

**GENDER INEQUALITY IN THE DISTRIBUTION OF HOUSEHOLD
EXPENDITURES IN BANGLADESH:
A THEIL DECOMPOSITION ANALYSIS (1995-96)**

Navil Chowdhury
*Department of Economics and Social Sciences
BRAC University, 66 Mohakhali
Dhaka-1212, Bangladesh*

ABSTRACT

This paper attempts to study the gender inequality situation in Bangladesh during 1995-96 through examining the effect the gender of a household head and their marital status has on the per capita household expenditure. The study was conducted using the Theil inequality decomposition technique with household expenditure data from the 1995-96 Household Expenditure Survey (HES). The study reveals that gender in Bangladesh does not seem to play a large role in explaining total inequality as the between component accounted for less than 5 percent of total inequality. However, this conclusion seems premature when the marital status of household heads are examined for their effect on inequality. The results show the need to distinguish amongst the various types of female headed households themselves. In this regard, De jure female headed households form an especially vulnerable group. Hence policy makers must keep this in mind when designing policy to reduce inequality.

Key words: Inequality, Gender, Theil decomposition, Gini coefficient

I. INTRODUCTION

Poverty has been synonymous with Bangladesh since its birth in 1971. In 1992, 47.4 percent of the population was estimated to be living below the poverty line. Bangladesh accounted for 7.2 percent of the world's poor in 1992 (UNDP, 1994). Per capita GNP in 1994 was only \$230. This was the basis for a low HDI (Human Development Indicators) ranking (144 among 173 countries) along with indicators such as low literacy rate (49 percent) and high infant mortality rate (IMR) (75 percent). It effectively castigated Bangladesh to the status of a least developing country (LDC). The brunt of this deprivation was however seldom shared equitably among the sexes. This is most epitomized by the differences in household expenditure between male and female headed households. In this paper we examine the extent of this difference along with the effect of marital status on household expenditure between male and female headed households.

The literature on the issues of poverty and its alleviation in Bangladesh is rich and varied. Given the widespread nature of poverty, inequality in Bangladesh has not got as much singular attention

other than as a consequence of poverty. However, economic reforms since the mid-1970s and enhanced economic growth in the 1990s has led to increasing inequality with the fruits of growth accruing to a few. Furthermore, the extent and nature of inequality between the sexes also remains to be explored. Hence this paper attempts to give a glimpse of the gender inequality situation exclusively in Bangladesh in the middle of the 1990s.

The year 1995 is appropriate to see the effects on inequality caused by structural changes in the economy under the Enhanced Structural Adjustment program (ESAP) initiated in the early 1990s. GDP growth rate was higher in the 1990s at an average rate of 5 percent in comparison to the 4 percent average growth rate in the past decade. This paper will examine the effect of gender based household characteristics in Bangladesh during 1995-96, on expenditure inequality. This will be done using the Theil inequality decomposition technique with household expenditure data from the 1995-96 Household Expenditure Survey (HES).

There have been some studies done with a secondary focus on measuring inequality and the

factors determining inequality in Bangladesh. Alamgir (1978) measured the income inequality and poverty indices for 1963-64, 1966-67 and 1973-74 in the urban and rural areas of Bangladesh. Using data from the Bangladesh Bureau of Statistics (henceforth BBS), he found that there was a decline in the incidence of poverty and inequality between the early and late sixties.

Rahman and Haque (1988) attempted to examine the trends in poverty and inequality in Bangladesh between 1982 and 1984-85 using BBS data. They found little evidence that government development programmes had reduced poverty in the early eighties.

Sen et al. (1990) used household data from 62 sample villages to find the incidence of poverty by occupation based on three main indicators i.e. per capita income, household's self-evaluation about its deficit status and housing condition. They found that 82 percent of agricultural households fell in the category of moderate poverty with households engaged in the cottage industry accounting for the next biggest group in poverty (62 percent). Households engaged in services showed the lowest incidence of poverty.

