk. 33,435 and Rangpur division is at the bottom with Tk. 11,999. In the urban areas the highest average of loan taken at Tk. 70,067 is reported in Dhaka division followed by Chittagong division at Tk. 55,701. Sylhet division reports the lowest average of Tk. 13,711 which was also lowest in 2016.

4. Household Crisis Management

Crisis Management was first introduced in HIES 2010 questionnaire and also repeated in 2016. The questionnaire was designed to collect information about: whether the household faced any crisis during the last 12 months, month of occurrence of crisis, duration of crisis, whether affected income, resources, food production and food purchase and also steps taken to combat the crises.

The questionnaire contained 18 types of crises and 16 types of steps to cope with the crises. Table S1 gives a brief description of the information relating to crisis management collected in HIES 2016 with a comparison to 2010.

Table S1:

Type of Crisis	National	Rural	Urban
2016			
Total	0.86	1.04	0.40
1. Drought/irregular rains	2.95	3.81	0.75
2. Floods	5.46	6.79	2.05
3. Landslides/Erosion	0.49	0.63	0.12
4. Excessive crop diseases/pests	0.62	0.8	0.16
5. Excessive livestock diseases	0.39	0.5	0.09
6. Unusually high price of Agri. inputs	0.27	0.35	0.07
7. Unusually low price of Agri. products	0.41	0.56	0.04
8. Reduction Low income due to factory layoff	0.06	0.06	0.06
9. Less earning due to job loss of HH members	0.15	0.13	0.21
10. Serious accident/illness of income earners	0.71	0.79	0.52
11. Serious accident/illness of other members	0.59	0.62	0.52
12. Death of income earner	0.18	0.19	0.17
13. Death of other household members	0.19	0.18	0.23
14. Theft of money/valuable assets	0.36	0.37	0.34
15. Theft of Agri. Assorts/output (crop/livestock)	0.13	0.14	0.08

16. Conflict/violence	0.07	0.09	0.04
17. Fire/earth quake/tornado etc.	0.79	1.91	1.49
18. Others	0.59	0.72	0.26
2010			
Total	0.84	1.03	0.30
1. Drought/irregular rains	3.62	4.66	0.79
2. Floods	2.67	3.59	0.16
3. Landslides/Erosion	0.31	0.39	0.09
4. Excessive crop diseases/pests	1.74	2.25	0.35
5. Excessive livestock diseases	0.48	0.60	0.13
6. Unusual high price of Agri. inputs	0.21	0.28	0.01
7. Unusual low price of Agri. products	0.16	0.21	0.03
8. Less earning due to factory layoff	0.08	0.08	0.10
9. Less earning due to job loss of HH members	0.43	0.54	0.15
10. Serious accident/illness of income earners	0.93	0.98	0.78
11. Serious accident/illness of other members	1.01	0.98	1.09
12. Death of income earner	0.26	0.30	0.15
13. Death of other household members	0.38	0.43	0.26
14. Theft of money/valuable assets	0.58	0.56	0.65
15. Theft of Agri. Assorts/output (crop/livestock)	0.21	0.27	0.02
16. Conflict/violence	0.23	0.24	0.18
17. Fire/earth quake/tornado etc.	1.15	1.51	0.16
18. Others	0.63	0.73	0.35
Total	0.84	1.03	0.30

The table shows that there is no difference in percentage of household experienced crises in the preceding year of the survey for 2016 and 2010. A total of 0.86% of the households at the national level faced any kind of crisis during the last 12 months. Of these 1.04% was in the rural areas and 0.40% was from urban areas. In 2010, 0.84% household at the national level 1.03% in

the rural areas and 0.30% households in the urban areas experienced any kind of crises in the preceding one year. Among the type of crisis in 2016, flood claimed the highest percentage with a total of 5.46% where the share of the urban areas is 2.05% and that of the rural areas is 6.79%. Drought/irregular rains occupies the second position with a total of 2.95% of which the share of the rural areas is 3.81% and urban is 0.75%. The third position goes to fire/earth quake/tornado 0.79% with rural share 1.91% and urban share 1.49%. In 2010, the highest type of crisis was drought/irregular rains 3.62% followed by flood 2.67% and excessive crop disease/pest 1.74%.

