

Rising Consumption Inequality in Bangladesh

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Abstract

This paper attempts to analyze the consumption pattern of Bangladesh after its liberation, from a period of 1973/74 to 2005 as per the availability of secondary data sources. It also attempts to show the pattern and trend of income, expenditure and consumption expenditure from the different points of view considering different relevant factors or variables. Since independence, Bangladesh has achieved some progress in its growth and development and at the same time it has experienced a rise in inequality in income and in consumption between the rich and the poor. The pattern of consumption especially, the food has been changed over the period mentioned above. Moreover, there has been increase in food and non-food consumption disparities

between rural and urban areas and also among the different socio-economic groups of Bangladesh which have also been worked out in this study.

Key Words: Consumption, food consumption, Non-food consumption, Consumption pattern, Consumption inequality, Consumption expenditure, rural-urban areas, socio-economic group.

INTRODUCTION

'Inequality' and 'development' are much debated terms today. Now what is development? Is it simply the increase in national income of a country? Certainly not. In whatever sort of a nation-developed or developing, development should be a positive change in the living standards of the average individual. Development which results in accumulation of wealth in the pockets of a few rich elites is not true development. Although economic growth today is not the only important indicator of development, there are other factors involved such as education, training, skills, health, nutrition, safety, environment, sanitation, political freedom, choice etc. Never the-less it remains the leading indicator of development. We can deduce that where economic growth is occurring, development is being experienced. There is another question which puzzles economist even today, is rising income inequality inevitable when there is development/growth? There is a widely held belief- that rising inequality is inevitable. Increased inequality is the result of forces such as technological change, over which we have no control, or the globalization of world trade, which people believe, despite historical evidence to the contrary, to be irreversible (Atkinson, 1999).

Independent development leads to an increase in inequality in a country. Moreover, the ongoing development process in some developing countries like Bangladesh might also be responsible for increase in inequality. This type of borrowed development policy is not helping to redistribute the income and wealth in favor of poor rather it causes to sustain the features of existing inequality in the society and even in some cases it is playing a vital role in increasing inequality (Mujejeri, 1993).

Kuznet (1955) suggested that income inequality might be expected to follow an inverse U shape, first rising with industrialization and then declining. Today, the Kuznet curve is commonly believed to have doubled back on itself the period of falling inequality has been succeeded by a reversal of the trend.

Therefore most may believe that with development growth, socio-economic inequality is inevitable. But is this inequality always hampering quality or harmful to the nation? Is it acceptable? Some may argue that a little inequality is tolerable if it brings overall welfare to the nation. But it is also very true and realistic that too much extreme inequality must definitely be avoided as it is unacceptable to most. In Bangladesh 80% (P.R.B 1999) of the population live in rural areas and most of them are dependent on agriculture whereas a very small portion of the rural population owns the land. The people who actually own, it most are very small tillers or poor farmers, the others are landlords or rich farmers. And the latter section of the rural Bangladesh owns the majority of land. Moreover, the numbers of landless people are going to increase day by day. Therefore, there is increase in inequality of both income and consumption the rural society.

At a very low level of per capita income, the average person will not vote for a high level of redistribution since the resulting income distribution will not allow anybody to accumulate significant amounts of human capital. The economy will be stuck in a poverty trap. For growth to occur, the average person will have to be relatively close to the high income groups in order to favor low levels of redistribution. Redistribution is thus less, the rich are able to accumulate capital, and the society's income grows. The distribution of income worsens. The two conditions that promote growth in a poor society are average person must not be too poor to favor high redistribution and the rich must be sufficiently rich to be able to accumulate capital (Jha, 1999).

Along with theories and experiments, numerical data helps to bring out or portray a clear picture of a situation, it helps to integrate ideas. It is without any doubt a necessary part of modern economics for instance, periodic. Household Expenditure Surveys (HES) have become an integral feature of the statistical system of Bangladesh. Such surveys are implemented every three or four years for a sample of rural and urban households. The principal purpose of these surveys is detailed estimation of household expenditure, but they also collect data for the estimation of household income and its main sources as well as a variety of other household characteristics.

These surveys have been used to estimate the inequality of the distribution of income and consumption and the incidence of absolute poverty i.e. the proportion of the

population below some threshold minimum living standard measured in terms of per capita consumption or basic nutrition.

OBJECTIVES OF THE STUDY

The main objective of the present study is to carefully analyze the trends of consumption growth and consumption inequality between the rural and urban areas and also between the different socio-economic groups in Bangladesh from a period of 1973 to 2005 to obtain as good as a set of estimates of consumption inequality as possible and to identify its major sources in both rural and urban Bangladesh. The hypothesis to be tested is that though there is growth in consumption in both rural and urban areas, there has been at the same time increase in inequality in the level of consumption between the rural and urban areas of Bangladesh. Therefore, an in-depth picture of consumption pattern of rural and urban household of the whole Bangladesh is the main objective of this study.

METHODOLOGY OF THE STUDY

Secondary data have been presented to analyze the trends of consumption growth and consumption inequality in Bangladesh between the periods of 1973-2005. Since, it is a macro-economic nation-wide data-based study, therefore we have used Household Expenditure Survey (HES), of 1983-84 (published in February, 1988), 1988-89 (published in August, 1991), 1991-92 (published in November, 1995), 1995-96 (published in April, 1998) and on the Household Income and Expenditure Survey (HIES) of 2000 (published in March, 2003), and on the preliminary report on HIES of 2005 (published in September, 2006). The HES has been conducted nationwide by the Bangladesh Bureau of Statistics (BBS) for the traditional reason to provide the basis for a new index of income expenditure, and consumption, both momentary and non-momentary. The relationship between income and consumption is measured by the average and marginal propensity to consume. Finally, a linear and log-linear estimated model has also been used to show the relationship between the average monthly consumption and the total consumption expenditure of Bangladesh.

LITERATURE REVIEW

The income-consumption relationship has been seeking much importance since the Keynesian theory emerged to determine national income as an outcome of the equilibrium between demand and aggregate supply. The Keynesian theory of consumption assumes that people's consumption depends on their current disposable income, whereas, in the mid 1940s, econometricians estimated the coefficients of consumption functions based on the simple absolute income hypothesis (Johnson, 1971).

Confield, Evans and Hoffenberg (1947) by using data from a variety of sources were used in an effort to find the relation that best explained the consumption (c) and income

(y) observations and to forecast the levels of consumption and saving consistent with full employment in the post war period. e about the true form of the relation except that consumption is not proportional to income.

Kuznets (1946) furnished estimates of the US saving/income ratio by decades back to 1970. The startling implication of this landmark study was that the saving ratio had been virtually consistent since the Civil war, in spite of substantial increases in real income over the period. Thus the long-run consumption function was best described by a straight line through the origin.

Jain and Sing (2004) argued that consumption expenditure depends upon the current absolute disposable aggregate income in real terms where consumption expenditure means aggregate consumption of the economy.

Again **Dorothy Brady and Rose Friedman (1947)** suggested that consumption depends on the level and the distribution of income. Their analysis of budget data indicated that the households in each income bracket tend to save less as aggregate income rose over time. Put another way, as total income for the economy rises, and a given household moves into a higher income bracket, the household will tend to save less than those households who previously that income bracket. As a consequence, consumption expenditures depend on the household's relative position in the income distribution, not the absolute level of income

Duesenberry (1952) and Franco Modigliani (1949) hypothesized that aggregate saving was a function of the highest previous peak income as well as the current income of the private sector. This formulation allowed for the possibility of both cyclical changes and secular constancy of the marginal and average propensities to save. Therefore, many researchers argued that the shifting of the consumption function depends upon the changes in the rate saving in the economy. Therefore, changes in the APC and MPC played a vital role in determining the aggregate saving function of an economy.

Again **Duesenberry (1952)** assumed that average propensity to save was a linear function of the ratio of current income to the past peak income. The details of relative income hypothesis rely on frictions or response lags on the one hand, and/or on sociological and psychological motivations on the other

Professor James Tobin (1951) has concluded that absolute income hypothesis is superior to the relative income hypothesis when financial assets are introduced as another explanatory variable in the regression equation of the former.

Aguiar and Hurst (2005), constructed their consumption index by projecting permanent income on the household's entire consumption basket using a sample of middle-aged households and they argued that consumption pattern have significant forecasting power for permanent income whereas lifecycle hypotheses (LCH) relates consumption to the stock of current life-time resources while the PIH (Permanent income hypotheses) relies on permanent income, a flow concept, as the crucial explanatory variable

John Y. Campbell and N. Gregory Mankiw (1989), emphasize a specific alternative hypothesis under which they argued that some consumers follow the "rules of thumb" of consuming their current income rather than their permanent income.

Milton Friedman (1957) divided a person's income into two types: permanent and transitory. Permanent income is the average income a person expects to receive over his or her lifetime. To estimate this, people look at their current wages and what they

are likely to be earning in the future. It is on this that people base their normal planned spending. On the other hand, transitory income is defined as temporary, unexpected income. Again, neither variable is directly observable and, as a consequence, each must be estimated from data on proxy variables. Finally, both models assume that consumption is proportional to the explanatory variable, current resources or permanent income. The result follows from an assumption that the individual's utility function is homogenous (for more details, see **Farrel, 1959**).

As noted by **becker (1965)**, consumption is the output of "home production" which uses the inputs both market expenditures and time. The use of total expenditure in such analysis may also help to analyze differences in tastes and preferences. There are differences in the level and pattern of consumption between different regions of a country with the level of development and there are also such differences which can be observed between the rural and urban areas of a country. These differences can be seen among the various economic, social and political groups. There are other forces which have also great influences on the level and pattern of consumption. A number of researchers have addressed the issue of consumption pattern since the formulation of Engel's law, which states that the share of expenditure on food in total expenditure tends to decline with a rise in income. In addition to income and, or expenditure, household size is considered in analyzing consumption expenditure.

Hauthakker (1957) emphasizes that the coefficient of household size comprises of two types of effects, such as specific effects and income effects. The specific effect resulting from increase in the need for various commodities as household size increases, whereas, the income effect arises because; a family becomes relatively poorer with an increase in the household size. The specific effect does not move proportionately with household size because of economies of scale in consumption which exist in the large households.

Sing (1968) emphasizes the role of occupation in the consumption pattern. He points out that the variability of consumer behavior is not due to economic disparities of the occupational group alone, but due to a socio-cultural heterogeneity associated with different groups.

Radhakrisna and Misra (1970) analyzed household consumption of India where they have dealt with regional disparities by analyzing each state separately. **Johar and Sandhu (1981)** have discussed the inter-regional and inter-temporal variation in the consumption pattern in Punjab. They conclude that these differences prevail in consumption pattern.

Subramanian and Deaton (1991) have demonstrated the gender effect in consumption for Maharashtra state. They dealt with the issue by making different demographic groups and sex.

Burney and Khan (1992) examine the consumption pattern for Pakistan, emphasizing the impact of household size and composition on expenditure pattern by aggregate list of the commodities.

Rao and Raddy (1965), analyze the pattern of household consumption in Andhra Pradesh. They support the fact that the food and non-food articles are treated as necessities and luxuries in rural Andhra Pradesh. Within the food group, milk and milk products, pulses, egg, fish, & meat, and sugar are found to be more elastic than others.

Similarly, in case of non-food group, items such as clothing and other food items are found to be more elastic.

According to **Nath (1991)** fish and pulses are most important non-cereal food in Bangladesh. Proportion to fish and meat taken together consumed by cooperators is just half the national level as estimated by HES of 1985-86. About 67% poor households do not have any third items for dinner, and the Menu of food for the poor households in general is very much narrow based with lower proportion of rich food like egg, milk and meat are taken very infrequently by the poor.

Latrif (2002) pointed out in his study that 72 percent of the total consumption expenditure is on food and the rest 28 percent on non-food items. But HES data show a different picture. During the same period of our survey, BBS from HES data estimated the food expenditure to be 55-58 percent (BBS 2001).

Razzaque, Khondker & Mujuri (1997), show in their study that the low income households are likely to spend a greater share of their income on food particularly on rice. Agricultural laborers spend 59.4 percent of their food budget on rice whilst the corresponding figure for professional group is 38.5 percent. The share of wheat in total food budget varies from 2.5 percent for large farmers to 4.9 percent for semi skilled workers. Apart from rice and wheat, the major spending is done on fish, pulses, beef and vegetable. The richest group (professionals) spends about 16 percent of its food budget on fish whilst the poorest (agricultural laborer) spend 9 percent. In fact the budget share for fish is likely to increase with increase in income. The same observation holds true for beef and vegetables. However, the semi-skilled workers spend a higher proportion on pulses compared to professional and high income groups. However, they report household size have significant effect on share of consumption behavior in most of the commodities.

Flowing the well-known Engel's law which states that the proportion of expenditure on food with respect to the total expenditure declines with the rise in incomes; a useful indication of relative consumption patterns is derived by comparing the income elasticities. The main advantage of following this approach is that income elasticity does not depend on the units of measurement of income and consumption, and is, therefore, directly comparable between countries and commodities (**Gupta, 1973**).

Houthakker, (1957), on the basis of nearly 35 budgets enquiries for a number of countries suggests the following values of partial elasticities with respect to total expenditure and household size for making rough estimates in countries possessing relevant statistical data; where he (Houthakker) shows that elasticity with respect to total expenditure for food, clothing, housing and miscellaneous are 0.6, 1.2, 0.8 & 1.6, whereas the elasticities with respect to household size for food, clothing, housing and miscellaneous are 0.3, 0, 0, and -1.4 respectively.

A recent study by FAO has also been used the income elasticities to make demand forecasts for a number of countries (**Gupta, 1973**). Food consumption in China has also declined with the rise in living standard in recent years. A study on 'Consumption Pattern changes among Chinese People' shows that food consumption accounted 41.9 percent of the total expense of urban residents in 1999, dropping 8 percentage points

from 1995, and 52.6 percent of rural people's expense, down 6 percentage point. ([http:- - html](#)).

The International Labour Organization (ILO), which was been preliminarily concerned with family living surveys, was over the last 60 years, devoted considerable attention to the subject of family budget enquiries (1926), later described as family living studies (1940, 1949, 1951, 1967) and finally adopted in 1974 a set of recommendations based on the resolution concerning 'household income and expenditure survey' adopted by the Twelfth International Conferences of Labour.

Bhattachargee (1993), in his study, using the data from different sources shows that countries tend to devote a small proportion of their incomes on food. Rural Bangladesh and India spend nearly 70 percent of their incomes on food as against less than 40 percent in the advanced countries. In the United States, the figure is nearly 30 percent. Rural India spends 62.42, Urban India 58.46, Ghana 58.0, Japan 40.0 Dominican Republic 61.0, France 40, UK 38.0, USA 29.7 and Bangladesh in 1965 is 68.71 percent on food of their total expenditure. (**1. HES of Bangladesh 1989, 2. Gupta (1973), 3. Gupta (1973), 4. FAO (1988), 5. Musgrove (1985), 6. FAO (1989), 7. Hadji matheou (1987), 8. Hadjimatheou, 1987, 9. Islam, 1965**).

Similar trend is revealed by elasticity coefficients for expenditure on total food. The elasticity of food expenditure of Rural Bangladesh is 0.79, Urban Bangladesh 0.67, Rural India 0.85, Urban India 0.75, Rural Pakistan 1.0, Ghana 0.88, Nigeria 0.48 to 0.62, Rodisia 0.63, Israel 0.52, Japan 0.39, Ceylon 0.82, Canada 0.38, Dominican Republic 0.62, UK 0.2 to 0.4, Bangladesh (in 1965) 0.63 to 0.79 (**1. HES, 1989, 2. Gupta (1973), 3. FAO (1988), 4. Rao, 1989, 5. Musgrove, (1985), 6 and 7. Hadjimatheou 1987, 8. Islam, 1965**).

Countries with high per capita incomes tend to have smaller elasticity's. **Houthakker (1957)** and **Goreux (1959)** pointed out that the elasticity coefficient for food declines with increase in the level of per capita expenditure.

In Countries with low real income, the cereal products tend to be more important compared to meat, fish and milk and milk products. It is evident from the report of HES 1988-89, and from the study of **Gupta (1973) and Musgrove (1985)** that Rural Bangladesh spends 52.9, Urban Bangladesh 38.6, Rural India 62.4, Urban India 42.4, Ceylon 39.0, Dominican Republic 54.7, USA 10.3, Bangladesh (in 1965) 39.98 percentage of total expenditure on food. On the other hand Rural Bangladesh, Urban Bangladesh, Rural India, Urban India, Ceylon, Dominican Republic, USA and Bangladesh (in 1965) spends 14.3, 21.9, 12.3, 20.6, 14.4, 18.0, 45.3 and 24.59 respectively.

In view of the importance of cereal products in poor countries, it is interesting to compare the trend to elasticity coefficients for expenditure on cereal products in poor countries with rich countries. In general, high income countries have low values of elasticities for cereal expenditure implying low priority for the consumption of cereals in high income families.

Chern and others (2002), in their study show that the Japanese food consumption has been undergoing dramatic changes over the last 30 years. There have been increasing consumption of meats, particularly beef and dairy products, and decreasing consumption of rice, fish, fresh fruits, as well as fresh and processed vegetables in Japan.

On the other hand, low income countries show high values indicating that cereal consumption occupies an important place in the overall consumption of poor people. It is evident from the HES report of 1988-89, and from the study of Gupta (1973) that expenditure elasticity of all Cereals for Rural Bangladesh, Urban Bangladesh, Rural India, Urban India, Pakistan, Egypt, Ceylon, Rural Japan, Urban Japan, UK, Italy, Denmark, and Bangladesh (in 1965) are 0.58, 0.47, 0.63, 0.32, 0.29, 0.59, 0.48, 0.19, 0.16, 0.23, 0.21, 0.11, and 0.44 respectively.