Rahman and Huda (1992) considered inequality between rural occupational groups using the 1983-84 Household Expenditure Survey (HES) of the BBS. Their findings revealed a highly skewed distribution of income in the rural area between the groups of interest. However, they also noted that inequality within groups was also high and policy measures to transfer people from lower income groups to higher income groups would not necessarily lower inequality greatly. They also recommended more egalitarian policies as opposed to the ones previously pursued.

Ravallion and Sen (1996) found that the urban and rural Gini in per capita consumption in 1991-92 were equal to 0.319 and 0.255 respectively. But they could not investigate in detail the impact of household characteristics such as education, land ownership, and occupation on inequality in the absence of household level data

Wodon (1999) in his study provided two extensions to Yitzhaki and Lerman's (1991) group decomposition of the Gini index. He analyzed stratification (within the group) and inequality (between groups) along several dimensions at once.

This made the determinants of inequality more understandable. He also derived the impact on the Gini of marginal changes in income or consumption by group. This was used to evaluate targeted redistributive policies or to assess the impact of exogenous shocks by group on data from Bangladesh. The study focused on how inequality affected land ownership, education, and occupation. Education appeared to be a stronger determinant of inequality than occupation and land ownership. Marginal targeted transfers and taxes were seen to have more effect on redistribution when applied to education (from the well-educated to the illiterate) or occupation groups (from officials and managers to tenants and agricultural workers).

This paper is organized into four sections. The second section looks into the methodology and data used in the study. The third section will present the results of the Theil decomposition analysis and their implications. The last section will draw conclusions based on findings of the study.

II. METHODOLOGY AND THE DATA

A. Theoretical foundations

The study of inequality *within a country* has become popular since the 1970s. This approach looks to measure the role various components play in total inequality. They can be grouped into three broad categories of analysis where inequality is decomposed by:

- Economic sector (e.g. urban vs. rural)
- Income source (e.g. income from labor vs. capital vs. land vs. transfers)
- Family/Income determinant characteristics (including attributes of workers such as education, their jobs and regional and other locational considerations).

Income source and economic sector decompositions give an account of income inequality, whereas family/income determinant decompositions are interpreted casually (Fields, 1979).

The current study attempts decompositions by family/income determinant characteristics. Decompositions based on family/income determining (e.g. education, sex age and occupation) characteristics attribute inequality

more to differences in personal characteristics than other factors.

It is deemed that real expenditure would give a more accurate picture of the inequality situation as opposed to real income as expenditure reflects more precisely the level of welfare. Collecting data and measuring consumption is much easier than doing the same for income. This is true especially in the developing country context. Since Bangladesh is a developing country, we prefer to use real expenditure as a measure of inequality.

B. Methodology

Inequality in the distribution of household's per capita expenditure is measured with the Theil Indices formulated by Theil (1967). The Theil index of inequality is derived from the notion of entropy in information theory. The basic idea behind it is that occurrences that differ greatly from what was expected should receive more weight than events that conform to prior expectations. The Theil index's main attraction lies in its decomposability that estimates the contribution of different groups to total inequality (Fields, 1979). They also satisfy all the desirable properties as a measure of inequality in welfare i.e. mean independence, population size independence and the Pigou-Dalton principle of transfers (Bourguignon 1979; Shorrocks 1980). These two Theil indices are part of the generalized entropy class of inequality measures (Anand, 1983).

An inequality index is additively decomposable if total inequality can be said to be the sum of the between-group and within-group components. Mean independence means that the index remains unaffected if a similar proportion changes everyone's expenditure. Population size independence refers to the unchanging index even if the number of households at each expenditure level is changed by the same quantity. Lastly, the Pigou-Dalton principle of transfers entails that any expenditure transfer from a richer to a poorer household that does not reverse their relative ranks in expenditures lessens the value of the index.