Table S2: Percentage Distribution of Households Facing Crisis Classified by Steps Taken to Cope with the Crisis HIES 2016 and HIES 2010

Type of steps taken	National	Urban	Rural
2016			
1. Help from friends & relatives	20.97	23.1	20.56
2. Help from local govt. agency	3.08	2.34	3.22
3. Changing food habit	7.16	9.87	6.63
4. Changing strategy of crop production	1.77	1.59	1.81
5. Non-agriculture work/self-employment with more pay	1.62	2.26	1.5
6. Increased Agri. work/ labour	1.97	1	2.15
7. Migrate in	6.36	4.1	6.81
8. Spending from previous savings	43.73	41.26	44.22
9. Taking loans	7.70	9.04	7.43
10. Selling durable goods	0.4	0.59	0.36
11. Selling land/House	0.43	0.59	0.39
12. Mortgaging land/house	0.26	0.33	0.25
13. Selling domestic animals	1.07	1	1.09
14. Sending children to another place	0.08	0.17	0.07
15. Reduced exp. in health & education	0.26	0.17	0.28
16. Others	3.13	2.59	3.24
2010			
1. Help from friends & relatives	16.54	21.49	16.01
2. Help from local govt. agency	0.85	0.00	0.95
3. Changing food habit	5.50	5.38	5.52

4. Changing strategy of crop production	6.58	1.90	7.08
5. Non-agriculture work/self-employment with more pay	1.67	0.70	1.78
6. Increased Agri. work/ labour	4.42	1.03	4.78
7. Migrate in	2.42	0.00	2.67
8. Spending from previous savings	35.43	35.01	35.48
9. Taking loans	14.68	13.69	14.79
10. Selling durable goods	1.34	0.81	1.40
11. Selling land/House	1.15	3.44	0.91
12. Mortgaging land/house	2.00	2.28	1.97
13. Selling domestic animals	2.53	2.97	2.48
14. Sending children to another place	0.20	1.43	0.07
15. Reduced exp. in health & education	0.00	0.00	0.00
16. Others	4.67	9.88	4.11

The table S2 shows that the household that experienced crisis coped with the problems through spending from previous savings both in 2016 and 2010. The corresponding percentages were 43.73% and 35.43%. The second method that was adopted for mitigating the crises was help from friends and relatives and the corresponding percentages in 2016 and 2010 were 20.97% and 16.54% respectively. The third measure that was adopted was borrowing which was 7.7% in 2016, but a high 14.68% in 2010. The same order of preferences is also followed both in urban and rural areas with some differences in steps taken for crisis between 2016 and 2010. Help from local government agencies increased in 2016 compared to 2010. The corresponding percentages were 3.08% and 0.85% respectively.

Appendix

Appendix-1

Poverty rates by Districts (using upper poverty lines)