Another important point that emerges from the above data that in Bangladesh and in India the demand for cereals in rural areas shows twice the response to income changes than in the urban ones where per capita incomes are higher. This indicates that the demand for cereals declines rapidly as incomes increase.

The above data also shows that, except for developing countries, the elasticity coefficients are either negative or nearly zero. This suggests that a rise in income in high-income countries would not cause the demand for cereals to change significantly. There may be some increase, of course as a result of rise in population.

However, in Asia and African countries, the demand for cereals is influenced by two factors, both working in the same direction. These are increasing incomes and rising population. Therefore, unless both rich and surplus producing countries are in a position to meet the cereal requirements for developing countries, it may not be possible for the low-income countries to achieve rapid industrial development (**Gupta, 1973**).

It is observed from the preceding comparisons that, in general, the values of elasticity coefficient for expenditure on total food, cereals, wheat, and rice, are high for countries with low-incomes, and low for high-income countries. There are, however, some exceptions. These are caused by a number of factors such as local food habits, the nature of the economy. Finally, it is seen that the elasticity for cereal expenditure declines rapidly with the increase in incomes, suggesting the increasing importance of non-cereal food with rising incomes.

PATTERNS AND TRENDS OF HOUSEHOLD INCOME AND EXPENDITURE IN BANGLADESH

Level of income:

The estimated income at National Level as per 1983-84 HES stands for Tk. 23,003 per household and the average household size is 5.71 (shown in table-1). The income level per household is rising gradually over the years and reaches at Tk. 86,436 in the year of 2005 which is about 276 % higher at current prices 1983-84. Therefore, there is a rising trend of income per household among these years.

Number of members per household falls on an average, though it rises between the years of 1983-84 to 1985-86. Income per member (at national level) also increased over these years.

At the rural areas of Bangladesh between 1983-84 and 2005 the income per household also rises gradually. In 2005 the income per household is about 231% higher

at current prices than in 1983-84. The number of member per household falls over these years though there is a rise in number in the year of 1985-86 but on an average there is a declining trend of household size between these periods as shown in the table 1.

In urban areas there is also a rising trend of income between 1983-84 and 2005 and a declining trend of household size except the year of 1985-86. In 2005 the income per household is about 321% higher than in 1983-84. Income per member is raising both in rural and urban areas of Bangladesh.

Table: 1: Rural Urban Differences in income, at current prices 1983-84, 1985-86, 1988-89, 1995-96, 2000 and 2005

Survey Year	Household Income Taka Per annum	Number of member Person per household	Number of earners Person per earner	Income per Member Taka per annum	Income per earner Taka per annum
National					
1983-84	23003	5.71	1.51	4029	15234
1985-86	30933	5.86	1.45	5279	21333
1988-89	34379	5.54	1.55	6205	22180
1991-92	40092	5.35	1.38	70316	29052
1995-96	52392	5.26	1.48	9960	3540
2000	70104	5.18	1.45	13536	48348
2005	86436	4.84	1.4	17859	61740
Rural					
1983-84	22131	5.70	1.51	3,883	14656
1985-86	28958	5.83	1.44	4967	20110
1988-89	32,042	5.52	1.56	5,805	20,539
1991-92	37308	5.35	1.38	6820	27036
1995-96	43896	5.25	1.46	8364	26460
2000	57792	5.19	1.43	11136	40368
2005	73152	4.88	1.37	14990	53388
Urban					
1983-84	29842	5.84	1.51	5110	19763
1985-86	45186	6.09	1.52	7,420	29728
1988-89	50682	5.61	1.55	9034	32698
1991-92	57984	5.34	1.38	10523	42012
1995-96	95676	5.30	1.59	18048	60168
2000	118536	5.13	1.54	23112	76968
2005	125556	4.72	1.50	26597	83700
Urban as % of Rural					
1983-84	135	102	100	132	135
1985-86	156	104	106	149	148
1988-89	158	102	99	156	159
1991-92	155	101	100	154	155

Survey Year	Household Income Taka Per annum	Number of member Person per household	Number of earners Person per earner	Income per Member Taka per annum	Income per earner Taka per annum
1995-96	218	101	109	216	227
2000	205	99	108	208	191
2005	172	110	109	177	157

Source: HES data of 1983-84, 1988-89, 1991-92 and HIES data of 2000 and 2005 and author's calculations.

Therefore, it is observed from the table that there is a rising trend of household income in both rural and urban areas of Bangladesh. But the income level in urban areas rising faster than that of rural areas over these years mentioned.

In the year of 1983-84 household income in urban areas was 135 as a percentage of rural areas and which was rising gradually up to 2000 but in the year of 2005 this percentage falls compared to 2000, which was 205 in 2000 and 172 in 2005 though it is much higher than that of 1983-84. Therefore, it can be said that the considerable urban/rural disparities is found with regard to household income as well as income either per member or per earner at current prices of 1983-84, 1985-86, 1988-89, 1991-92, 1995-96, 2000 and 2005

Household Consumption Expenditure by Major Expenditure Group

The table-2 presents percentage distribution of average monthly household consumption expenditure by major expenditure group such as food and beverage, clothing and foot-ware, housing and house rent, fuel and lighting and miscellaneous.

It is observe from the table that 53.8% consumption expenditure accounted to food and beverage 5.5 to cloth and footwear, 12.2% to housing and house rent, 6% to fuel and lighting and 22.4% to miscellaneous expenditure in 2005 at the national level.

The percentage share of food and beverage consumption decreased from 74.2% in 1973-74 to 53.8% in 2005. It is observed that overall there is a falling trend of percentage share of food and beverage consumption at the national level over the years mentioned though in the years of 1978-79 and 1988-89 this share of expenditure increased compared to the previous years, which is about 20% more in 2005 compared to 1973-74.

The consumption expenditure on housing and house rent increased sharply from 5.7% in 1973-74 to 12.2% in 2005 which is about 7% more in 2005 compared to 1973-74.

Percentage distribution of monthly consumption expenditure on food and beverage in both urban and rural areas of Bangladesh are showing similar trend as national level.

But the distribution by rural and urban shows some variation of share of consumption by major group. In 2005; 58.5% consumption expenditure accounted to food and beverage in rural area, where as the same was 45.1% in the urban area. Therefore, it can be said that the rural people spend bulk of their consumption expenditure on food and beverage that of urban people. Spending on these items decreased by 22.7% and 15% in urban and rural areas of Bangladesh in 2005 compared to 1973-74. A little fluctuation is observed on spending on food and beverage in between the early and late 70's, but there was sudden dramatic fall in this spending in the early 80's and little fluctuation is observed up to late 80's. Again the middle of 90's (1995-96) there was also a dramatic fall in the spending on these items, but between this period of 1995-96 and 2005, it was more or less stagnated, which was 46.3% in 1995-96 and 45.2% in 2005 in the urban areas of Bangladesh.

Table: 2: Percentage distribution of monthly consumption expenditure on major items per household by survey year.

Survey Year	Average Monthly consumption expenditure (Taka)	Monthly consumption expenditure on major items					
		Total	Food and beverage	Cloth And footwear	Housing And House rent	Fuel & Lighting	Misc. Expenditure
National							
1973-74	501	100.0	74.2	5.3	5.7	8.0	6.8
1976-77	496	100.0	73.7	5.3	5.8	10.1	5.1
1977-78	594	100.0	72.4	6.4	7.9	7.4	5.9
1978-79	793	100.0	75.7	5.9	5.2	7.6	5.6
1981-82	1105	100.0	66.1	7.8	9.5	6.9	9.7
1983-84	1686	100.0	65.1	7.7	7.8	7.6	11.8
1985-86	2316	100.0	63.3	5.9	8.8	8.4	13.6
1988-89	2555	100.0	65.4	5.5	9.6	5.8	13.6
1991-92	2904	100.0	66.6	4.7	10.4	5.7	12.7
1995-96	4026	100.0	57.7	6.5	11.1	5.6	19.1
2000	4537	100.0	54.6	6.3	9.0	6.8	21.8
2005	5964	100.0	53.8	5.5	12.2	6.0	22.4
Urban							
1973-74	643	100.0	67.9	5.6	9.8	7.3	9.4
1976-77	621	100.0	63.3	6.8	12.0	8.2	9.7
1977-78	748	100.0	62.3	6.7	15.3	7.2	8.5
1978-79	1032	100.0	66.3	6.7	11.8	6.7	8.5
1981-82	1816	100.0	56.1	6.9	16.2	6.0	14.8
1985-86	3459	100.0	55.1	5.9	15.6	5.8	17.6
1988-89	3816	100.0	56.1	5.2	16.3	5.4	17.0
1991-92	4280	100.0	56.1	4.3	16.4	6.2	17.0
1995-96	7084	100.0	46.3	6.6	17.3	4.7	25.2
2000	7125	100.0	44.5	5.7	16.0	6.0	24.8
2005	8316	100.0	45.1	5.4	16.7	5.7	24.2
Rural							
1973-74	491	100.0	74.7	5.3	5.3	8.1	6.6

Survey Year	Average Monthly consumption expenditure (Taka)	Monthly consumption expenditure on major items					
		Total	Food and beverage	Cloth And footwear	Housing And House rent	Fuel & Lighting	Misc. Expenditure
1976-77	484	100.0	74.9	5.1	5.1	10.4	4.5
1977-78	575	100.0	74.0	6.4	6.7	7.4	5.5
1978-79	766	100.0	77.1	5.8	4.2	7.7	5.2
1981-82	991	100.0	69.1	8.1	7.5	7.1	8.2
1985-86	2157	100.0	65.1	5.9	7.3	9.0	12.7
1988-89	2374	100.0	67.6	5.6	8.0	5.8	12.7
1991-92	2690	100.0	69.2	4.8	8.9	5.4	11.6
1995-96	3426	100.0	62.4	6.4	8.4	5.9	14.3
2000	3879	100.0	59.2	6.5	5.7	7.1	18.2
2005	5165	100.0	58.5	5.5	9.7	6.1	18.2
Urban - Rural discrepancy ratio							
1973-74	0.97	1	0.91	1.06	1.85	0.90	1.42
1976-77	1.28	1	0.85	1.33	0.20	0.79	2.16
1977-78	1.30	1	0.84	1.05	2.28	0.79	1.55
1978-79	1.35	1	0.86	1.16	2.81	0.87	1.63
1981-82	1.83	1	0.81	0.85	2.16	0.85	0.22
1985-86	1.60	1	0.85	1	2.14	0.64	1.39
1988-89	1.60	1	0.83	0.93	2.04	0.93	1.34
1991-92	1.59	1	0.81	0.90	1.84	1.15	1.47
1995-96	2.07	1	0.74	1.03	2.06	0.80	1.76
2000	1.84	1	0.75	0.88	2.81	0.85	1.36
2005	1.61	1	0.77	0.98	1.72	0.59	1.33

Source: HES data of 1983-84, 1988-89, 1991-92 and HIES data of 2000 and 2005

A dramatic decline in spending on food and beverage was seen in early 80's in the rural areas of Bangladesh which is 69.1% in 1981-82, but it was 77.1% in 1978-79. Then after this period there was a slight decline in the percentage share of food and beverage expending in rural areas of Bangladesh which was 58.5% in 2005.

Share of spending on housing and house rent increased both in rural and urban areas of Bangladesh. It was 9.8% and 5.3% in 1973-74, where as 16.7% and 9.7% in 2005 in the urban and rural areas of Bangladesh respectively. Though a little fluctuation is observed on the share of expending on housing and house rent, but a rising trend is seen in urban areas, while a major fluctuation is observed in case of rural area though alternately it increased up to 9.7% in 2005 which was nearly a double compared to 1973-74.

Share of expending on cloth, foot-ware and fuel and lighting have decreased by about 2% in 2005 in both cases compared to 1973-74.

Growth and Inequality at the Rural and Urban Level

Urban and rural data both show (Table 3) the similar characteristics. In terms of PCI and PCE, the 1985/86 was the peak year. After 1985/86 the per capita income and expenditure both decreased for both the rural and urban areas. In the year of 1995/96 the gap between the rural and urban areas had increased a great deal since the PCI and PCE both reached a peak for urban areas but PCI for rural areas had decreased though there has been a little increase in the PCE for rural area: Above all, the income and expenditure gap between the rural and urban areas has increased to a large extent, which ultimately increased the inequality of income distribution between the urban and rural areas.

Table: 3 Per capita Income / Expenditure, Gini index and poverty in different year at real price of 1972-73 Base: (1973-74=100)

Year	H.H. Size	Av. H.H Income	Av. H.H. Expend	PCI	PCE	Gini Index	Head Count	
							Absolute Poverty (2112)	Hardcore Poverty (1805)
Urban								
73-74	6.5	5323	5476	819	843	N.A.	N.A.	N.A.
76-77	5.7	6542	4305	1148	755	N.A.	N.A.	N.A.
81-82	5.8	6519	6039	1124	1041	N.A.	N.A.	N.A.
83-84	5.8	6646	6187	1146	1067	0.370	67.7	37.4
85-86	6.1	8012	7531	1313	1235	0.370	62.6	30.7
88-89	5.6	6961	6429	1243	1148	0.381	47.6	26.4
91-92	5.34	6649	6023	1245	1128	0.398	46.7	26.3
95-96	5.30	9138	8337	1724	1573	0.444	49.7	27.3
Rural								
73-74	5.8	3921	4149	676	715	N.A.	N.A.	N.A.
76-77	5.5	4427	3321	805	604	N.A.	N.A.	N.A.
81-82	5.7	3537	3246	621	569	N.A.	N.A.	N.A.
83-84	5.7	4928	4337	865	761	0.350	61.9	36.7
85-86	5.8	5134	4636	885	799	0.360	54.7	26.3
88-89	5.5	4401	3946	800	717	0.368	47.8	28.6
91-92	5.34	4278	3744	801	701	0.364	47.6	28.3

95-96	5.25	4193	3980	799	758	0.384	47.1	24.6
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Source: BBS, 1995-96, HES, author's calculation.

Poverty Trends at the Rural and Urban Level

The relationship between growth and poverty and the importance of the underlying income distribution to the dynamics of this relationship is important when identifying suitable and effective poverty alleviation strategies. Poverty is affected by both a change in average income, and also by shifts in the overall distribution of income. (Ward 1996).

The data suggests (Table 3) that the absolute poverty and hardcore poverty have decreased from 1983/84 to the year of 1991/92 and again in the year of 1995/96 it increased in rural areas. On the other hand, the hardcore and absolute poverty have decreased in the urban areas between the years of 1981/82 to 1995/96.

In rural areas the absolute poverty has decreased from the year of 1983/84 to 1995/96 but the hardcore poverty shows a different nature which decreased between 1983/84 to 1985/86 and again increase in 1988/89 after then it started to decline (Table 3).

Therefore, in the rural areas both the absolute and hardcore poverty decreased over the years shown in table 3. It might be due to different economic activities of NGOs and also the role of the micro-credit of the Grameen Bank. Poverty in Bangladesh has declined significantly since the early 1990s, but it is still pervasive, with about half of the population living below the 'food based' poverty line and about one-quarter substituting in extreme poverty in the year 2000. The national poverty incidence declined from 58.8 to 49.8 per cent between 1992 and 2000, reflecting at 8 per cent points of both urban and rural poverty. (Diop, 2005).

Finally, we can conclude that though there was a fluctuation in the per capita income and expenditure between the years of 1973/74 to 1995/96, the PCI and PCE both increased ultimately for urban areas, though the PCI for rural areas decreased. (Shown in table 3).

A study carried out by a group of researchers of BIDS (Sen, 2006) shows that wage rate as an indicator of extreme poverty had been increasing between the years of 1983 to 2003. In 1983/84 the daily agricultural wage rate was equivalent of only 2.6 kg of coarse rice, in 1991 the matched figure is 3.6 kg; in 2000 it has gone up to 4.8 kg rising further to 5.2 kg in 2003. And this improvement in real agricultural wage rate has been taken place in most districts between 1995 and 2003. Thus there is a pronounced rising trend in real agricultural wages rate for male labourers (deflated to 1983/84 values) has increased from about taka 20/day in 1983/84 to Tk24/day in 1991, but stagnated in the first half of the 1990s. A major breakthrough came in recent years, especially after the economy recovered from the adverse effects of 1998 flood. Indeed, real agricultural wages rose from Tk23/day in 1996 to Tk28/day by 2003. Therefore, this rise in the rate of real agriculture wage rate shows the fall in the rural poverty in Bangladesh after 2001. The other Human development indicators like infant mortality rate, life expectancy,

literacy rate distressed in human rate which are distressed in human also show the improvement in this respect which played very vital roles to reduce both the rural and urban poverty in Bangladesh in recent years.

Another study carried out by a group of World Bank researchers show that there was a substantial deterioration in the poverty situation in the 1970s followed by rapid progress during 1978-86. There was again a worsening of poverty in 1986-92 periods. More recently three has been an improvement in the poverty reduction effort. (Ahmed 2005).

Though there has been discontinuation in the conduction and publications of HIES data by BBS after the period of 1995-96, but the published HIES reports of 2000 and 2005 showed the growth in the per capita income and expenditure in both rural and urban areas of Bangladesh. According to the HIES report of 2005, the per capita monthly income increased by Tk.357 (31.65%) in 2005 over the year 2000 and increased by Tk.860 (137.6%) over the year 1991-92. The most remarkable feature in 2000 findings was that, rural income increased significantly than that in urban areas. In 2005, rural income increased by 26.56% where urban income increased by 5.92% only over the same in the year of 2000. This accelerated increase of rural income helped to reduce rural poverty incidence and thus helped to reduce the overall poverty situation of the country at an accelerated rate. The incomes Gini-co-efficient for 2000 are 0.451, 0.393 & 0.497 and for 2005 are 0.467, 0.428 & 0.497 at national, rural and urban levels respectively.