Zila		HCR (%)	Std. Err (%)	95% Confidence Interval	
Code	Name			Lower limit	Upper limit
1	Bagerhat	31.0	4.3	22.6	39.5
3	Bandarban	63.2	7.7	48.1	78.3
4	Barguna	25.7	3.2	19.3	32.1
6	Barisal	27.4	3.1	21.2	33.5
9	Bhola	15.5	2.9	9.9	21.1
10	Bogra	27.2	3.7	20.0	34.4
12	Brahmanbaria	10.3	2.7	5.0	15.6
13	Chandpur	29.3	4.3	20.9	37.7
15	Chittagong	13.7	3.2	7.5	19.9
18	Chuadanga	31.9	2.8	26.5	37.4
19	Comilla	13.5	2.0	9.7	17.4
22	Cox's bazar	16.6	4.1	8.6	24.6
26	Dhaka	10.0	3.7	2.8	17.2
27	Dinajpur	64.3	3.3	57.9	70.7
29	Faridpur	7.7	2.0	3.8	11.7
30	Feni	8.1	1.8	4.6	11.6
32	Gaibandha	46.7	3.5	39.8	53.5
33	Gazipur	6.9	1.4	4.2	9.7
35	Gopalganj	29.5	3.3	23.0	36.0
36	Habiganj	13.4	2.9	7.8	19.0
38	Joypurhat	21.4	2.8	15.8	26.9
39	Jamalpur	52.5	3.3	46.1	59.0
41	Jessore	26.9	3.0	21.0	32.7
42	Jhalokati	21.5	2.5	16.7	26.4
44	Jhenaidah	26.5	4.5	17.8	35.2
46	Khagrachhari	52.7	7.6	37.8	67.5
47	Khulna	30.8	4.6	21.8	39.8
48	Kishoregonj	53.5	4.3	45.1	62.0
49	Kurigram	70.8	3.4	64.2	77.4
50	Kushtia	17.5	2.6	12.4	22.7
51	Lakshmipur	32.5	4.0	24.8	40.3

52	Lalmonirhat	42.0	4.5	33.2	50.8
54	Madaripur	3.7	1.0	1.6	5.7
55	Magura	56.7	4.8	47.4	66.0
56	Manikganj	30.7	3.6	23.7	37.6
57	Meherpur	31.5	3.6	24.5	38.5
58	Maulvibazar	11.0	2.5	6.1	15.9
59	Munshiganj	3.1	1.0	1.1	5.0
61	Mymensingh	22.0	3.6	15.0	29.0
64	Naogaon	32.2	3.1	26.1	38.2
65	Narail	16.8	2.8	11.3	22.3
67	Narayanganj	2.6	1.0	0.6	4.5
Zila		HCR (%)	Std. Err (%)	95% Confidence Interval	
Code	Name			Lower Limit	Upper Limit
68	Narsingdi	10.5	2.7	5.1	15.8
69	Natore	24.0	3.3	17.5	30.5
70	Chapai nababganj	39.6	3.0	33.8	45.5
72	Netrakona	34.0	3.7	26.8	41.1
73	Nilphamari	32.3	2.7	27.0	37.6
75	Noakhali	23.3	4.2	14.9	31.6
76	Pabna	33.0	3.3	26.6	39.4
77	Panchagarh	26.3	5.0	16.6	36.1
78	Patuakhali	37.2	5.0	27.4	47.0
79	Pirojpur	32.2	3.3	25.7	38.7
81	Rajshahi	20.1	6.8	6.8	33.5
82	Rajbari	33.8	3.2	27.6	40.0
84	Rangamati	28.5	4.6	19.6	37.5
85	Rangpur	43.8	3.6	36.7	50.8
86	Shariatpur	15.7	2.7	10.5	20.9
87	Satkhira	18.6	3.3	12.0	25.1
88	Sirajganj	30.5	3.7	23.3	37.7
89	Sherpur	41.3	4.2	33.1	49.5
90	Sunamganj	26.0	4.7	16.9	35.1
91	Sylhet	13.0	2.5	8.1	18.0
93	Tangail	19.0	3.0	13.1	24.9
94	Thakurgaon	23.4	3.5	16.5	30.4

Official Poverty Estimation Methodology used in Bangladesh

The official methodology used in Bangladesh to estimate the poverty numbers is based on the Cost of Basic Needs (CBN). The CBN method consists in calculating the cost of obtaining a consumption bundle believed to be adequate for basic consumption needs. If a person can afford the cost of this basic consumption needs bundle then this person is considered to be non-poor. In contrast, if a person cannot afford the cost of this bundle then this person is considered to be poor. Poverty lines under the CBN method, therefore, represent the minimum per capita expenditure that a person needs to be able to afford to meet his basic needs.

The first step for estimating a poverty line consists in estimating the cost of this basic consumption needs bundle for food. The basic consumption bundle consists of eleven items: coarse rice, wheat, pulses, milk, oil, meat, fish, potatoes, other vegetables, sugar, and fruits, as recommended by Ravallion and Sen (1996) following Alamgir (1974). This basic consumption bundle provides the minimal nutritional requirements corresponding to 2,122 kcal per day per person.¹ The price for each item in the bundle is estimated using the median of the unit-values (price per unit) for each of the items reported by a reference group of households calculated separately for each strata. The food poverty line is then computed for each strata by multiplying the estimated prices with the quantities in the food bundle.²

Starting in 2000, the HIES defined 16 different geographical strata that have been used since then to estimate the cost of the basic consumption bundle. The estimation of this bundle at different geographical levels allows accounting for cost of living differences across areas and therefore provides a more accurate picture of living standards after accounting for price differences across geographic areas. These 16 original strata include urban and rural areas in the six divisions that existed in 2010 including Barisal, Chittagong, Dhaka, Khulna, Rajshahi, and

¹ This is the same threshold used to identify the absolute poor with the direct caloric intake method.

² The reference groups are the households belonging to the 2nd to 6th deciles of the per capita consumption distribution that fall within the strata and reflects the median prices that are faced by households located within a reasonable range around the level of consumption where the poverty line is expected to be.

Sylhet and the four main City Corporations of Chittagong, Dhaka, Khulna, and Rajshahi. Out of the 16 original strata, 6 are classified as rural and 10 are classified as urban.

Once the food poverty lines have been estimated as the minimum cost of the basic consumption needs bundle for each stratum, the second step consists in computing non-food allowances using two different methods. In the first one, the non-food allowance is estimated by taking the median amount spent for non-food items by a reference group of households whose total per capita expenditure is close to the food poverty line. The non-food allowance estimated using this method is called the “lower non-food allowance”. In the second method, the non-food allowance is estimated by taking the median amount spent for non-food items by a reference group of households whose food per capita expenditure is close to the food poverty line. The non-food allowance estimated using this method is called the “upper non-food allowance”. Lastly, the food poverty lines are added to the lower and upper non-food allowances and this yields the official upper and lower poverty rates at the stratum level (16 upper poverty lines and 16 lower poverty lines). Table 1 shows a summary of when poverty lines were estimated for Bangladesh for each of the latest four rounds of the HIES available.

Table 2 Bangladesh Poverty Measurement

Year	2000 ³	2005	2010	2016
Food PL	Updated from 1991/92	Re-estimated (CBN)	Updated from 2005	Updated from 2010
Non-food PL	Updated from 1991/92	Re-estimated (CBN)	Re-estimated (CBN)	Updated from 2010

1. Updating Poverty Lines for Changes in Cost-of-Living

In order to be able to make proper comparisons of poverty rates across time, it is important that the values of the poverty lines are kept constant over time in real terms. To ensure this, the upper and lower poverty lines are generally not re-estimated frequently but rather updated based on previous estimates. In the case of the HIES 2016, the upper and lower poverty lines for each quarter were estimated by updating the official upper and lower poverty lines available for the HIES 2010 using price indices constructed for each quarter.

In each quarter a set of composite price indexes were constructed for each of the 16 original strata using a combination of the Törnqvist food price index and the non-food CPI for urban and rural areas.⁴The stratum-specific Törnqvist food price indexes were constructed using a set of 13 food expenditure groups including coarse rice, pulses, meat, potatoes, milk, fruits,

³The 2005 poverty lines were also back-casted to 2000.