Table: 4 Trend in rural agricultural wages based on Poverty line Deflator and Rural CPI, 1983/84 to 2003

Year	Nominal wages (Taka/day)	Real Wage** (taka/day)	Deflator (1983/84= 100)
1983/84	19.58	19.58	100.00
1988/89	32.71	23.21	140.96
1991	41.77	23.94	174.45
1995/96	45.58	22.62	20.146
2000	63.60	26.95	235.94
2001	65.13	27.19	239.53
2003	72.23	28.02	257.78

Note: Daily agricultural cash wages for male labour (without food).

** The series of 1983/84 through 2000 is based on poverty line deflator; the series of 2000 through 2003 is based on rural CPI.

Source: Calculated from unpublished data of the Agriculture Statistics wing of BBS.

The incomes Gini-co-efficient increased to 0.467 in 2005 from 0.451 in 2000 and 0.451 in 2000 from 0.432 in 1995-96. Thus increase of Gini-co-efficient bears the evidence that, slight concentration of income to the rich households took place during the period of 2000 to 2005 and 1996 to 2000. (BBS, 2007).

GDP at Constant Market Price and Current Market Price

The table-5 shows the GDP at constant market price (Base Year 1984-85) and a current market price and per capita GDP at constant and current market price over the years of 1973-74 to 2004-05. The national income statistics data has been used to show the trends of the GDP over these 35 years immediate after the liberation period of Bangladesh to till now (2005). Between this period there has been a growth in the GDP at all prices both in constant market price and in current market price. The per capita GDP have also been raised over the years mentioned above only a few exceptions like to 2000 and 2001 at current market price in the per capita term. This year shows a declining pattern compared to 1999-00 but again it increased in the year of 2001-02

in the recent period of time. This fluctuation can also be observed in the year of 1975-76 at constant market price by per capita term. There has been also a growth in the per capita GDP at constant market prices over the years mentioned only a few exception to 1974-75, 1979-80 and 2001-02. Though a little fluctuations are observed in the above mentioned years, but overall, a rising trend is seen in the per capita GDP over a long period of time between the years of 1973 to 2005 both in constant and current market prices.

**Table: 5 GDP at Constant Market Price (Base Year 1984-85) and a Current Market Price
And per capita GDP at constant and current market price**

Years	GDP at Constant Market Price (in core TK)	GDP at Current Years Market Price (in core TK)	Size of population (in Core)	Per Capita GDP at Constant Market Price (TK)	Per Capita GDP at Current Market Price (TK)
1973-74	28993	7575	7.6	3815	997
1974-75	27808	12437	7.8	3565	1594
1975-76	29382	11037	7.9	3719	1397
1976-77	30167	11600	8.1	3724	1432
1977-78	32301	14519	8.3	3892	1749
1978-79	33852	17405	8.5	3983	2048
1979-80	34130	19605	8.7	3923	2253
1980-81	35288	23142	8.9	3965	2600
1981-82	35772	26514	9.1	3931	2914
1982-83	37470	28842	9.2	4073	3135
1983-84	39503	34992	9.4	4202	3723
1984-85	40693	41696	9.6	4239	4343
1985-86	42459	46618	9.8	4333	4757

1986-87	44234	53769	10.1	4380	5324
1987-88	45513	58922	10.3	4419	5721
1988-89	46661	65960	10.5	4444	6282
1989-90	49753	73557	10.8	4607	6811
1990-91	51444	83439	11.0	4677	7585
1991-92	53619	90650	11.3	4745	8022
1992-93	56023	94807	11.5	4872	8244
1993-94	58384	103036	11.7	4990	8806
1994-95	60979	117026	11.9	5124	9834
1995-96	64244	130160	12.1	5309	10757
1996-97	68021	140305	12.3	5530	11406
1997-98	71867	154833	12.5	5749	12387
1998-99	75612	173762	12.6	6001	13790
1999-00	80663	237086	12.8	6302	18522
2000-01	85997	253546	13.0	6612	17965
2001-02	82651	273200	13.2	6261	20696
2002-03	86057	300580	13.3	6470	22600
2003-04	89604	435370	13.5	6637	32249
2004-05	93297	495699	13.7	6810	36182
Average annual Growth (%) between 1973/74-2005	6.3	184.2	2.3	2.8	101

Sources: BBS, Bangladesh Economic Review, 2005 and author's calculation.

Note: Annual Growth Rate = (Current Year Price – Base year Price) / Base Year Price * 100 / No. of Years.

Between these 35 years, the average annual growth rates in GDP at constant market price and GDP at current market price are 2.8 percent and 101 percent respectively. Therefore, it can be concluded the Bangladesh has obviously achieved some growth after the liberation period between the years of 1973 to 2005.

Food Intake (Grams) in different Survey Years (Table 6)

Average per capita daily intake of food in items of quantity has been shown in table 6. At national level average per day intake of food is 947.8 grams, which is 54.7 grams more than the corresponding figure in 2000 and 34 grams more than that of 1995-96 and 145.6 grams more than that of 1983-84.

At the rural and urban level of Bangladesh consumption of food increased on an average between 1973-74 and 2005. In 2005 per day food intake is 946.3 and 952.1 grams which were 47.6 and 81.4 grams more than that of 2000 in urban and rural areas respectively. Food consumption in 2000 decreased compared 1995-96 which were 11.8 grams and 60.1 grams less than that of 1995-96 but a rising trend is observed between 1973-74 and 1995-96 in both rural and urban areas of Bangladesh. In 1973-74 it were 678.5 grams and 737.2 grams in rural and urban areas of Bangladesh while in 1995 it were 910.5 and 930.8 in rural and urban Bangladesh which was 232 grams and

193.6 grams more than that of 1973-74 and 267.8 and 214.9 grams more compared to 1973-74 in rural and urban areas respectively.

Table 6: Food Intake (Grams) in Different Survey Years

Survey Years	Residence			Urban Rural Discrepancy Ratio
	National	Rural	Urban	
1	2	3	4	5
2005	947.8	946.3	952.1	0.99
2000	893.1	898.7	870.7	1.03
1995-96	913.8	910.5	930.8	0.98
1991-92	886.2	878.1	938.4	0.94
1988-89	868.8	863.1	910.4	0.95
1985-86	873.9	871.3	892.0	0.98
1983-84	102.2	799.8	827.6	0.96
1981-82	NA	740.0	824.4	0.90
1976-77	NA	623.6	704.9	0.88
1973-74	NA	678.5	737.2	0.92
Change (in grams) between 1973-74 to 2005	-	+267.8	+214.9	0.07
Change (in %) between 1973-74 to 2005	-	+39.47	29.15	7.61

Source: HES data of 1983-84, 1988-89, 1991-92 and HIES data of 2000 and 2005 and author's calculation

Per capita food intake in quantity shows more discrepancy ratio in 2005 compared to 1973-74 between urban and rural areas of Bangladesh. It was 0.92 in 1973-74 while it was 0.99 in 2005 which is by 0.7 more in 2005 compared 1973-74. This discrepancy ratio was in the highest level in the year of 2000 which was more than 1 (1.03) and 0.11 higher than that of 1973-74.

Average Per Capita per day Intake of Major food items (in grams) by rural and urban areas

Average per capita daily intake of food items in terms of quantity has been shown in table 7, per capita per day consumption of rice at national level was 439.64 grams in 2005 which was 18.9 grams less compared to 2000 and 28.04 grams more compared to 1983-84. The rice consumption in urban area increased averagely between 1983-84 and 1995-96 but it decreased in 2000 by 5.76 grams than the corresponding figure in 1995-96 and again it decreased in 2005 by 18.9 grams than the corresponding figure of 2000, consumption of rice in rural areas also showing the similar trend between 1983-84 and 1995-96 but after then in 2000 and 2005 there was a fall in this figure. Rice consumption in 2000 is less by 43.06 grams than the corresponding figure of 1995-96 and by 19.1 grams less compared to 2000. Rice consumption in national level fell by 28.0 grams and which was 6.8% less compared to 1983-84.

Consumption of wheat, as one of the major items of cereal group, decreased by 0.8% in 2005 compared to 1983-84. National level consumption of other food components like potato, vegetables, edible oil, onion, beef, chicken/duck, eggs, fish, milk, fruits and sugar increased in 2005 over 1983-84. Consumption of other items like pulse, mutton and miscellaneous items decreased between these periods mentioned at the national level (tab7).

In rural Bangladesh consumption of rice was increased by 94% in 2005 over 1983-84 whereas consumption of wheat decreased by 87.3% over this period. Consumption of other food products like potato, pulses, vegetables, edible oil, onion, butter, chicken/duck, eggs, fish, milk, fruits, sugar and miscellaneous items increased while the consumption of mutton and wheat decreased over the time period mentioned earlier (Tab. 7).

In urban level, the consumption of rice was increased by 28.1% while consumption of wheat decreased by 49.4%. The consumption of other food like potato, pulses, vegetables, edible oil, beef, chicken/duck, eggs, milk, fruits, sugar/gur decreased while the consumption of wheat, mutton, pulses, miscellaneous items decreased over the time period mentioned earlier (Tab. 12). Some rural-urban discrepancy is observed (Tab.12) in the consumption pattern of major food items, between 1983-84 and 2005 time period, the rice consumption in urban area increased by 8% while it was 94% in rural areas. It was 86% higher in rural areas than in urban areas of Bangladesh. Consumption of wheat decreased both in urban and rural areas but it decreased by 49.5% in urban area while it was by 87.3 in rural areas which is 37.8 higher than that of urban areas of Bangladesh.

Though the consumption of mutton and wheat was decreased in both rural and urban areas but the consumption of pulses showed the different characteristic. The pulses consumption increased by 28.3% in rural level while its consumption decreased by 13.9% in urban areas of Bangladesh. As a major food component, the consumption of chicken/duck, fish, milk and fruits increased in urban areas at a faster rate than that in rural areas while the consumption of rice, potato, vegetables, beef, eggs, fish, fruits and sugar/gur increased at a faster rate in rural areas than in urban areas of Bangladesh.

Table 7: Average Per Capita per Day Intake of Major Food Items (in Grams) by Rural and Urban household

Food Item	National								
	1983-84	1985-86	1988-89	1991-92	1995-96	2000	2005	Change (in grams) between 1983-84 to 2005	Change (in %) between 1983-84 to 2005
Total	802.2	873.9	868.8	886.2	913.8	893.1	947.7	+145.6	+181.5
Rice	411.6	443.9	441.7	472.8	464.3	458.5	439.6	-28.0	-6.8
Wheat	64.1	51.7	58.1	36.3	33.7	17.24	12.08	-51.3	-0.4
Potato	37.2	48.1	39.5	43.7	49.5	55.5	63.3	+26.1	+40.7

Pulses	25.4	18.6	21.8	17.9	152.6	15.8	14.2	-11.2	-102.7
Vegetables	107.0	142.3	133.5	137.4	14.0	140.5	157.0	+50.2	+46.9
Edible Oil	7.1	7.3	9.2	10.1	9.9	12.8	16.5	+9.4	+132.4
Onion	11.2	8.8	10.2	11.9	11.6	15.4	18.4	+7.9	+64.3
Beef	4.2	4.8	3.4	5.2	6.6	8.3	7.8	+3.6	+85.7
Mutton	1.6	1.1	0.8	0.9	1.0	0.5	0.6	-1.0	-63.1
Chicken, duck, others	1.8	2.2	1.9	2.0	4.3	4.5	6.6	+5.1	+277.8
Eggs	3.3	3.5	5.9	4.7	3.2	5.3	5.2	+1.9	+57.6
Fish	27.6	36.1	34.8	34.6	43.8	38.5	42.2	+14.5	+52.5
Milk	24.0	25.3	22.0	19.1	32.3	29.7	32.4	+8.4	+35.0
Fruits	17.2	23.8	13.3	16.9	27.6	28.4	32.5	+15.3	+89.0
Sugar/Gur	4.9	8.1	9.1	8.8	9.1	6.9	8.1	+3.2	65.3
Food taken outside	NA	NA	NA	NA	NA	-	24.8	NA	NA
Miscellaneous	54.0	48.3	63.6	64.0	50.1	55.4	48.4	-5.7	-10.6
Food Item	Rural								
	1983-84	1985-86	19888-89	1991-92	1995-96	2000	2005	Change (in grams) between 1983-84 to 2005	Change (in %) between 1983-84 to 2005
Total	799.8	871.3	863.1	878.9	910.5	898.7	946.3	+146.5	+18.3
Rice	420.2	453.7	448.7	481.6	521.9	478.8	459.7	+395.	+94.0
Wheat	62.8	51.3	58.8	34.6	479.0	14.0	8.0	-54.8	-87.3
Potato	35.2	45.7	37.3	41.4	46.7	54.7	61.9	+26.7	+75.9
Pulses	9.9	18.3	21.1	17.3	12.9	15.0	12.7	+2.8	+28.3
Vegetables	104.7	141.0	131.3	135.3	154.4	141.1	156.5	+51.8	+49.5
Edible Oil	6.8	6.7	8.4	9.0	8.4	11.2	14.3	+7.6	+110.3
Onion	10.9	8.3	9.5	11.2	9.9	14.1	16.1	+5.2	+47.7
Beef	3.8	4.0	2.8	4.5	4.9	6.9	6.4	+2.6	+68.4
Mutton	1.4	1.0	0.7	0.8	0.8	0.4	0.6	-0.8	-57.1
Chicken, duck, Others	3.8	2.0	1.7	1.9	7.5	3.5	6.1	+2.3	+60.5
Eggs	1.6	3.3	6.1	4.6	2.6	4.6	4.4	+2.8	+175.0
Fish	2.8	34.7	32.5	30.5	42.2	37.8	39.7	+36.9	+1317.9
Milk	22.6	24.3	20.8	18.5	30.3	29.0	31.0	+8.4	+37.2
Fruits	16.8	22.0	12.4	15.9	25.3	26.5	32.4	+15.6	+92.9
Sugar/Gur	1.8	7.7	8.9	8.5	9.1	6.4	7.6	+5.7	+316.7
Food taken Outside	4.8	NA	NA	Na	NA	-	23.7	NA	NA
Miscellaneous	51.0	47.3	62.1	16.6	47.9	54.58	67.0	+16.0	+31.4

Continued table no. 4 from last page-----

Food Item	Urban								
	1983-84	1985-86	19888-89	1991-92	1995-96	2000	2005	Change (in grams) between 1983-84 to 2005	Change (in %) between 1983-84 to 2005
Total	827.6	892.0	910.4	938.4	930.8	870.7	952.1	+124.5	+124.5
Rice	350.4	376.3	395.1	416.0	390.3	372.7	378.5	+28.1	+28.1
Wheat	74.0	54.3	53.1	47.1	40.1	30.1	24.5	-49.4	-49.5

Potato	53.2	65.0	55.0	58.3	64.4	58.4	67.5	+14.3	+14.3
Pulses	21.6	20.7	25.3	21.7	19.4	19.0	18.6	-3.0	-3.0
Vegetables	125.0	151.0	148.7	150.9	142.9	137.9	158.7	+33.7	+33.7
Edible Oil	9.6	11.7	14.3	16.4	17.0	19.1	22.9	+13.3	+13.3
Onion	13.9	12.0	15.6	17.0	20.2	20.7	25.3	+11.4	+11.4
Beef	7.8	10.3	7.5	9.9	15.0	14.0	12.0	+4.2	+4.2
Mutton	2.8	2.0	1.7	1.3	1.6	0.7	0.7	-2.1	-2.1
Chicken, duck, Others	3.4	3.3	2.8	3.1	7.5	8.4	10.6	+7.2	+7.2
Eggs	7.6	5.0	4.5	5.8	5.9	7.9	7.4	-0.2	-0.2
Fish	20.7	46.0	50.9	47.8	51.7	40.9	49.6	+28.9	+28.9
Milk	34.6	32.3	30.8	23.2	42.1	32.6	36.6	+19.5	+19.5
Fruits	20.8	36.0	19.5	23.4	38.8	35.6	32.9	+12.1	+12.1
Sugar/Gur	5.3	11.0	10.9	10.8	10.1	8.7	9.7	+4.4	+4.4
Food taken outside	NA	NA	NA	NA	NA	-	27.9	NA	NA
Miscellaneous	76.0	55.1	74.7	85.7	63.5	54.9	68.6	-7.4	-7.4

Source: HES, 1985-86, 1988-89, 1991-1992, 1995-96, and HIES of 2000, 20005 published Report and author's calculation

Notes: • Miscellaneous items for 1983-84 to 1988-89 include: fried rice, semai, suji, bread, biscuit, cake, dust-rice, cheena-kaon, barley, cooked cakes, til-oil, vegetable-ghee, garlic, chillies, turmeric, dhonia, jira, ginger, salt, betel-leaf, betel-nut, jarda, juice, ovaltin, horlics, curd, cheese, tomato, lemon, jelly, sauce, Kasundi, etc.

• Miscellaneous items for 1991-92 include: fried rice, semai, suji, bread, biscuit, cake, dust-rice, cheena-kaon, barley, cooked cakes, til-oil, vegetable-ghee, garlic, chillies, turmeric, dhonia, jira, ginger, salt, betel-leaf, betel-nut, jarda, juice, ovaltin, horlics, curd, cheese, tomato, lemon, jelly, sauce, Kasundi, hot, spices, lozence, toffi, chewing gum, drinks, bread, etc.

• Miscellaneous items for 1995-96 include soft drink, bread, biscuits, betel nut, betel leaf, chillies, and other type of cereals, and other type of candy and spices.

• Data of Others of meat, poultry, eggs has been added with chicken, duck for 1995 and 1996.

• Pulses for 1985/86 to 1989 consist of Musur and other pulses. Mastard Oil and soyabin has been shown in the place of edible oil.

Average Per Capita per day Calorie (K-cal) intake by Residence at national, rural and urban level (Table 8)

Per Capita Calorie per day increased in national, rural and urban level in 2005 than the corresponding figures of 1981-82. The National, rural and urban figures have increased by 16.25%, 18.27%, 7.08% respectively over this time period mentioned. But per capita per day calorie increased at a faster rate in rural areas than in urban which was 11.19% higher in rural than that of urban areas of Bangladesh. Moreover, the urban-rural discrepancy ratio is more in 2005 than that of in 1981-82 (Tab.8).

Table 8: Average per Capita per Day Calorie (K. Cal), and Intake of Protein (grams) by Residence

Survey Years	Average per Capita per Day Calorie (K. Cal) Intake by Residence				Average per Capita per Day Intake of Protein (grams) by Residence			
	National	Rural	Urban	Urban Rural	National	Rural	Urban	Urban Rural

				Discrepancy Ratio				Discrepancy Ratio
2005	2238	2253	2193	1.03	62.52	61.74	64.88	0.95
2000	2240	2263	2150	1.05	62.50	61.88	64.96	0.95
1995-96	2244	2251	2209	1.02	64.96	64.45	67.50	0.95
1991-92	2266	2267	2258	1.00	62.72	62.29	65.49	0.95
1988-89	2215	2217	2183	1.02	63.66	62.29	68.27	0.91
1985-86	2191	2203	2107	1.05	63.50	63.30	65.42	0.97
1983-84	2102	2113	2020	1.05	60.93	60.68	62.86	0.97
1981-82	1925	1905	2048	0.93	56.21	54.82	64.80	0.85
Change (k. cal/in grams) between 1981-82 to 2005	+313	+348	+145	+0.1	+6.31	+6.92	+0.08	+0.10
Change (in %) between 1981-82 to 2005	+16.26	+18.26	+7.08	+10.75	+11.22	12.62	+0.12	+11.76

Source: HES data of 1983-84, 1988-89, 1991-92 and HIES data of 2000 and 2005 and author's calculation

Average Per Capita per day intake of Protein (grams) by Residence (Table 8)

Data on intake of protein in per capita term in quantity and the urban-rural discrepancy ratio have been shown in table 9. Per Capita per day intake of protein increased from 1981-82 to 1995-96 on an average while its consumption decreased in 2000 than the corresponding figure of 1995-96 by 2.46 grams and 3.79 is less by percentage at the national level. Between 2000 and 2005 this figure was almost stagnated.

At the rural level though the similar trend is observed on an average but some fluctuations observed in between 1981-82 and 1995-96. Urban areas are showing similar characteristics as rural areas but the urban rural discrepancy ratio is more in 2005 while it was 0.85 in 1981-82.

In rural level per capita per day intake of protein (grams) increased by 6.92 grams which was 12.62% more in 2005 compared to 1981-82. In urban level this figure increased by only 0.08 gram which is 0.12% more compared to 1981-82. Therefore, per capita per day protein intake increased faster in rural Bangladesh while this figure almost stagnated is case of urban areas of Bangladesh between 1981-82 to 2005 (Tab. 8).

Percentage Distribution of Income Accruing to Households in Groups (Deciles) and Gini Co-Efficient

The sample households have been ranked on the basis of the per capita income and the income shares of successive decile groups have been estimated in order to see the

pattern of distribution of income in rural and urban areas. The findings are reported in table 9. It is evident from the table that the gap between the poorest of the poor (bottom percent) and the richest of the rich (top percent) is extremely high. In 2005, the income accruing to top 5 percent of the household was 26.93%, whereas, the same was 0.77% for the bottom 5% household. In 2000 income accruing to top 5% of the household was 28.34%, whereas the same was 0.93% of the bottom 5%. It decreased from 0.93% in 2000 to 0.77% in 2005. And it decreased from 1.2 in 1973 to 0.77 in 2005 in the urban areas of Bangladesh. On the contrary, the share of income of top 5% increased from 6.4 (in 1973) to 26.93 in 2005 though it decreased from 28.34 in 2000 to 26.93 in 2005.

In 1995-96, 1991-92, 1988-89, 1985-86, 1983-84, 1981-82 and 1973-74 the income accruing to top 5 percent of the households were 23.62, 18.85, 20.51, 21.35, 187.30, & 16.4 respectively, whereas, the same were 0.88, 1.03, 1.06, 1.18, 1.17, 1.12 & 1.2 for the bottom 5% household at the national level.

At national level, it is evident from the table 14, that the share of income accruing to household belonging to decile-1 to decile -5, jointly decreased in 2005 in which it is recorded at 20.32 from 25.4 in 1973-74 although, they comprise 50% of the total population. The jointly share of income of these five decile was highest in the year of 1983-84 which was 26.33 percent. In both rural and urban areas, similar changing pattern of decile distribution of income can be observed over the years 1973-74 to 2005 at the national level. On the whole, the distribution of income is more unequal in urban areas compared to rural areas. In rural area, the richest-poorest ratio was found to be 34.47 in 2005 while this ratio was 35.7 in 2000. In urban area, this ratio was 48.33 in 2005 while 39.6 in 2000. So the magnitude of ratio was higher in urban area than that of rural area indicating that, the richest-poorest gap was more severe in urban area.

The Gini Co-efficient of income increased to 0.467 in 2005 from 0.451 in 2000 and which was 0.362 in 1973-74. This increased in Gini-Coefficient bears the evidence that, slight concentration of income to the rich households took place during the period 1973-74 to 2005.

Consumption Expenditure by Decile Groups

The percentage share of income by decile groups and Gini co-efficient with rural and urban break down for the surveys conducted during 2000 and 2005 are presented in table 10. Table 15 Provides information on percentage distribution of consumption expenditure by food and non-food items and by decile groups, the distribution shows that, it strictly follows the Engle's law, i.e. the low income households spend more of consumption on food items. On the other hand, the rich households spend less of consumption on food and more on non-food items. In 2005, the national average of share of food expenditure was 53.8%, whereas, the bottom 5% households spent 67.9%, Decile-1 67.8%, Decile-2 67.7%, Decile-3 66.6%, Decile-4 66.0%, Decile-5 64.4%, Decile-6 63.5%, Decile-7 61.3%, Decile-8 57.7%, Decile-9 52.9%, Decile-10 37.9% and top 5% 33.2%. This data shows a trend of diminishing share of expenditure on food. From other angle of view, the Decile-1 spends 67.8% of total expenditure on food and 32.2% on non-food whereas; the Decile-10 spends 37.9% on food and 62.1% on non-food items. The pattern is just reverse for these two Deciles. This distribution for rural and urban for 2000 also show similar pattern.

Table: 9: Percentage Distribution of Income Accruing to Households in Groups

Household Income Group and Gini Coefficient	2005	2000	1995-96	1991-92	1988-89	1985-86	1983-84	1981-82	1973-74
Total- National	100	100	100	100	100	100	100	100	100
Lowest 5%	0.77	0.93	0.88	1.03	1.06	1.18	1.17	1.12	1.2
Decile 1	2.00	2.41	2.24	2.58	2.64	2.81	2.89	2.76	2.8
Decile 2	3.26	3.76	3.47	3.49	4.00	4.18	4.31	3.08	4.2
Decile 3	4.10	4.57	3.46	4.95	4.96	5.13	5.39	4.83	5.4
Decile 4	5.00	5.22	5.37	5.94	5.93	6.05	6.36	5.89	5.9
Decile 5	5.96	6.10	6.35	7.08	6.95	6.98	7.38	6.93	7.1
Decile: 1-5	20.32	22.6	20.89	24.04	24.48	25.15	26.33	23.49	25.4
Decile 6	7.17	7.09	7.53	8.45	8.10	8.09	8.56	8.27	8.0
Decile 7	8.73	8.45	9.15	10.09	9.61	9.48	9.99	9.95	10.0
Decile 8	11.06	10.39	11.35	12.10	11.62	11.25	11.74	12.17	12.8
Decile 9	15.07	14.00	15.40	15.64	15.20	14.58	15.08	15.79	16.0
Decile 10	37.64	38.01	34.68	29.23	31.00	31.46	28.30	29.53	28.4
Top 5%	26.93	28.34	23.62	18.85	20.51	21.35	18.30	18.95	16.4
Gini Coefficient	0.467	0.451	0.432	0.388	0.379	0.370	0.360	0.3892	0.362
Total- Rural	100	100	100	100	100	100	100	100	100
Lowest 5%	0.88	1.07	1.00	1.07	1.10	1.23	1.19	1.16	0.8
Decile 1	2.25	2.80	2.56	2.67	2.74	2.92	2.95	2.84	2.4
Decile 2	3.63	4.31	3.93	4.07	4.13	4.30	4.37	4.27	4.8
Decile 3	4.54	5.25	4.79	5.10	5.10	5.30	5.46	5.34	5.6
Decile 4	5.42	5.95	5.97	6.05	6.05	6.20	6.46	6.37	6.3
Decile 5	6.43	6.84	6.98	7.21	7.21	7.16	7.53	7.47	7.1
Decile: 1-5	22.27	25.15	24.23	25.10	25.23	25.88	26.77	26.29	26.20
Decile 6	7.63	7.88	8.16	8.57	8.25	8.20	8.67	8.71	8.0
Decile 7	9.27	9.09	9.75	10.28	9.69	9.55	10.11	10.26	9.8
Decile 8	11.49	10.97	11.87	12.30	11.74	11.30	11.75	12.33	13.5
Decile 9	15.43	14.09	15.58	15.71	15.10	14.07	14.81	15.73	16.1
Decile 10	33.92	32.81	30.23	28.04	30.08	31.00	27.89	26.69	26.4
Top 5%	23.03	23.52	19.73	17.80	19.81	21.36	18.14	16.78	16.0
Gini Coefficient	0.428	0.393	0.384	0.364	0.368	0.360	0.350	0.362	0.358
Total- Urban	100	100	100	100	100	100	100	100	100
Lowest 5%	0.67	0.79	0.74	1.09	1.12	1.20	1.18	1.09	1.6
Decile 1	1.80	2.02	1.92	2.64	2.76	2.84	2.82	2.69	3.2
Decile 2	3.02	3.07	3.20	4.06	4.05	4.08	4.10	3.52	3.6
Decile 3	3.87	3.84	4.06	5.01	4.91	5.09	5.02	4.39	5.2
Decile 4	4.61	4.68	4.98	5.88	5.80	5.99	5.93	5.47	5.8
Decile 5	5.66	5.60	6.97	6.80	6.84	7.04	7.00	6.44	7.2
Decile: 1-5	18.96	19.21	21.13	24.39	24.36	25.04	24.87	22.51	26.6
Decile 6	6.78	6.74	7.20	8.11	7.91	8.29	8.34	7.89	8.8
Decile 7	8.53	8.24	8.98	9.66	9.42	10.30	10.09	9.67	10.0
Decile 8	10.18	10.46	11.35	11.77	11.57	12.24	12.48	12.02	12.0
Decile 9	14.48	14.04	16.29	15.64	15.56	15.73	19.39	15.84	16.0
Decile 10	41.08	41.32	36.05	30.43	31.19	28.41	27.83	32.06	29.2

Household Income Group and Gini Coefficient	2005	2000	1995-96	1991-92	1988-89	1985-86	1983-84	1981-82	1973-74
Top 5%	30.37	31.32	24.30	19.42	20.02	18.04	19.93	20.89	18.6
Gini Coefficient	0.497	0.497	0.444	0.398	0.381	0.370	0.370	0.4093	0.384

Source : HIES Report 2005, 2000, 1995-96, 1991-92, 1988-89, 1983-84 and Author's calculation.

Note : Decile 1-5 has been calculated by adding the number from Decile 1 to 5 in all the years separately at the National, Rural and Urban levels of Bangladesh.

Table 10: Percentage distribution of consumption expenditure for food and non-food items by decile group of households

Decile of Household	National		Rural		Urban		Urban-rural Discrepancy Ratio	
	Food	Non-food	Food	Non-food	Food	Non-food	Food	Non-food
01	02	03	04	05	06	07	08	09
2005								
Total	53.8	46.2	58.6	41.5	45.2	54.8	0.77	1.32
Bottom 5%	67.9	32.1	68.3	31.8	45.2	33.3	0.66	1.04
Decile 1	67.8	32.2	68.0	32.1	66.7	33.9	0.98	1.05
Decile 2	67.7	32.3	67.9	32.1	66.1	36.9	0.92	1.14
Decile 3	66.6	33.5	67.5	32.5	63.2	37.5	0.94	1.15
Decile 4	66.0	34.0	67.2	32.8	62.5	39.3	0.02	1.19
Decile 5	64.4	35.6	65.8	34.3	60.7	42.0	0.92	1.22
Decile 6	63.5	36.5	64.8	35.2	58.0	43.6	0.90	1.23
Decile 7	61.3	38.7	63.7	36.3	56.4	49.0	0.89	1.34
Decile 8	57.7	42.3	61.7	38.3	51.0	52.9	0.83	1.38
Decile 9	52.9	47.1	57.6	42.5	47.1	59.3	0.82	1.39
Decile 10	37.9	62.1	45.7	54.3	40.7	69.3	0.89	1.27
Top 5%	33.2	66.8	41.6	58.4	27.8	72.2	0.69	1.23
2000								
Total	54.6	45.4	59.3	40.7	44.6	55.4	0.75	1.36
Bottom 5%	69.2	30.8	69.7	30.3	65.3	34.7	0.94	1.14
Decile 1	69.1	30.9	69.5	30.4	65.5	34.5	0.95	1.13
Decile 2	68.6	31.3	69.1	30.9	63.0	37.0	0.91	1.19
Decile 3	67.8	32.1	68.9	31.2	61.1	38.9	0.89	1.24
Decile 4	65.6	34.4	66.5	33.5	58.6	41.4	0.88	1.23

Decile 5	64.3	35.7	65.3	34.5	57.7	42.3	0.88	1.22
Decile 6	62.9	37.3	64.4	35.6	53.3	46.7	0.83	1.31
Decile 7	61.0	38.9	62.4	37.6	51.2	48.7	0.82	1.29
Decile 8	57.8	42.2	60.1	39.9	47.1	52.9	0.78	1.32
Decile 9	53.0	47.1	57.3	42.6	41.1	58.9	0.72	1.38
Decile 10	37.4	62.5	45.9	54.1	27.4	55.4	0.60	1.02
Top 5%	32.7	67.3	41.8	58.1	23.9	76.1	0.57	1.30
1995-96								
Total	57.7	42.3	62.4	37.6	46.3	53.7	0.74	1.42
Bottom 5%	69.9	30.1	70.1	29.9	65.6	34.4	0.94	1.15
Decile 1	70.1	29.9	70.6	29.4	64.8	35.2	0.92	1.19
Decile 2	70.5	29.5	70.6	29.4	64.1	35.9	0.91	1.22
Decile 3	70.2	30.3	71.0	29.0	61.0	39.0	0.86	1.34
Decile 4	69.7	31.4	69.7	30.3	61.0	39.0	0.88	1.28
Decile 5	68.6	33.1	70.1	29.9	57.0	43.0	0.81	1.43
Decile 6	66.9	35.3	69.2	30.8	54.8	45.2	0.79	1.46
Decile 7	64.7	37.8	66.8	33.2	51.0	49.0	0.76	1.47
Decile 8	62.2	43.6	64.6	35.4	47.0	53.0	0.73	1.49
Decile 9	56.4	43.6	61.6	38.4	43.7	56.3	0.71	1.46
Decile 10	42.1	59.9	49.3	50.9	32.8	67.2	0.67	1.32
Top 5%	37.8	62.2	45.3	54.7	30.1	69.9	0.66	1.27
1991-92								
Total	64.7	35.3	67.4	32.6	53.9	46.1	0.80	1.41
Bottom 5%	70.6	29.4	70.4	29.6	71.5	28.5	1.01	0.96
Decile 1	71.9	28.1	71.7	28.3	69.9	30.1	0.59	1.06
Decile 2	73.2	26.8	73.6	26.4	66.8	33.2	0.90	1.25
Decile 3	72.9	27.1	73.4	26.6	64.9	35.1	0.88	1.31
Decile 4	72.5	27.5	72.6	27.4	63.7	36.3	0.87	1.32
Decile 5	70.6	29.4	72.1	27.9	65.2	34.8	0.90	1.24
Decile 6	70.7	29.3	71.7	28.3	62.9	37.1	0.87	1.31
Decile 7	69.1	30.9	70.1	29.9	59.2	40.8	0.84	1.36
Decile 8	68.1	31.9	70.1	29.9	58.1	41.9	0.82	1.40
Decile 9	64.9	35.1	67.1	32.9	51.6	48.4	0.76	1.47
Decile 10	52.2	47.8	57.8	42.2	38.3	61.7	0.66	1.46
Top 5%	47.5	52.2	53.9	46.1	33.8	66.2	0.62	1.43

Source : HIES Report: 2005, 1995-96

Between the years 1991-92 to 1995-96, it is observed that in the lowest decile 70 percent of the consumption expenditure spent on food and the rest on non-food whereas, only 41.2 percent of the consumption expenditure spent on food in the highest decile of household in 1995-96. It is also observed that between the two HES, (1995-96 and 1991-92) shift of food expenditure to non-food are more rapid in the highest decile than in lowest deciles. In rural area food share of lowest decile is 1.4 times of the highest deciles, but in urban area this figure is almost double.