⁴The Törnqvist price index was selected instead of the Laspeyres or Paasche indexes because it uses budget shares averaged between consecutive years, and therefore allows for changes in consumption patterns over time.

sugar, fish, eggs, cooking oil, salt/spices, soft drinks, and betel/cigarette.⁵ These food expenditure groups were selected because they represent some of the most frequently consumed items by households but also because they allow minimizing the inherent issue of differences in item quality. For each of the food expenditure groups and stratum, the median unit-values were calculated as well as the average budget shares using the 2010 and the 2016 data.⁶ Lastly, The Törnqvist food price indexes for each of the food expenditure groups and each stratum k were calculated as follows:

$$\ln P_{10}^{Tk} = \sum_{j=1}^n \frac{w_{1j}^k + w_{0j}^k}{2} \ln \left(\frac{P_{1j}^k}{P_{0j}^k} \right)$$

where P_{10}^{Tk} denotes the Törnqvist price index for region k, 1 and 0 denote the two years of comparison (2010 and 2016/17 in this case), w_{1j}^k and w_{0j}^k are the respective budget shares, and p_{1j}^k and p_{0j}^k are the respective median unit-values (prices) for food group j in the two years of comparison.

Once the HIES-based Törnqvist food price indexes had been derived from the survey data for each stratum, a set of stratum-specific composite price indexes were constructed to update the poverty lines. These composite price indexes were constructed by creating a weighted average of the non-food CPI inflation rate for urban and rural areas between 2010 and 2016 and the Törnqvist food price indexes for each stratum. The relative weights used for this calculation of the composite price index were the stratum-level average food budget shares for 2010 and 2016. The non-food CPI inflation rate was computed using the average CPI from February 2010-January 2011 (data collection for the HIES 2010) and the average non-food CPI for each quarter in 2016, (e.g. April-June 2016 for Q1, July-September 2016 for Q2, October-December 2016 for Q3 and January-March 2017 for Q4) separated for urban and rural areas. The Törnqvist price index, the non-food CPI inflation rate and the composite price indices for Q1 and Q2 are presented in Tables 3 and 4 respectively. These composite price indexes are used to update the 2010 lower and upper poverty lines to 2016 (see Table 5). Each of the quarterly poverty lines is updated based on the 2010 poverty lines rather than on the previously quarter poverty lines.⁷

⁵ Traditionally, the group of 13 food items used in the HIES to update the poverty lines do not perfectly overlap with the 11 food items used to estimate the poverty lines.

⁶ Using the median unit-values instead of the mean unit-values for each group allows minimizing the issue of the difference in item qualities which is inherently present in the estimation of all unit values and also the effect of outliers.

⁷ Starting in Q2, poverty lines could have also been updated using the previous quarterly poverty lines. That is, for instance, Quarter 2 (July-September 2016) poverty lines could be updated using the Quarter 1 (April-June 2016) poverty lines. Each method will yield slightly different results as the Törnqvist price index does not have the transitivity property. The upper poverty rates for Q2 that were obtained using these two methods, however, were similar to the second decimal (23.7%) and the lower poverty rates were 12.9% (updating Q2 from Q1) compared to 13% (updating Q2 from 2010).

Table A1: Poverty lines of HIES -2016

Stratum		Lower poverty line	Upper poverty line
1	Barisal Rural	1778	2056
2	Barisal Urban	1993	2756
3	Chittagong Rural	2030	2439
4	Chittagong Urban	2135	2606
5	Chittagong SMA	2097	2660
6	Dhaka Rural	1835	2152
7	Dhaka Urban	1947	2657
8	Dhaka SMA	2020	2929
9	Khulna Rural	1677	2019
10	Khulna Urban	1817	2419
11	Khulna SMA	1942	2360
12	Rajshahi Rural	1716	2065
13	Rajshahi Urban	1864	2251
14	Rajshahi SMA	1764	2244
15	Sylhet Rural	1764	1865
16	Sylhet Urban	1911	2315
	Total	1862	2268

Table A2: Price indices for April, 2016 to March, 2017 (food & composite)