Level of Income and expenditure by size of Own Land in Rural Area

Table 11 provides information on monthly household income, expenditure, family size and number of earners by size of own land in rural area. In the landless group, the average income per household was taka 3299 in 2005. The corresponding figures for 2000, 1991-92, 1995-96, 1988-89 were taka 3248, 2325, 1717 & 1438 respectively. On the other hand, the average income of the households owning land size 7.50 acres & above was taka 21066 which was 6.38 times higher than the average income of landless group in 2005.

Average monthly income per household in rural area increased with the increase in size of owned land. Thus, land holding size is an important determinant of income particularly in rural area. It appears from the table 11 that the highest percentage of households (37.71%) owned land 0.05-0.49 acres, where as 75.85% households owned land 0.01-1.49 acres in 2005. This indicates that, the farm size is very small in Bangladesh.

Another important feature is that, the family size increased with the increase in size of own land in all the year from 1988-89 to 2005 at the rural level of Bangladesh. Similar trend can be observed in case of increase in the number of earners per household with the increase in land size over the years between '1988-89 to 2005'. The monthly household expenditure by size of owned land also shows increasing pattern.

Table 11: Percentage of rural households, family size, and no. of earners, monthly income and expenditure by owned land size

Size of land owned in acre	% of h/h	Family size	Aver. no. of earners	Aver. income	% of income	Aver. exp	% of exp.
01	02	03	04	05	06	07	08
2005							
All group	100.00	4.88	1.37	6095	100.00	5318	100.00
Landless	5.32	3.78	1.15	3299	2.88	3087	3.09
0.01-0.04	17.48	4.20	1.23	3217	9.22	3391	11.14

Size of land owned in acre	% of h/h	Family size	Aver. no. of earners	Aver. income	% of income	Aver. exp	% of exp.
01	02	03	04	05	06	07	08
0.05-0.49	37.71	4.87	1.35	4851	30.02	4697	33.30
0.50-1.49	20.68	5.03	1.39	6070	20.60	5665	22.03
1.50-2.49	8.37	5.26	1.43	9122	12.52	6862	10.80
2.50-7.49	8.86	5.87	1.60	13327	19.37	9136	15.22
7.50 +	1.55	7.08	1.95	21066	5.35	15075	4.39
2000							
All group	100.00	5.19	1.43	4816	100.00	4257	100.00
Landless	5.60	4.24	1.24	3248	3.78	2887	3.80
0.01-0.04	46.54	4.84	1.33	3841	37.12	3315	36.24
0.05-0.49	13.47	5.05	1.35	3713	10.38	3721	11.77
0.50-1.49	16.97	5.34	1.46	4570	16.11	4562	18.19
1.50-2.49	7.98	5.94	1.64	6068	10.06	6075	11.39
2.50-7.49	8.12	6.65	1.88	10426	17.58	7636	14.57
7.50 +	1.31	8.0	1.94	18233	4.97	13081	4.04
1995-96							
All group	100.00	5.25	1.46	3658	100.00	3473	100.0
Landless	5.48	4.45	1.39	2325	3.48	2443	3.85
0.01-0.04	12.45	4.24	1.25	2055	7.00	2058	7.38
0.05-0.49	37.11	4.90	1.39	2793	28.34	2739	29.28
0.50-1.49	21.01	5.30	1.40	3692	21.21	3500	21.18
1.50-2.49	9.82	5.67	1.55	4506	12.10	4246	12.01
2.50-7.49	11.97	6.72	1.80	6462	21.13	5834	20.10
7.50 +	2.16	8.48	2.22	11450	6.74	9979	6.19
1991-92							
All group	100.00	5.35	1.38	3109	100.00	2721	100.00
Landless	5.36	4.10	1.15	1717	2.96	1511	2.98
0.01-0.04	12.21	4.07	1.16	1776	6.98	1618	7.26
0.05-0.49	35.44	4.96	1.34	2428	27.68	2157	28.09
0.50-1.49	20.78	5.36	1.37	3118	20.84	2738	20.91
1.50-2.49	10.42	6.12	1.51	39.09	13.10	3487	13.35
2.50-7.49	12.66	6.68	1.56	4943	20.12	4185	19.47
7.50 +	3.13	9.00	1.90	19395	8.32	16279	7.94
1988-89							
All group	100.00	5.52	1.56	26.70	100.00	2405	100.00
Landless	3.5	4.21	1.26	1438	1.88	1382	2.01

Size of land owned in acre	% of h/h	Family size	Aver. no. of earners	Aver. income	% of income	Aver. exp	% of exp.
01	02	03	04	05	06	07	08
0.01-0.04	14.72	4.23	1.22	1571	8.66	1460	8.94
0.05-0.49	34.70	5.01	1.41	2069	26.90	1909	27.55
0.50-1.49	18.92	5.59	1.56	2595	18.39	2342	18.44
1.50-2.49	10.28	6.06	1.68	3203	12.33	2857	12.21
2.50-7.49	14.40	7.19	2.03	4171	22.51	3702	22.18
7.50 +	3.48	8.49	2.40	15795	9.33	13151	8.69

Source : HIES Report 2005, 2000, 1995-96

Consumption expenditure by land size

Household consumption expenditure on major items of expenditure by size of land owned in rural area has been provided in table 13. It is observed that the average monthly expenditure is directly proportional to land size with an exception in landless group in 1995-96 but inversely proportional to the share of food expenditure. Among the non-food items only the share of fuel and lighting is inversely proportional to the land size but other non-food items have direct relationship with land size on an average.

Table 12: Consumption expenditure on major food and non-food items of expenditure by size of land owned in rural area

Size of land owned	Average monthly		Share of components on total consumption expenditure						
	Expn per hhold	Consum exp per hhold	Total	Food and beve.	Cloth & footwear	Housing and rent	Fuel/lighting	Household effects	Misc.
01	02	03	04	05	06	07	08	09	10
2005									
All groups	5318	5164	100	58.54	5.54	9.77	6.10	1.80	18.22
Landless	3087	3018	100	66.55	5.26	6.78	7.36	1.16	12.86
0.01-0.04	3391	3325	100	65.22	5.51	7.72	7.35	1.08	13.10
0.05-0.49	4697	4579	100	61.76	5.48	9.26	6.64	1.58	15.25
0.50-1.49	5665	5500	100	59.10	5.61	9.20	6.01	1.95	18.10
1.50-2.49	6862	6673	100	54.86	5.42	11.12	5.63	2.03	20.91
2.50-7.49	9136	8714	100	51.17	5.85	11.08	4.85	2.37	24.66
7.50 +	15075	14613	100	42.47	5.05	16.19	3.82	2.64	29.80
2000									

Size of land owned	Average monthly		Share of components on total consumption expenditure						
	Expn per hhold	Consum exp per hhold	Total	Food and beve.	Cloth & footwear	Housing and rent	Fuel/lighting	Household effects	Misc.
01	02	03	04	05	06	07	08	09	10
All groups	4256	3878	100	59.29	6.53	7.61	7.19	1.22	18.14
Landless	2887	2804	100	61.0	6.4	6.4	9.3	1.3	15.6
0.01-0.04	3314	3197	100	62.0	6.6	7.3	7.9	0.9	15.3
0.05-0.49	3720	3440	100	62.1	6.3	6.2	7.6	1.3	16.4
0.50-1.49	4562	4050	100	59.3	6.5	6.9	7.1	1.4	18.9
1.50-2.49	6075	5340	100	56.2	6.4	10.7	6.2	1.3	19.1
2.50-7.49	7635	6418	100	54.0	6.8	8.3	5.9	1.6	23.4
7.50 +	13080	10308	100	48.0	6.4	8.1	4.5	1.7	31.6
1995-95									
All groups	3473	3421	100	62.4	6.5	8.5	6.0	1.7	14.9
Landless	2443	2412	100	66.07	6.0	7.2	7.7	1.9	10.6
0.01-0.04	2058	2046	100	69.4	5.8	7.0	7.5	0.8	9.5
0.05-0.49	2740	2719	100	67.1	6.1	7.5	6.4	1.3	11.7
0.50-1.49	3501	3443	100	63.5	6.5	7.7	6.1	1.8	14.5
1.50-2.49	4246	4180	100	60.9	6.9	9.5	5.8	1.8	15.0
2.50-7.49	5834	5706	100	55.5	7.0	9.1	5.0	2.3	21.2
7.50 +	9980	9658	100	50.4	6.7	14.6	4.2	2.9	21.2
1991-92									
All groups	2721	2686	100	67.3	4.8	8.9	5.5	0.9	12.6
Landless	1511	1502	100	71.7	4.6	6.1	6.4	0.7	10.6
0.01-0.04	1618	1608	100	71.7	4.2	7.5	6.8	0.4	9.4
0.05-0.49	2157	2140	100	71.4	4.4	7.6	5.8	0.7	10.1
0.50-1.49	2738	2701	100	68.8	4.7	8.6	5.4	0.7	11.6
1.50-2.49	3487	3435	100	66.0	4.7	9.8	5.4	0.9	13.3
2.50-7.49	4185	4111	100	62.9	5.1	11.4	4.8	1.0	14.8

Size of land owned	Average monthly		Share of components on total consumption expenditure						
	Expn per hhold	Consum exp per hhold	Total	Food and beve.	Cloth & footwear	Housing and rent	Fuel/lighting	Huousehold effects	Misc.
01	02	03	04	05	06	07	08	09	10
7.50 +	6915	6767	100	56.6	6.5	9.7	4.2	2.0	21.1

Sources: HIES Report 1995-96, 2005

Household Size and Poverty line

Table 13 shows that, incidence of poverty is positively correlated with the household size until the households size reached 8 and then declines again. The results show that 18.42% population live below the absolute poverty line for household size 1; 18.28% for size 2; 29.10% for size 3; 38.72% for size 4; 41.01% for size 5; 45.44% for size 6; 46.72% for size 7; 46.88% for size 8; 44.79% for size 9 and 37.43% for size 10+ in 2005. For the hardcore poor, 12.03% population was recorded below the hardcore poverty line for the household size 1; 8.01% for size 2; 12.49% for size 3; 20.58% for size 4; 19.15% for size 5; 21.55% for size 6; 21.41% for size 7; 24.84% for size 8; 22.03% for size 9 and 16.88% for size 10+ in 2005.

The table 16B provides information about absolute poverty and hardcore poverty for rural and urban area. For rural area, the HCR shows some irregular pattern by size of household. In 2005, it was estimated at 20.98% for household size 1; 20.49% for size 2; 29.16% for size 3; 38.58% for size 4; 41.40% for size 5; 46.02% for size 6; 45.27% for size 7; 45.41% for size 8; 44.76% for size 9; 32.98% for size 10 and above. The HCR was reduced for smaller households but increased for large households, in 2005 over 2000 in rural area. But in urban area, the same increased for smaller households, but decreased for large households.

For 1995-96 and 1991-92, incidence of poverty is also directly related with the size of the household strictly up to 5 then it declines. Finally in both rural and urban areas this relationship holds good for the years 1995-96 and 1991-92. For rest of the size of the households, the incidence of poverty shows a decreasing tendency but with an irregular pattern.

Table 13 A Population below poverty line by household size (National)

Household size	Poverty line 1: Absolute Poverty 2122k. cal/person/day		Poverty line 2 : Hardcore Poverty 1805 k. cal/person/day	
	No. (million)	Percent	No. (million)	Percent
01	02	03	04	05

Household size	Poverty line 1: Absolute Poverty 2122k. cal/person/day		Poverty line 2 : Hardcore Poverty 1805 k. cal/person/day	
	No. (million)	Percent	No. (million)	Percent
01	02	03	04	05
2005				
Total	56.03	40.36	27.04	19.48
1	0.11	18.42	0.07	12.03
2	0.74	18.28	0.32	8.01
3	3.91	29.10	1.68	12.49
4	10.57	38.72	5.62	20.58
5	12.04	41.04	5.62	19.15
6	11.10	45.44	5.27	21.55
7	6.72	46.72	3.08	21.41
8	4.71	46.88	2.50	24.84
9	2.75	44.79	1.35	22.03
10+	3.38	37.43	1.53	16.88
2000				
Total	55.91	44.33	25.20	19.98
1	0.11	28.20	0.06	14.04
2	0.58	20.19	0.25	8.64
3	2.97	31.79	1.32	14.11
4	8.40	40.33	4.30	20.65
5	11.15	44.21	4.81	19.08
6	11.60	51.94	5.24	23.46
7	8.15	47.81	3.62	21.25
8	4.71	45.59	2.07	19.99
9	3.24	48.92	1.49	22.51
10+	4.99	44.96	2.04	18.41
1995-96				
Total	55.28	47.53	29.15	25.05
1	0.10	20.17	0.04	8.26
2	0.60	23.70	0.34	13.17
3	3.52	39.02	1.84	20.42
4	7.84	46.75	4.39	26.14
5	11.05	49.24	5.91	26.34
6	10.38	50.17	5.36	25.90
7	7.06	47.43	3.98	26.72

Household size	Poverty line 1: Absolute Poverty 2122k. cal/person/day		Poverty line 2 : Hardcore Poverty 1805 k. cal/person/day	
	No. (million)	Percent	No. (million)	Percent
01	02	03	04	05
8	5.42	50.43	2.88	26.79
9	3.05	47.40	1.54	23.91
10+	6.25	51.02	2.87	23.45
1991-92				
Total	51.53	47.52	30.42	28.00
1	0.06	15.79	0.03	7.15
2	0.63	23.63	0.33	12.27
3	3.84	41.35	2.26	24.28
4	70.7	48.96	4.15	28.70
5	8.56	50.61	5.38	31.80
6	9.56	51.38	5.61	30.14
7	7.31	49.86	4.02	27.41
8	5.38	52.90	3.11	30.57
9	3.20	44.72	2.09	29.22
10+	6.01	41.92	3.45	24.10

Sources: HIES Report 1991-92, 1995-96& 2005

Table 13B Population below poverty line by household size (Rural and Urban)

Household size	Poverty line 1: Absolute poverty 2122 k./person/day				Poverty line 1: Hardcore poverty 1805 k./person/day			
	Rural		Urban		Rural		Urban	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
01	02	03	04	05	06	07	08	09
2005								
Total	42.00	40.20	15.14	44.13	18.92	18.10	8.41	24.51

Household size	Poverty line 1: Absolute poverty 2122 k./person/day				Poverty line 1: Hardcore poverty 1805 k./person/day			
	Rural		Urban		Rural		Urban	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
01	02	03	04	05	06	07	08	09
1	0.11	20.98	0.02	17.61	0.07	12.99	0.01	11.77
2	0.63	20.49	0.15	15.09	0.27	8.82	0.07	6.83
3	2.81	29.16	1.25	32.76	1.13	11.79	0.62	16.33
4	7.50	38.58	3.29	41.82	3.76	19.32	1.89	24.07
5	9.10	41.40	3.22	43.70	4.06	18.45	1.73	23.40
6	8.65	46.02	2.65	47.04	3.71	19.73	1.57	27.93
7	5.12	45.27	1.69	55.11	2.22	19.59	0.81	26.50
8	3.58	45.41	1.16	53.89	1.89	23.91	0.67	30.98
9	2.24	44.76	0.58	51.18	0.99	19.88	0.40	34.97
10+	2.27	32.98	1.12	52.13	0.83	12.04	0.63	29.42
2000								
Total	42.53	42.28	13.28	52.5	13.87	18.72	6.33	25.02
1	0.10	30.23	0.01	15.38	0.05	14.05	0.01	13.99
2	0.48	20.29	0.11	19.77	0.20	8.32	0.05	10.01
3	2.26	30.70	0.71	35.82	0.96	12.98	0.36	18.30
4	6.22	37.98	2.18	48.99	3.10	18.90	1.20	27.08
5	8.52	42.82	2.63	49.43	3.68	18.48	1.13	21.31
6	9.09	51.20	2.51	54.84	40.7	22.93	1.17	25.53
7	6.19	44.12	1.96	64.92	2.59	18.49	1.03	34.03
8	3.50	42.24	1.21	59.09	1.57	18.9	0.50	24.37
9	2.37	44.34	0.88	67.78	0.97	18.18	0.52	40.39
10+	3.90	42.92	1.08	54.24	1.70	18.66	0.35	17.30
1995-96								
Total	45.73	47.11	8.79	49.69	23.90	2462	4.93	27.27
1	0.09	8.27	0.00	8.11	0.03	20.88	0.00	13.96
2	0.49	12.50	0.10	16.45	0.26	23.51	0.07	24.61
3	2.49	20.39	0.56	2057	1.56	38.55	0.27	41.69
4	6.53	26.34	1.30	25.23	3.64	47.25	0.74	44.36

Household size	Poverty line 1: Absolute poverty 2122 k./person/day				Poverty line 1: Hardcore poverty 1805 k./person/day			
	Rural		Urban		Rural		Urban	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
01	02	03	04	05	06	07	08	09
5	9.11	26.03	1.93	27.94	4.88	48.58	1.02	52.61
6	8.54	25.29	1.83	28.75	4.31	50.09	1.04	50.50
7	5.85	26.28	1.20	29.13	3.31	46.47	0.66	52.73
8	4.62	26.93	0.80	26.01	2.46	50.52	0.41	49.91
9	2.46	21.93	0.58	32.79	1.17	45.97	0.36	54.56
10+	5.05	-	1.20		2.24	-	0.62	-
1991-92								
Total	44.81	47.64	6.82	46.70	26.59	28.27	3.83	26.25
1	0.06	16.67	0.00	9.09	0.03	7.69	0.00	3.03
2	0.58	24.80	0.05	15.70	0.31	12.99	0.02	7.44
3	3.38	42.27	0.46	35.75	2.00	25.09	0.25	19.34
4	6.24	50.00	0.83	42.32	3.70	29.62	0.45	22.90
5	7.43	50.70	1.13	50.00	4.76	32.45	0.62	27.3
6	8.40	52.04	1.16	47.06	4.97	30.78	0.64	25.95
7	6.24	49.37	1.07	52.97	3.49	27.59	0.53	26.24
8	4.80	54.58	0.58	42.55	2.71	30.83	0.40	28.93
9	2.72	43.71	0.49	51.35	1.81	29.14	0.28	29.73
10+	4.96	-	1.05	-	2.81	-	0.64	-

Sources : HIES Report 1991-92, 1995-96& 2005

Deferential in APC and APS: APC is considerably higher in rural areas than in urban area on an average over the years of 1973-74 to 2005. The total average of APC is 0.8670 for urban areas while it is 0.8835 for rural area which is higher by 0.01 than that of urban area. Therefore, some disparities are found between rural and urban Bangladesh over this time period. On the other hand, the APS figure on an average is higher in urban area than in rural area. The average figure for APS for more than three decade is 0.1134 for urban area while it is 0.0884 for rural area. The APC figure are 0.7947 and 0.8841 in 2005 while it were 1.0206 and 1.0582 in 1973-74 in urban and rural areas respectively.