Stratum		Food price index	Composite price index
1	Barisal Rural	1.28	1.38
2	Barisal Urban	1.26	1.40
3	Chittagong Rural	1.38	1.45
4	Chittagong Urban	1.30	1.43
5	Chittagong SMA	1.26	1.42
6	Dhaka Rural	1.37	1.44
7	Dhaka Urban	1.41	1.48
8	Dhaka SMA	1.30	1.44
9	Khulna Rural	1.30	1.41
10	Khulna Urban	1.32	1.44
11	Khulna SMA	1.32	1.44
12	Rajshahi Rural	1.28	1.39
13	Rajshahi Urban	1.29	1.42
14	Rajshahi SMA	1.33	1.44
15	Sylhet Rural	1.36	1.42
16	Sylhet Urban	1.43	1.49

Reference:

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Standard Errors (SE) and Relative Standard Errors (Rel. SE) and confidence Intervals of Some selected estimates by residence

Selected Variables	Estimate (TK)	Standard Error (TK)	Relative Standard Error (%)	95% Confidence Interval	
				Lower Limit	Upper Limit
National					
Income	15893	206.31	1.30	15489.12	16297.87
Consumption Expenditure	15420	65.39	0.42	15292.1	15548.44
Food Expenditure	7354	22.67	0.31	7309.65	7398.53
Rural					
Income	13442	144.77	1.08	13158.2	13725.7
Consumption Expenditure	13868	72.62	0.52	13725.48	14010.17
Food Expenditure	7001	27.63	0.39	6947.07	7055.38
Urban					
Income	22168	610.13	2.75	20972.09	23363.95
Consumption Expenditure	19383	132.60	0.68	19122.97	19642.81
Food Expenditure	8255	38.27	0.46	8179.78	8329.82

Standard Error of Selected Indicators

B1: Head Count Rates Using Lower Poverty Line (LP)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	12.9	0.36	12.17	13.59
Rural	14.9	0.43	14	15.71
Urban	7.6	0.66	6.32	8.91

B1: Head Count Rates Using Upper Poverty Line (UP)

Residence	Using Upper Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	24.3	0.54	23.28	25.41
Rural	26.4	0.58	25.24	27.52
Urban	18.9	1.24	16.48	21.33

B3: Poverty Gap Using Lower Poverty Line (LPg)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	2.26	0.08	2.11	2.42
Rural	2.62	0.1	2.42	2.82
Urban	1.31	0.12	1.08	1.55

B4: Poverty Gap Using Upper Poverty Line (UPg)

Residence	Using Upper Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	4.98	0.14	4.7	5.26
Rural	5.38	0.16	5.07	5.68
Urban	3.92	0.32	3.29	4.54

B5: Squared Poverty Gap Using Lower Poverty Line (LSPg)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	0.63	0.03	0.58	0.69
Rural	0.73	0.04	0.66	0.8
Urban	0.37	0.04	0.29	0.45

B6: Squared Poverty Gap Using Upper Poverty Line (USPg)

Residence	Using Upper Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	1.54	0.05	1.43	1.64
Rural	1.66	0.06	1.53	1.78
Urban	1.22	0.11	1.01	1.43

Appendix-6

B1: Head Count Rates Using Lower Poverty Line (LP)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
Barisal	14.46	1.25	12.01	16.91
Chittagong	8.71	0.8	7.14	10.27
Dhaka	7.19	0.73	5.75	8.62
Khulna	12.4	0.83	10.78	14.03
Mymensingh	17.55	1.46	14.69	20.41
Rajshahi	14.23	1.04	12.19	16.28
Rangpur	30.55	1.17	28.25	32.86
Sylhet	11.49	1.41	8.71	14.26

B2: Head Count Rates Using Upper Poverty Line (UP)