MPC in different Years: Marginal Propensity to consume has increased at rural, urban and national level of Bangladesh between 1973-74 and 2005. Though this figure is higher in urban areas compared to rural areas in 2005 but the MPC on an average is higher in rural areas than in urban areas over these years which were 0.7434 in rural level and 0.6499 for urban level. Therefore, rural-urban disparities are observed in case

of MPC, though both are showing ultimately rising trend with the rise in nominal income over this year mentioned. Therefore rural-urban disparities are observed in case of MPC, though both are showing ultimately rising trend with the rise in nominal income over this year mentioned.

Table 14: Average Propensity to Consume (APC) and Average Propensity to Save (APS) in different Years

Year	APC			APS		
	National	Urban	Rural	National	Urban	Rural
1973-74	1.0547	1.0206	1.0582	-0.0568	-0.0286	-0.0582
1976-77	0.7283	0.6435	0.7412	0.2614	0.3420	0.2496
1977-78	0.8852	0.9122	0.8806	0.0999	0.0720	0.1041
1978-79	0.8870	0.8889	0.8855	0.0962	0.0861	0.0983
1981-82	0.9147	0.9107	0.9159	0.0803	0.0737	0.0823
1983-84	0.8795	0.9136	0.8742	0.1127	0.0688	0.0198
1985-86	0.8984	0.9185	0.8939	0.0904	0.0600	0.0970
1988-89	0.8918	0.9036	0.8891	0.0953	0.0765	0.0993
1991-92	0.8692	0.8858	0.8375	0.1188	0.0765	0.1248
1995-96	0.9221	0.8885	0.9366	0.0618	0.0939	0.0506
2000	0.6640	0.7237	0.8054	0.1636	0.2549	0.1161
2005	0.8270	0.7947	0.8841	0.1720	0.1845	0.0895

Table 15: Marginal Propensity to Consume (MPC) and Marginal Propensity Save in different Years

Year	MPC			MPS		
	National	Urban	Rural	National	Urban	Rural
1973-74	0.0000	0.0000	0.0000	1.000	0.0000	0.0000
1976-77	-0.0243	-0.0657	-0.0370	1.0243	-0.0657	-0.0370
1977-78	-9.8000	-0.8759	-0.0000	10.8000	-0.8759	-0.0000
1978-79	0.8924	0.8328	0.9009	0.1076	0.8328	0.9009
1981-82	0.9936	0.9412	1.0369	0.0064	0.9412	1.0369
1983-84	0.8195	0.9249	0.8150	0.1805	0.9249	0.8150
1985-86	0.9531	0.9281	0.9578	0.00469	0.9281	0.9578
1988-89	0.8328	0.7812	0.8444	0.1672	0.7812	0.8444
1991-92	0.7332	0.7619	0.5239	0.2668	0.7619	0.5239
1995-96	1.0946	0.8927	1.4912	-0.0946	0.8927	1.4912
2000	-0.0996	0.0341	0.3912	1.0996	0.0341	0.3912
2005	1.5320	1.9932	1.2534	-0.532	1.9932	1.2534

Note: Table 8 is computed from HIES report of 1988-89, 1995-96, 2000 and 2005. But the MPC on an average is higher in rural areas than in urban areas over this year which was 0.7434 in rural level and 0.6499 for urban level.

Income and Expenditure Elasticities

Income and expenditure elasticities have been estimated for selected items of consumption for both rural and urban areas. The items for which elasticities have been estimated are rice, wheat, potato, pulses, milk, mutton, beef, chicken, egg, fish, and clothing & footwear. Income consumption and expenditure consumption relationship have been estimated by fitting the double logarithmic function of the type: $\log c_i = a + b \log x_i$, where x_i = per capita income/expenditure, c_i =per capita expenditure on the i th commodity.

Table 16: Income and Expenditure Elasticities of selected consumption items from 1973-74, 1983-84, 1988-89, 1991-92, 1995-96, 2000 and 2005 surveys by urban/rural residence

Survey Year	Rice	Wheat	Potato	Pulses	Milk	Mutton	Beef	Chicken	Eggs	Fish	Cloth. and Footwear
INCOME ELASTICITIES											
Rural											
2005	0.66	-1.48	0.21	0.46	0.24	0.73	-0.27	2.81	-0.16	0.17	-0.67
2000	-1.19	-1.68	0.51	0.48	0.13	-1.48	1.21	-0.17	2.28	-0.35	0.03
1995/96	0.06	-0.28	-0.57	-1.13	2.28	0.00	0.39	3.50	-1.93	1.32	1.55
1991/92	0.37	-2.05	0.59	-0.90	-0.55	0.71	3.03	0.59	-1.22	0.00	-0.74
1988/89	0.43	0.02	0.76	0.70	0.95	0.56	0.73	0.75	0.70	0.95	0.76
1985/86	0.43	0.13	0.75	0.67	0.99	0.35	0.52	0.66	0.80	0.99	0.99
1983/84	0.65	0.13	0.89	0.93	1.18	0.84	0.87	0.53	0.71	1.03	0.98
1973/74	0.73	-0.08	-	0.74	1.37	1.28	1.31	1.70	1.37	0.95	0.95
Urban											
2005	0.1	1.25	1.04	0.14	0.82	0.00	0.96	0.16	0.42	1.43	0.74
2000	-0.11	0.87	-0.36	-0.07	-1.05	-1.95	-0.23	0.09	1.18	-0.73	0.49
1995/96	-0.06	-0.20	0.15	-0.15	1.15	0.32	0.72	2.00	0.02	0.11	-0.71
1991/92	0.26	0.57	0.03	-0.71	-1.22	-1.17	1.20	0.53	1.43	-0.30	-1.02

Survey Year	Rice	Wheat	Potato	Pulses	Milk	Mutton	Beef	Chicken	Eggs	Fish	Cloth. and Footwear
1988/89	0.19	0.12	0.58	0.56	1.02	0.62	0.66	0.75	1.00	0.90	0.79
1985/86	0.16	0.20	0.46	0.49	1.10	0.59	0.78	0.79	1.01	0.91	0.90
1983/84	0.33	0.21	0.55	0.63	1.21	0.92	0.79	1.37	1.01	0.99	1.09
1973/74	0.53	-0.02	-	0.59	1.06	1.22	1.02	1.17	1.04	0.77	1.06
EXPENDITURE ELASTICITIES											
Rural											
2005	-0.12	0.04	0.18	-0.47	0.20	1.59	-0.22	2.49	-0.13	0.15	-0.72
2000	-1.6	-2.27	0.69	0.65	0.17	-2.00	1.63	-0.24	3.08	0.47	0.04
1995/96	0.04	-0.20	0.39	-0.78	1.96	0.00	0.27	2.43	-1.34	0.92	1.08
1991/92	0.55	-0.38	0.74	1.10	2.83	2.86	2.49	2.25	1.24	1.21	0.28
1988/89	0.61	0.10	0.92	0.87	1.11	0.83	0.95	0.79	0.86	0.21	1.97
1985/86	0.54	0.14	0.98	0.92	1.25	0.40	0.56	0.76	1.01	1.28	0.97
1983/84	0.82	0.15	1.00	1.08	1.36	1.06	0.95	0.74	0.92	1.22	1.11
1973/74	0.83	0.13	-	1.05	1.46	1.80	1.70	1.73	1.27	1.06	0.95
Urban											
2005	0.08	0.71	0.59	0.08	0.47	0.00	0.55	0.09	-0.24	0.81	-0.28
2000	-0.65	-5.11	-2.10	-0.42	-6.22	-11.52	-1.37	0.55	6.97	4.28	-2.76
1995/96	-0.09	0.35	-0.15	0.15	1.13	0.31	0.71	1.96	0.02	0.11	0.68
1991/92	0.08	0.39	0.26	0.39	2.18	1.99	1.87	2.48	1.67	0.83	0.95
1988/89	0.25	0.14	0.67	0.65	1.13	0.72	0.76	0.88	1.09	1.00	0.88
1985/86	0.18	0.23	0.48	0.52	1.16	0.69	0.83	0.81	1.07	0.97	0.94
1983/84	0.38	0.24	0.61	0.71	1.28	0.94	0.86	1.28	1.12	1.06	1.14
1973/74	0.69	0.13	-	0.75	1.95	2.41	1.49	2.04	1.39	1.11	1.24

The parameter 'b' gives the income/expenditure elasticity which remains constant at all levels of income. Income/expenditure per expenditure elasticity measures the percentage changes in demand for the commodity in response to percentage change in total income/expenditure.

Table 16 shows that items such as milk, fish, eggs have high income/expenditure elasticities between the period of 1973/74 to 1995/96 whereas, in the year of 2000 and 2005, the income/expenditure elasticities of fish is very low; even it is negative income inelastic in 2000 in the rural areas of Bangladesh. Though the eggs have very high income/expenditure elasticities in 2000 but it is negatively responsive with the rise in income and expenditure in 2005.

On the other hand in 2005, the demand for fish, chicken and mutton has increased compared to 2000 in a great extent as they are showing high income /expenditure elasticities in rural areas. The demand for beef has positive elasticity between the periods of 1973/74 to 2000, but it has largely declined in the year 2005 which is showing negative income/expenditure elasticities for rural areas.

The urban areas are showing slightly different pictures. The demand for fish and chicken is showing positive income/expenditure elasticity from 1973-74 to 2005 only exception to 2000 for income elasticity though, expenditure elasticity is very high in this year. The eggs is also showing positive income/expenditure elasticities only exception to 2005 for expenditure elasticities. On the other hand in 2005, in urban areas of Bangladesh, the demand for fish, chicken and eggs, beef, milk, pulses, and potato has increased compared to 2000 as they are showing high income /expenditure elasticities though some of them were negatively responsive in terms of rise in income and expenditure in the year of 2000 compared to 1995-96.

Income elasticities of demand for mutton, beef, chicken increased in rural areas during period between 1973/74 to 2005 considering few exceptions, while the corresponding indicator for wheat, declined even it is negatively responsive in the recent years like 1991-92, 1995-96, 2000 and 2005 in rural areas.

Income elasticity of demand for rice remains highly inelastic: a 10 percent increase in income would lead to 4.3 percent increase in the demand for rice in rural areas and only 1.9 percent in urban areas between the above mentioned periods and in the recent years it is also negatively responsive in terms of rise in income and expenditure.

On the whole the non-cereal food sector, specially livestock and fishery items demonstrate considerable growth potentials in the rural areas. A 10 percent increase in rural income would result in considerable increase in demand for milk (9.5 percent), fish (9.5percent), potato (7.6percent), chicken (7.5percent), beef (7.3 percent), egg (7.0 percent), pulses (7.0 percent), mutton (5.6percent) etc. Income elasticities of demand for livestock and poultry products were higher in urban areas compared to rural areas of Bangladesh. Thus, a 10 percent increase in urban income would lead to still higher increase demand for milk (10.2 percent), eggs (10.0 percent) mutton (6.2 percent) etc.

Table - 17: Estimated Model of Average Monthly Consumption Expenditure (Y) on Average Monthly total Expenditure (X)

	Linear Model		Log-linear model	
	Estimated model	R ²	Estimated model	R ²
National	$y = - 34.25 + 1.042x$	0.9987**	$y = 0.9424x^{0.105}$	0.9997**
Urban	$y = 160.69 + 1.0615x$	0.8846**	$y = 0.7928x^{1.0395}$	0.9678**
Rural	$y = 452.48 + 0.7161x$	0.8582**	$y = 1.7483x^{0.9203}$	0.9753**

Estimated Model of Consumption: Liner and Log Liner Model

It is quite logical that the total expenditure of any household, whether rural or urban, will be influenced by the expenditure on consumer goods and services. In other words, a household spending more on consumption is likely to spend more on other items. There have been studies on the relationship of between average monthly consumption expenditure and average monthly total expenditure but no such studies are known to have been done in Bangladesh.

The relationship between average monthly consumption expenditure and average monthly total expenditure has been examined using both linear and log-linear model. Data used for this study were the consumption expenditure data from 1973-2005 conducted and published by BBS in the different survey years mentioned earlier. (Table 2, Rural-Urban Consumption Pattern in Bangladesh Chapter iv).

It was found that both linear and log-linear model fitted well to the data but, for any year, log-linear model appeared to be relatively more adequate to explain the average monthly total expenditure based on the average monthly consumption expenditure. Using log-linear model, the average monthly consumption expenditure can explain about 97% of the variation in the average monthly total expenditure of a household both for rural and urban areas and almost 100% at the national level. The results give very strong evidence that the average monthly consumption expenditure is a major determinant of the average monthly total expenditure implying that with knowledge on the monthly consumption expenditure, one can determine the monthly total expenditure with a very high confidence for rural and urban areas and almost certainly at the national level.

FINDINGS OF THE STUDY

In Bangladesh, the income level per household is rising gradually over the years of 1973-74 to 2005. Therefore, on an average, there is a rising trend of income per household over these years. Though, there has been increased in the income per

household but at the same time there has also been increased in 'consumption inequality' in the different sections of the society. The **Summary and Findings** of the present study are as follows:

- **Income per household at national level:** The number of member per household falls on an average, though there was a rise in number of member per household between the years 1983-84 and 1985-86. Income per member (at national level) also increased over these years.
 - **Income per household at rural and urban level:** At the rural areas of Bangladesh between 1973-74 and 2005 the income per household also rises gradually. In urban areas there is also a rising trend of income between the years mentioned above and a declining trend of household size is observed over the time mentioned. Income per member is raising both in rural and urban areas of Bangladesh.
 - **Level of Expenditure:** Household nominal income, expenditure and consumption expenditure have increased gradually over the years of 1973-74 to 2005.
 - **Monthly average household Consumption Expenditure:** Overall, the household average monthly consumption expenditure increased in 2005 compared 1973-74 both in real and nominal terms.
-
- **Growth and Inequality at the Rural and Urban Level**

The income and expenditure gap between the rural and urban areas has increased to a large extent, which ultimately increased the inequality of income distribution between the urban and rural areas. Poverty Trends at the Rural and Urban Level

The absolute poverty and hardcore poverty have decreased from 1983/84 to the year of 991/92 and again in the year of 1995/96 it increased in rural areas. On the other hand, the hardcore and absolute poverty have decreased in the urban areas between the years of 1981/82 to 1995/96.

In rural areas the absolute poverty has decreased from the year of 1983/84 to 1995/96 but the hardcore poverty shows a different nature which decreased between 1983/84 to 1985/86 and again increase in 1988/89 after then it started to decline. Therefore, in the rural areas both the absolute and hardcore poverty decreased over the years.
 - **GDP at Constant Market Price and Current Market Price**

Overall, a rising trend is seen in the per capita GDP between the years of 1973 to 2005 both in constant and current market prices. Between these 35 years, the average annual growth rates in GDP at constant market price and GDP at current market price are 2.8 percent and 101 percent respectably. Therefore, it can be concluded the Bangladesh has obviously achieved some growth after the liberation period between the years of 1973 to 2005.
 - **Food Intake (Grams) in different Survey Years:** At the rural and urban level of Bangladesh, consumption of food increased on an average between 1973-74 and 2005. In 2005 per day food intake are 946.3 and 952.1 grams which were 47.6 and 81.4 grams more than that of 2000 and 267.8 and 214.9 grams more in 2005

compared to 1973-74 in rural and urban areas respectively. The urban rural discrepancy ratio has increased over the years mentioned. It was 0.92 in 1973-74 whereas; it rises at 1.3 in 2000 and 0.99 in 2005.

- **Average Per Capita per day Calorie (K-cal) intake by Residence at national, rural and urban level:** Per Capita Calorie per day increased in national, rural and urban level in 2005 than the corresponding figures of 1981-82. The National, rural and urban figures have increased by 16.25%, 18.27%, 7.08% respectively over this time period mentioned. But per capita per day calorie increased at a faster rate in rural areas than in urban which was 11.19% higher in rural than that of urban areas of Bangladesh. Moreover, the urban-rural discrepancy ratio is more in 2005 than in 1981-82.
- **Average Per Capita per day intake of Protein (grams) by Residence:** Per Capita per day intake of protein increased from 1981-82 to 1995-96 on an average while its consumption decreased in 2000 than the corresponding figure of 1995-96 by 2.46 grams and 3.79 is less by percentage at the national level between 2000 and 2005 this figure was stagnated. Urban areas are showing similar characteristics as rural areas but the urban rural discrepancy ratio is more in 2005 while it was 0.85 in 1981-82. In rural level per capita per day intake of protein (grams) increased by 6.92 grams which was 12.62% more in 2005 compared to 1981-82.
- **Decile distribution of income and Gini-Coefficient:** The decile distribution of income shows the similar trend in all national, rural and urban level. On the whole, the distribution of income is more unequal in urban areas compared to rural areas. In rural area the richest-poorest ratio was found to be 34.47 in 2005 while this ratio was 35.7 in 2000. In urban area, this ratio was 48.33 in 2005 while 39.6 in 2000. So the magnitude of ratio was higher in urban area than that of rural area indicating that, the richest-poorest gap was more severe in urban area. The Gini Co-efficient of income increased to 0.467 in 2005 from 0.451 in 2000 and which was 0.362 in 1973-74. This increased in Gini-Coefficient bears the evidence that, slight concentration of income to the rich households took place during the period 1973-74 to 2005.
- **Consumption expenditure by decile group:** Between the years 1991-92 to 1995-96, it is observed that in the lowest decile 70 percent of the consumption expenditure spent on food and the rest on non-food whereas, only 41.2 percent of the consumption expenditure spent on food in the highest decile of household in 1995-96. It also observed that between the two HES, (1995-96 and 1991-92) shift of food expenditure to non-food are more rapid in the highest decile than in lowest deciles. In rural area food share of lowest decile is 1.4 times of the highest deciles, but in urban area this figure is almost double.
- **Level of income and expenditure by size of land in rural area:** Average monthly income per household in rural area increased with the increase of size of owned land. The highest percentage of households (37.71%) owned land 0.05-0.49 acres, where as 75.85% households owned land 0.01-1.49 acres in 2005. This indicates that, the farm size is very small in Bangladesh. Another important feature is that, the family size increased with the increase in size of own land in all the years from 1988-89 to 2005 at the rural level of Bangladesh
- **Consumption expenditure by land size:** It is observed that the average monthly consumption expenditure is directly proportional to land size with an exception in

landless group in 1995-96 but inversely proportional to the share of food expenditure. Among the non-food items only the share of fuel and lighting is inversely proportional to the land size but other non-food items have direct relation with land size on an average.

- **Household Size and Poverty line:** Incidence of poverty is positively correlated with the household size until the households size reached 8 and then declines again. For rural area, the HCR shows some irregular pattern by size of household but HCR was reduced for smaller households whereas it increased for large households, in 2005 over 2000 in rural area. In urban area, the same increased for smaller households, but decreased for large house holds.
- **Income and Expenditure Elasticities:** In the year of 2000 and 2005, the income/expenditure of elasticities of fish is very low; even it is negative income inelastic in 2000 in the rural areas of Bangladesh. Though the eggs have very high income/expenditure elasticities in 2000 but it is negatively responsive with the rise in income and expenditure in 2005. On the other hand in 2005, the demand for fish, chicken and mutton has increased compared to 2000 in a great extend as they are showing high income /expenditure elasticities in rural areas. The demand for beef has positive elasticity between the periods of 1973/74 to 2000, but it has largely declined in the year 2005 which is showing negative income/expenditure elasticities for rural areas.

The urban areas are showing slightly different pictures. The demand for fish and chicken is showing positive income/expenditure elasticity from 1973-74 to 2005 only exception to 2000 for income elasticity though, expenditure elasticity is very high in this year. The eggs is also showing positive income/expenditure elasticities only exception to 2005 for expenditure elasticities.

On the other hand in 2005, in urban areas of Bangladesh, the demand for fish, chicken and eggs, beef, milk, pulses, and potato has increased compared to same as 2000 as they are showing high income /expenditure elasticities though some of them were negatively responsive in terms of rise in income and expenditure in the year of 2000 compared to 1995-96.

Income elasticities of demand for mutton, beef, chicken increased in rural areas during period between 1973/74 to 2005 considering few exceptions, while the corresponding indicator for wheat, declined even it is negatively responsive in the recent years like 1991-92, 1995-96, 2000 and 2005 in rural areas.

- **Deferential in APC and APS:** APC is considerably higher in rural areas than in urban area on an average over the years of 1973-74 to 2005. The total average of APC is 0.8670 for urban areas while it is 0.8835 for rural area which is higher by 0.01 than that of urban area. Therefore, some disparities are found between rural and urban Bangladesh over this time period. On the other hand, the APS figure on an average is higher in urban area than in rural area. The average figure for APS for more than three decade is 0.1134 for urban area while it is 0.0884 for rural area.
- **MPC in different Years:** Marginal Propensity to consume has increased at rural, urban and national level of Bangladesh between 1973-74 and 2005. Though, this figure is higher in urban level than in rural in 2005. But the MPC on an average is higher in rural areas than in urban areas over these years which were 0.7434 in rural level and 0.6499 for urban level. Therefore, rural-urban disparities are observed in

case of MPC, though both are showing ultimately rising trend with the rise in nominal income over this year mentioned.

- **Estimated model of average monthly consumption expenditure (Y) on average monthly total expenditure (X):**

It was found that both linear and log-linear model fitted well to the data but, for any year, log-linear model appeared to be relatively more adequate to explain the average monthly total expenditure based on the average monthly consumption expenditure. Using log-linear model, the average monthly consumption expenditure can explain about 97% of the variation in the average monthly total expenditure of a household both for rural and urban areas and almost 100% at the national level. The results give very strong evidence that the average monthly consumption expenditure is a major determinant of the average monthly total expenditure implying that with knowledge on the monthly consumption expenditure, one can determine the monthly total expenditure with a very high confidence for rural and urban areas and almost certainly at the national level.

RECOMMENDATIONS

The earlier discussion confirms the idea that reducing consumption inequality between rural and urban areas and between the different sectors of the society can help to raise the level of consumption and can bring a positive change in the consumption pattern in Bangladesh. Thus:

- Rural-urban disparities should be reduced.
- Disparities between rich and poor within the rural area should be reduced.
- Disparities between rich and poor within the urban area should be reduced.
- Consumption poverty especially in rural area should be reduced.
- The food consumption pattern among the poor (both urban and rural area) should be improved.
- Fisheries, poultry and livestock sectors should be reform.
- Productivity in the agricultural sector including the above mentioned sectors should be increased.
- More subsidies/low rate, or interest free loan or grants should be provided for the above mentioned sectors.
- Special attention should be paid for the betterment of the landless and bottom five decile groups of the rural areas.
- Wage-inequalities between female and male labors in urban and rural areas should be removed.
- Government spending should be increased and tax burden for the taxable low/middle income groups should be reduced or eliminated.
- More education training and technical knowledge should be provided to the people of rural area.
- Rate of interest for micro credit or any other type of loan which is required to enhance the development of the economy, especially the productive sectors, should be reduced.
- To provide Khash (Vested) land to the land-less group.

- To established more agriculture support industry.
- Private investment should be encouraged.
- To take measures to reduce the prices of necessities.
- To establish agro-oriented food processing industries in rural areas.
- Economies of large scale production technique should be employed in the agricultural sectors.
- Unemployment benefits, child benefit and old age benefits should be provided and extended.
- Good governance, corruption free and politically stable democratic society should be encouraged which may help to raise the voice of the poor in the society.
- To reduce the concentration the economic power.
- Non farm activities should be encouraged in rural areas to absorb the surpluses labors of agriculture sector.

To fulfill the above agenda, the following measures/ programs can be taken up:

- ◆ **Land Reform:** Land reform program is a complex but an important issue. The Land reform programs include possession of land, redistribution of ownership and all other land related activities. This program ensures possession or use of land resources through some changes. In developing countries like Bangladesh and India the majority of the people live in rural villages. In Bangladesh 80% people still live in villages (P.R.O 1999) and masses of these people live on agriculture in rural Bangladesh, still there has not been such a significant development of 'non-farm' sectors. Though, there has been a little bit of operation of 'non-farm' activities but that is not adequate to absorb the excess workers of agriculture. As a result, the redundant workers of agricultural sectors are going to be marginalized, the poor are going to get poorer day by day; hence, and the number of land-less increases. Since the land less ness is one of the major causes of inequality and which also causes to slow down the development process so that it is essential to take a fair land reform policy for equitable distribution of income and wealth. Since "The poor usually lack assets as well as income. In economies in which wealth and income come from land (i.e. rural areas), poverty is highly correlated with land-less ness, and the disadvantaged households are typically rural land-less workers in many cases, even when the poor do won the land, it is often unproductive and lies outside the irrigated areas. The poor are usually unable to improve their land, since they lack income and access to credit"(Dabour, 2000,).

The governments of developing countries can take action to redistribute the available land among the land-less agricultural workers. So that it requires the implementation of legislation on ceiling on land holdings and then the tenure conditions should be improved. For this the government and local agencies must take some measures to distribute better seeds, fertilizers and other agricultural equipments at a lower price to the farmers. The credit facility and the support of marketing ability for the agricultural outputs to the farmers should also be provided.

The government of Bangladesh undertakes land reforms in 1952, 1963 (former Pakistan government), 1972 and 1983, first to reduce inequality and in 1983 to improve tenancy. Under the State Acquisition and Tenancy Act of 1952, only 18 million hectares of land were acquired from the landlords and of those, only 13 million hectares were distributed to former tenants.

The land subject to appropriation from large landowners was reduced under the 1963 Land Reform Ordinance by raising the ceiling from 28.6 to 51.6 hectares. The land ceiling was fixed at 13.32 hectare per family in the land reform program of 1972, large farmers and only 12,400 hectares taken by the state surrendered only 21,760 hectares of land. By 1976, only about 0.2 percent of the cultivated area had been acquired by the state and 0.6 percent of state-owned land distributed among the rural poor (Siddique, 1978). Land reform as a measure to reduce inequality in assets appears to have lost importance to governments in 1990s, (Ahmed and Townsend, 1998). Therefore, it will not be worthy enough to take only the land reform policy again but the important thing is to find out the proper implementation measures. For this the political will has to be matched by bureaucratic initiatives and there is a need for mobilization and participation of the people. "Reformative measures cannot be implemented unless the administrative machine and the bureaucrat's top, petty and lower are attuned, oriented and motivated. Efforts should be there to streamline the law and order enforcing agency" (Rahman 1999).

- ◆ **Credit / Micro credit:** Credit has been one of the key elements in supporting technological change and increasing agricultural productivity. In most of the developing countries, credit has been used to facilitate change, particularly increased productivity and purchase of inputs. Bangladesh is a leader among low-income countries offering micro credit. This micro credit program may help to generate self-employment activities such as cattle and poultry-rearing, food processing, social forestry, agriculture and rural handicrafts etc., which ultimately will tend to increase the income level of the poorer section of rural society. According to World Bank, using a group based approach to lending; the countries small-scale micro credit programs provide more credit than national financial institution in rural areas (World Bank 1999).

One of the major causes of inequality in consumption in a developing society is poverty and poverty is often the result of low level of national income, rapid population growth and unequal distribution of income and wealth. "The proximate determinant of poverty is unemployment and low productivity of the poor. When poverty results from unemployment, reducing poverty requires creating jobs; when poverty result from low productivity and low income; reducing poverty requires investing in human and physical capital, to increase both physical and human capital. Consequently, the best way to reduce poverty and inequality in consumption is to deal both problems: increasing productivity by creating employment and developing human capital" (Khandker 1998). Therefore to increase the level of productivity by creating employment, developing economy needs to increase in investment in human resources first and then to increase in investment in physical

capital. To make them successful, micro credit program can really play an active and vital role in rural societies that will ultimately tend to reduce the level of inequality all respects. Therefore, consumption disparities will be reduced in all respects.

Micro credit for Marginal and Small farmer:

Interest free micro credit may be provided to the marginal and small farmers. They may be also provided with cash or non-cash subsidies to buy the agricultural equipments and raw materials including the irrigation facilities.

Micro credit for the poorest of the poor:

There are many among hard-core poor who are unable to receive benefits from the existing micro credit programs. They should be provided with this facility with a zero rate of interest. Not only government, the private sector, NGOs, donor agencies can play vital role in this respect.

- ◆ **Labor-intensive Techniques:** The labor-intensive techniques can be applied to minimize the inequality in the share of the factors of production and to widening the employment opportunities for improving the income distribution methods. By applying this type of techniques, the excess workers of agricultural sectors of the developing countries like Bangladesh can be absorbed. As a result, the economic conditions of the poorer section will improve, hence, consumption disparities decreases. "Even by 2020, over half Asia's poor will depend mainly on agriculture for incomes. Sector-specific policies to secure labor-intensive growth of output on reformed of 'no-too-unequal' farmland will continue to be a necessary precondition for accelerated growth and poverty reduction in all low-income countries. Agriculture will continue to have far lower cost per workplace than other sectors, and it produces most of the consumption bundle of the poor (Arjan and Lipton 1998). During the last two decades, some parts of West Bengal and Bangladesh have had and unprecedented growth in agriculture due to the expansion of irrigation facilities and extensive use of high yielding variety (HYV) seeds, fertilizers and pesticides.

In Bangladesh such agriculturally advanced districts are Comilla, Chittagong, Dinajpur and Kushtia, These areas today constitute the Green Revolution Belts of Bangladesh and West Bengal. Experiments in these districts in the use of modern inputs have provided a new model for agricultural growth (Dasgupta 1998). Irrigation and education are the two crucial measures for agricultural development in Bangladesh. Reforms of food policies, especially in pricing policies regarding food and agricultural inputs, contribute to both efficiency and equity, have made some progress in the past; they require further strengthening (Islam 1991).

In the Green Revolution areas, special government programs of cheap credit, as well as subsidy have generally filled this gap on the prices of seeds and fertilizer. Sometimes in sharecropping situations landlords take the lead in sharing cost as well as output, and advancing working capital to the tenants, But the supply of essential inputs through such arrangements may not be enough. In his analysis of the causes of the relative stagnation of agriculture in Bangladesh and West Bengal puts heavy emphasis on the economics of water control as related to the problem of the unequal distribution of land. Despite intense demographic pressure both

Bangladesh and West Bengal have not been able to fulfill their great agricultural potential (Mazumdar 1994).

- ◆ **Population control:** The growing population of some developing countries is one of the major causes of the increase in inequality of income and wealth. The larger the size of the family the lower the per capita income and vice versa. Underdeveloped countries are faced with the problem of allocating resources between infrastructure, education, and health service that are essential for human capital development and population control measures (Nakibullah & Rahman 1996). Therefore, it is important to reduce the size of the population of an overpopulated country. The excessive size of population of a country causes to decline the level of employment, level of productivity, level of national income per capita, therefore, the level in consumption and hence the living standard will fall. And most of the times, the poorer section of society are going to be affected the most. As a result, the inequality of income, consumption and wealth distribution increases. So that to increase the income level among the poorer section, there is the need to adopt an effective family planning programs which will help to control the size of the population in developing countries.
- ◆ **Social Security:** By increasing the social security measures, the government of the developing countries can reduce the degree of inequality in the society. Governments can provide different types of social security measures like free education and training, medical services, unemployment benefits, old-age benefits, cheap housing facilities and also other types of public and merit goods which will help to redistribute the income from rich to poor. Since, to provide these facilities the governments need to raise extra funds for which they will have to impose extra taxes at a progressive rate on the income of the richer sections of the society. Ultimately, this progressive system of taxation will help to redistribute the income from rich to poor; hence inequality of consumption decreases.
- ◆ **Fiscal policy:** The instruments of fiscal policy are taxation and government expenditures. These two instruments play very important role over the economic activity of a country. The level of aggregate demand (AD) can be greatly influenced by these two instruments like government expenditure and taxation which in turn influence the level of employment, level of inflation, level of national income, level of economic growth and state of balance of payments. All these important activities have a great influence over the income and wealth distribution in a society. Therefore, fiscal policy ultimately can help to redistribute the income and wealth from rich to poor section in a society.

Taxation

By imposing taxes at a progressive rate on the income of the rich, the government, which can be spent for the welfare of the poor men, can withdraw more revenues. Therefore, the post-tax distribution of income will be more equal than the pre-tax distribution.

Subsidies

There are two broad categories of subsidies; cash benefits and commodities. Cash benefits can be seen as subsidies to individual's income, for instance family credit,

child benefit and old-age pensions, whereas the subsidies in commodities take the form of subsidized goods and services that may be provided free or at a reduced price like free education and health care concessionaire, bus fares for elderly. Subsidies will help to reduce inequality if they account for a larger proportion of a poor person's income than a rich person's income. A more concrete effort to capture a modest proportion of income of the rich in the form of taxes and targeting the very poor for public income subsidies to enhance their human capital endowment and capabilities, would improve the distribution of income (Khan and Sen 1999).

- ◆ **Reducing Concentration of Economic Power:** Small industries should be given priorities to reduce the concentration of economic power. Young, smart and motivated entrepreneurs are to be invited in areas that lack in competitive investment. The governments also can play a vital role by expressing the efficiency and dynamism of the public sectors towards this direction. In this way, the domestic market can be expanded rapidly and the monopoly powers of few business units can be reduced which may in turn help to reduce the consumption disparities in the society.
- ◆ **Investing in human capital:** Standard analysis of economic growth observed three sources of the growth: accumulation of physical capital, increased human capital, and improvement in efficiency with which resources are used (Stiglitz 1999). Therefore, it is one of the most important ways to reduce inequality in society by investing in human capital. To raise the productivity of the poor, improved nutrition, health care, education and training facilities are needed. Investments in the nutrition, education, and health of the poor not only increase their welfare directly, but also enhance their capacities for productive labor.