Residence	Using Upper Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
Barisal	26.49	1.54	23.46	29.51
Chittagong	18.43	1.23	16.01	20.84
Dhaka	16	1.3	13.44	18.55
Khulna	27.48	1.27	24.98	29.98
Mymensingh	32.77	2.03	28.8	36.75
Rajshahi	28.93	1.55	25.89	31.96
Rangpur	47.23	1.32	44.64	49.82
Sylhet	16.23	1.7	12.89	19.57

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10.	Representative, World Bank	Member
11.	Representative, World Food Programme (WFP)	Member
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13.	Director, National Accounting Wing, BBS	Member
14.	Project Director, HIES, BBS	Member
15.	Deputy Secretary (Dev), SID	Member-Secretary

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7.	Representative, Food Planning and Monitoring Unit (FPMU)	Member
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10.	Chairman, Department of Economics, University of Dhaka	Member
11.	Director, Institute of Statistical Research and Training (ISRT), DU	Member
12.	Representative, World Bank	Member
13.	Representative, World Food Programme (WFP)	Member
14.	Representative, National Household Data Base Project	Member
15.	Deputy Secretary (Dev), SID	Member
16.	Director, National Accounting Wing, BBS	Member
17.	Project Director, HIES, BBS	Member-Secretary

Working Group for HIES 2016

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01.	Abul Kalam Azad, Director, National Accounting Wing, BBS, Dhaka.	Chairman
02.	Nur Jahan, Deputy Secretary, Statistics and Informatics Division, Parisankhyan Bhaban, Agargaon, Dhaka.	Member
03.	Mohammad Anowar Hossain, PS to Secretary, Statistics and Informatics Division, Parisankhyan Bhaban, Agargaon, Dhaka.	Do
04.	Zia Uddin Ahmed, Joint Director, National Accounting Wing, BBS, Dhaka.	Do
05.	Mr. Kabir Uddin Ahmed, Project Director, LMIS Project, BBS, Dhaka.	Do
06.	Mr. Bidhan Baral, Project Director, AMIS Project, BBS, Dhaka.	Do
07.	Mr. AKM Ashraful Haque, Project Director, MSVSB Project, BBS, Dhaka.	Do
08.	Md. Shahabuddin Sarkar, Deputy Director, National Accounting Wing, BBS, Dhaka.	Do
09.	Md. Abdul Khaleque, Deputy Director, National Accounting Wing, BBS, Dhaka.	Do
10.	Salma Hasnayan, Deputy Director, National Accounting Wing, BBS, Dhaka.	Do
11.	Md. Rafiqul Islam, Deputy Director, National Accounting Wing, BBS, Dhaka.	Do
12.	Md. Alamgir Hossain, Deputy Director, Census Wing, BBS, Dhaka.	Do
13.	Md. Tahidul Islam, Deputy Director, Demography and Health Wing, BBS, Dhaka.	Do
14.	Md. Abdul Latif, Deputy Director, HIES Project, BBS, Dhaka.	Do
15.	Md. Maksud Hossain, Statistical Officer, HIES Project, BBS, Dhaka.	Do
16.	Md. Saidur Rahman, ASO, HIES Project, BBS, Dhaka.	Do
17.	Mr. Shekhor Ranjan Halder, ASO, National Accounting Wing, BBS, Dhaka.	Do
18.	Dr. Dipankar Roy, Deputy Secretary, Project Director, HIES Project, BBS, Dhaka.	Member Secretary

List of Officials Responsible for Overall Management of HIES 2016

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1.	Kaniz Fatemanda	EX. Secretary, Statistics and Informatics Division
2.	K. M Mozammel Hoq	Secretary, Statistics and Informatics Division
3.	Mohammad Abdul Wazed	Ex. Director General, Bangladesh Bureau of Statistics
4.	Md. Amir Hossain	Director General, Bangladesh Bureau of Statistics
5.	Dr. Dipankar Roy	Project Director, HIES, BBS

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6.	Purobi Rani Deb	Computer Operator, HIES Project, BBS



Household Income and Expenditure Survey (HIES) Project

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