A study of food for work programs found that the wage, which the poor was paid weekly, was not even sufficient to allow them to purchase enough food to regain the calories used up in earning that wage (Radger 1997). Therefore, it is important for the governments of the developing countries to give priority to increase the allocation of those components of human capital formation that benefit the poorer section of the society (e.g. primary education and basic health care) relative to the others (higher education and modern health services). By investing money in the acquisition of human capital, the poor person can possibly earn a higher return on this money than the rich person (who has already made use of his educational opportunities to the fullest) and can therefore compensate the rich person for the opportunity cost of investment (Ray 1999).

Investment in the education of the poor, through about literacy campaigns and through increase in primary education's facilities wherever the poor reside, spread the ownership of human capital. They qualify the poor for more productive jobs and also increase the rate of rural urban migration, thereby allowing the poor access to higher income employment opportunities and improving the agricultural terms of trade (Adelman and Robinson 1998).

- ◆ **Development of non-farm sectors:** Development of non-farm sectors can improve the economic conditions of the land-less laborer including the marginalized farmers. For this, it requires not only fast agricultural growth, but also a considerable

expansion of productive non-farm employment. The proportion of the labor force employed in the non-agricultural sector, both in the urban and rural areas in Bangladesh, has increased over time, even though the available statistics on the sectoral distribution of employment exaggerate the extent of the occupational shift in the labor force. In the work of N. Islam (1991), it has been argued that agricultural income has gone up, but the proportion of income spent on non-farm goods and services (i.e. manufactured goods and consumption goods and services, including transport, trade,) personal services, health and education has also gone up more rapidly. Not only that; even income from rural trade and services expanded more rapidly in the villages undergoing agricultural modernization (Hossain.1985). In his work, Islam (1991) has suggested three major preconditions which are necessary for the non-farm sector to take off: (i) availability of credit: (ii) extension and training, including an increase in secondary school education, specially technical education; (iii) infrastructure, especially roads, transport, communication and electricity (Khan and Hossain 1989).

- ◆ **Nutrition program:** Rural people especially, the low income group in the rural areas of Bangladesh has been suffering from mal-nutrition due to the consumption of low caloric food items. Therefore, govt. should take some measures to help mitigate the nutrition problem of the poorer section of the society. Though our government has already taken up this type of project under the activities of the NNP and nutrition component of HNPP but the success of this type of program will depend upon the proper implementation and control of population.
- ◆ **Women empowerment:** Approximately 50% of the total population of the country is women. The overall development of nation is not possible keeping them outside the mainstream. Women, specially, in rural areas are more deprived compared to urban. Moreover, the low income group women are not getting the wages as equal as to the male even though by providing the equal time of labor as provided by the male labor. Therefore, this has caused inequality in consumption between rural and urban areas and between the lower income groups and higher income groups within the rural level of Bangladesh, which should have to be removed by empowering more women in rural and urban areas of Bangladesh. Government should create more opportunities for empowering the women providing better economic benefits.
- ◆ **Urban poverty reduction program:** We have known from our study that not only the gap has widen between the top 5% decile and bollom 5% decile of rural areas, it has already been widen in the urban areas also. So the government should take up some programs like the urban infrastructure development program and micro credit for the urban poor etc., which will help to minimize the inequality of consumption between the above mentioned groups.
- ◆ **Rural infrastructure development program:** The living standard, employment opportunity, mobility of labor etc. very much depend upon the degree of infrastructure of the both rural and urban areas. So, if the government and other non-government agencies, private sectors come forward to invest to develop to the rural infrastructure that will undoubtedly raise the living standard of rural poor and non-poor of the rural areas by creating more employment opportunities. Therefore,

this will raise the level of consumption in this sector to mitigate the consumption disparities.

- ◆ **Food for works programs:** These types of program may help to increase the consumption capability of the rural poor, specially the land-less group. Though, our government has taken up this type of programs many times in the past but the success of these programs will depend upon the proper implementation. In this regard, not only the government, the private sectors, NGO's, different social and community groups may come forward to extend their support to the deprived sector of the society.

- ◆ **Special poverty alleviation program:** Though the level poverty has decreased in the recent years in our country both in rural and urban levels but this decreased rate is more in urban level compared to rural level. Therefore urban-rural disparities is till persist and the consumption disparities is widening day by day. Thus, it is more important to pay more attention for the development of rural Bangladesh. Though the government already has been taken up the following types of program in 2004-05 fiscal years, we will obviously welcome to the proper implementation of these programs.

The programs are as follows:

- Poverty alleviation and goat development project.
- Providing incentives and financial assistance to poultry and livestock sectors.
- Poverty alleviation and micro credit program under taken by department of fisheries.
- Fund for housing and homeless.
- Program for generating employment for the unemployed youth by the Karmasangsthan Bank.
- Poverty alleviation and re-habilitation project.
- Fund for mitigating risk due to natural disaster.
- Program for mitigating economic shocks and
- Fund to meet sudden natural disaster.

(Sources Bangladesh economic review, 2006).

The above programs have been taken up by the government for the betterment of the rural poor. The success of these programs can bring the benefits for poorer section in terms of fulfilling accommodation facility, nutrition etc.. In our study, we found out that the consumption of fish, mutton, beef and eggs have decreased in the rural areas though the average consumption of chicken has increased. Thus proper implementation of these programs will obviously increase the consumption of the

above mentioned food in the rural Bangladesh. Therefore, consumption disparities of food items between rural and urban areas will be decreased.

Again we will welcome, in addition to government, the local richer class people, the private sectors, NGO's and other social and community groups and donor agencies to come forward to succeed this types of programs for the betterment of rural poor of our country.

- ◆ **Social safety-Net Programs:** Though our government is firmly committed to mitigate the miseries of the hard-core poor and the under privileged community; but government have allocated more resources to make fruitful of these types of programs. In this respect, government can also provide interest free small amount loan to the poor. Government should also enhance the more of the food for work program, food for education, women empowerment, social welfare and child right programs which may help to raise the quality of life of the rural poor. Therefore, consumption disparities will be reduced within the rural areas and between the rural and urban areas of Bangladesh.
- ◆ **Micro Entrepreneur Developments Programs:** These types of programs taken by government, private sectors, NGO's and others can play a big role for generating self employment opportunity among the rich and urban poor. This type of program should financially be supported by the above mentioned parties. The beneficiaries should be provided with very low interest loan facility, tax holiday, subsidies and grants and other types of technical and logistic support as possible. This type of program undoubtedly will help to reduce the consumption disparities between rich and the poor of our country.

CONCLUSION:

The main findings of our study is the inequality in income, expenditure and consumption between the different groups of people between different levels in terms of differences in age, sex, education, geographical area, family size, land holdings etc. Inequality is not only a common feature of all the economy rather it is a common problem both in developing and developed nations. It is common that inequality will be experienced with development, but how should we get rid of inequality in society? As discussed particularly by Sen, income and wealth inequality are caused basically by inequality in the distribution of opportunities, entitlement and thus capabilities. Sen's own theory is one which demands equality of something - namely, capability - that is regarded as particularly important in the theory. 'If there of something - are n people in society, we may think of a space of n-tupelos of individual's capabilities; we may defined a feasible set in this space and we may use a criterion which attaches value to equality of capability to impose a (possibly incomplete) ordering on that set.' (Sen 1993). Inequality has often been narrowly conceived in monetary terms only, thereby ignoring - as highlighted in Sen's capability approach - the fact that interpersonal differences in the ability to transform resources into functioning have to be taken into account if inequality is to assess properly (Rosenbaum 1999). Therefore, the most effective policies would be to equally distribute education, training, skill and information which will obviously help to reduce the consumption inequality in the society. In recent years, rapid expansions of

non-agricultural activities, especially petty trading in the nearby rural towns, enable the land poor earn higher income; more successfully by the technically skilled workers (Quasem, 2004). So that technology and investment in human capital can play a very vital role to improve the consumption pattern of a community.

In our current study the inequality in consumption of different commodities are found between rural and urban areas of Bangladesh. Cereals, vegetables, edible oil and clothing are treated as necessities in both rural and urban areas. In addition to that, pulses and beverages are necessities in urban areas. On the other hand, egg, fish, meat and sugar are found to be luxuries in both urban and rural areas in the recent years. Household size has a different impact on the consumption pattern in both urban and rural areas of Bangladesh. Therefore, there is some differences in the pattern of consumption in both rural and urban areas which may have been created by some factors like income, demographic and various social factors.

These differences in consumption are not only found between the rural and urban areas, rather the differences are found within the same area among the various income and social groups. Moreover, the differences are also found between the different countries which we have discussed in our literature review chapter. A study carried out by Parikh (1991) shows the differences in the consumption of some food and non-food items between developed and developing countries. In their study, they show that the 48% of the total cereals is consumed by developed countries and 52% are consumed by developing countries. Milk and meat are showing opposite picture where, 72% & 64% milk and meat are consumed by developed countries and on the other hand 28% & 36% are consumed by developing countries respectively.

Therefore, developed countries can afford to consume more luxury foods than that of developing one. So that we can now conclude that there is no alternate to development for bringing the positive change in the pattern of consumption in Bangladesh especially, for the poorer section of the society. For development, poverty alleviation and thus reduction in income inequality is necessary. Here poverty is not seen from a single angle, it is dynamic which can be linked to income per head, education, health, safety and shelter. Therefore, poverty alleviation and inequality reduction is not only the rise in per capita income but also increase in the qualitative factors, which must be taken into account. Only then, we can expect the true image of development in a country. The state must be sufficiently sincere about these aspects.

Growth in the past was defined a rise in income per head where emphases were put on income, investment and industrialization, but there have been changes in the notion since then. Now a day, emphases are put on the increase in facilities of individuals for which it is necessary to increase the capability in individuals which would accelerate the pace of development. The faults in former development theory were that, emphases were put on national income and output, and the supply of the particular commodities. Individual entitlement and the power from this entitlement were not mentioned. The ultimate target of all economic development should be the creation of the individuals' capabilities. The main topic of discussion should be about what people can and can not

do. Can people achieve a long life, have they overcome early death? Have they got adequate education, communications, nutrition, sanitation, and employment? And to increase capabilities introduction of equity and growth are necessary (Sen, 1990). To achieve the MDGs, Bangladesh will need to substantially accelerate growth to 6-7% per annum, and ensure that such growth is much more pro-poor and better distributed (World Bank 2005). Thus it is important to achieve the faster rate of growth which can only help to achieve equality of income, expenditure and consumption in the different sections of our society whether between the rural and urban areas, or within the same area.

Therefore, not only growth but also economic inequality must be reduced. Otherwise, the majority will be deprived of the benefits of development in Bangladesh. From international experience it is clear that growth is only ideal for poverty when, in that country, inequality is minimal and only this condition can ensure the reduction in consumption disparities in a society like us.

Appendix

APPENDIX - A

Table: 1

A) Standard Errors (SE) and Relative Standard Errors (Rel. Se) of Some Selected Estimates by Residence, 2005

Selected Variables	Estimate (Tk.)	Standard Error (Tk)	Relative Standard Error (%)	95% Confidence Interval	
				Lower Limit	Upper Limit
National					
Income	7203	267.8	3.72	6676.979	7729.283
Consumption Expenditure	5964	129.2	2.17	5709.884	6417.459
Food Expenditure	3209	39.5	1.23	3131.715	3287.134
Rural					
Income	6096	229.0	3.76	5645.575	6545.466
Consumption Expenditure	5165	84.0	1.63	4999.813	5329.779
Food Expenditure	3024	40.5	1.34	2944.014	3103.054

Urban					
Income	10463	812.9	7.77	88865.98	12060.22
Consumption Expenditure	8315	445.4	5.36	7439.815	9190.003
Food Expenditure	3757	100.7	2.68	3558.763	3954.319

B) The standard errors for the head-count rate, the poverty gap and the squared poverty gap by residence.

Table : 2
Head Count Rates Using Lower Poverty Line (IP)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	25.13104	0.82475	23.51053	26.75154
Rural	28.58337	1.04793	26.52436	30.64238
Urban	14.61924	0.93101	12.78996	16.44852

Table : 3
Head Count Rates Using Upper Poverty Line (up)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	40.00926	0.99305	38.05808	41.96045
Rural	43.83640	1.20464	41.46948	46.20331
Urban	28.35626	1.60915	25.19455	31.51797

Table : 4
Poverty Gap using Lower Poverty Line (lpg)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	4.65777	0.20299	4.25892	5.05662
Rural	5.34352	0.26090	4.86089	5.85615
Urban	2.56978	0.20046	2.17592	2.96365

Table : 5
Poverty Gap using Upper Poverty Line (upg)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	8.99169	0.29524	8.41159	9.57179
Rural	9.80639	0.36888	9.08160	10.53118
Urban	6.51108	0.39870	5.72769	7.29447

Table : 6
Squared Poverty Gap using Lower Poverty Line (lspg)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	1.29777	0.07181	1.15668	1.43886
Rural	1.48259	0.09161	1.30260	1.66259
Urban	0.73502	0.07985	0.57812	0.89191

Table : 7
Squared Poverty Gap using Upper Poverty Line (uspg)

Residence	Using Lower Poverty Line		95% Confidence Interval	
	Estimates (%)	Standard Error (%)	Lower Limit	Upper Limit
National	2.87737	0.12110	2.63943	3.11532
Rural	3.12236	0.15252	2.82268	3.42204
Urban	2.13142	0.15380	1.82924	2.43360

APPENDIX – B

Estimation of Standard errors (STDs) and Relative Standard Errors (Rel. SE) 1991-92

Table: 8 Standard errors (STDs) and Relative Standard Errors (Rel. SE) of some selected estimates by residence

Selected Variables	National			Rural			Urban		
	Taka monthly	S . E	Rel. S . E	Taka monthly	S . E	Rel. S . E	Taka monthly S . E	Rel S . E	
Average Income	3341	51.71	1.55	3109	31.14	1.00	4832	183.92	3.81
Average Expenditure	2944	41.53	1.41	2721	26.64	0.98	4377	137.20	3.12
Average consumption Expenditure	2904	40.26	1.39	2690	26.69	0.99	4280	127.49	2.98
Food and Drinks	1932	24.11	1.25	1859	20.81	1.12	2398	45.30	1.89
Clothing and footwear	139	3.09	2.22	129	2.76	2.14	185	5.20	2.80
Fual and lighting	163	4.53	2.78	147	1.31	1.09	265	23.33	8.80

Housing and house rent	302	10.78	3.57	240	3.99	1.66	703	55.87	7.95
Miscellaneous	341	7.07	2.07	289	1.93	0.67	0.67	46.02	6.81

Sources : HES, 1991-92

APPENDIX - C

Table : 9 Estimate of monthly average per capita intake of some selected food items (in grams) and standard errors relative errors by residence 1995-96

Selected Variables	National			Rural			Urban		
	Grams	SE	Rel. SE	Grams	SE	Rel. SE	Grams	SE	Rel. SE
Rice	14372	92	0.64	14640	72	0.49	12647	221	1.75
Wheat	1103	38	3.45	1052	14	1.38	1431	188	13.16
Potato	1329	53	6.32	1260	48	3.65	1771	84	4.75
Masoor	239	7	2.93	205	5	2.68	457	17	3.66
Other Pulses	288	17	5.90	306	18	5.86	177	8	4.72
Vegetables	4178	30	0.72	4114	17	0.41	4588	113	2.47
Onion	363	16	4.41	339	12	3.62	516	39	7.58
Soyabean	141	6	4.26	102	3	3.08	392	24	6.25
Beef	159	7	4.40	137	3	2.30	302	33	10.84
Fish	930	24	2.58	882	19	2.12	1241	56	4.52
Eggs	144	4	2.78	139	3	2.28	176	6	3.58
Fruits	513	7	1.36	483	14	2.93	711	74	10.44
Sugar	116	8	6.90	96	5	5.72	243	18	7.496

HES 1995-96: Head- Count Rates- lower Poverty Line (HL):

APPENDIX - D

Estimation of Incidence of Poverty by Direct Calorie Intake Method

Table : 10 Incidence of poverty (HCR) by DCI method

Number and percent of population below poverty line						
Survey Year	National		Rural		Urban	
	No. in million	% of pop.	No. in million	% of pop.	No. in million	% of pop.
1	2	3	4	5	6	7
Poverty Line-1: Absolute poverty <= 2122 k. cal per capita per day						
2005	56.0	40.4	41.2	39.5	14.8	43.2
2000	55.8	44.3	42.6	42.3	13.2	52.5
1995-96	55.3	47.5	45.7	47.1	9.6	49.7
1991-92	51.6	47.5	44.8	47.6	6.8	46.7
Poverty Line-2: Hardcore poverty <= 1805 k. cal per capita per day						
2005	27.0	19.5	18.7	17.9	8.3	24.4
2000	24.9	20.0	18.8	18.7	6.0	25.0
1995-96	29.1	25.1	23.9	24.6	5.2	27.3

1991-92	30.4	28.0	26.6	28.3	3.8	26.3
Poverty Line-3: Ultra poverty <= 1600 k. cal per capita per day						
2005	10.8	7.8	7.0	6.7	3.8	11.0
2000	10.3	8.2	7.4	7.3	2.9	11.7

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