Suppose that the population of all households is grouped into m mutually exclusive and collectively exhaustive socioeconomic groups (different age groups, different education groups, etc.). Then the Theil index T , which measures inequality in the

distribution of households in per capita expenditure, is given by:

$$T = \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y} \right) \log \left(\frac{y_{ij}/Y}{1/n} \right) = \frac{1}{n} \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{\mu} \right) \log \left(\frac{y_{ij}}{\mu} \right), \quad (1)$$

Where

y_{ij} = per capita expenditure of household j in group i ($i = 1, 2, \dots, m; j = 1, 2, \dots, n_i$);

n_i = total number of households in group i

($i=1, 2, \dots, m$);

$Y = \left(\sum_{i=1}^m \sum_{j=1}^{n_i} y_{ij} \right)$ = total expenditure of all households;

$n = \left(\sum_{i=1}^m n_i \right)$ = total number of all households; and

$\mu = \left(\frac{Y}{n} \right)$ = mean (per capita) expenditure for all households.

In measuring inequality for the distribution of households in per capita expenditure, we assume that each household receives its per capita expenditure.

The Theil index T , as given in (1), can be decomposed into the within-sector component and the between-sector component as follows:

$$\begin{aligned} T &= \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y} \right) \log \left(\frac{y_{ij}/Y}{1/n} \right) \\ &= \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y_i} \right) \left[\log \left(\frac{y_{ij}/Y_i}{1/n_i} \right) + \log \left(\frac{Y_i/Y}{n_i/n} \right) \right] \\ &= \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \left[\sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y_i} \right) \log \left(\frac{y_{ij}/Y_i}{1/n_i} \right) \right] + \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \log \left(\frac{Y_i/Y}{n_i/n} \right), \end{aligned}$$

Since considering the fact that,

$\sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y_i} \right) = \frac{\sum_{j=1}^{n_i} y_{ij}}{Y_i} = \frac{Y_i}{Y_i} = 1$, the second term is recast as

$$= \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y_i} \right) \log \left(\frac{Y_i/Y}{n_i/n} \right) = \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \log \left(\frac{Y_i/Y}{n_i/n} \right),$$

where

Y_i = total expenditure of households in group i ,

n_i = total number of households in group i .

Therefore, we get

$$T = \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) T_i + \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \log \left(\frac{Y_i/Y}{n_i/n} \right) = T_w + T_B. \quad (2)$$

where

$$T_i = \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y_i} \right) \log \left(\frac{y_{ij}/Y_i}{1/n_i} \right) = \frac{1}{n_i} \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{\mu_i} \right) \log \left(\frac{y_{ij}}{\mu_i} \right),$$

and

$\mu_i \left(= \frac{Y_i}{n_i} \right)$ = mean (per capita) expenditure for households in group i .

It should be noted that the between component can be rewritten as:

$$T_B = \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \log \left(\frac{Y_i/Y}{n_i/n} \right) = \sum_{i=1}^m \frac{n_i}{n} \left(\frac{\mu_i}{\mu} \right) \log \left(\frac{\mu_i}{\mu} \right)$$

The other Theil measure,

the Theil index L , is given by:

$$L = \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{1}{n} \right) \log \left(\frac{1/n}{y_{ij}/Y} \right) = \frac{1}{n} \sum_{i=1}^m \sum_{j=1}^{n_i} \log \left(\frac{\mu}{y_{ij}} \right)$$

(3) This index can also be decomposed additively into the within-sector component and the between-sector component as given below:

$$L = \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{1}{n} \right) \log \left(\frac{1/n}{y_{ij}/Y} \right) = \sum_{i=1}^m \left(\frac{n_i}{n} \right) \sum_{j=1}^{n_i} \left(\frac{1}{n_i} \right) \left[\log \left(\frac{1/n_i}{y_{ij}/Y_i} \right) + \log \left(\frac{n_i/n}{Y_i/Y} \right) \right] = \sum_{i=1}^m \left(\frac{n_i}{n} \right) \left[\sum_{j=1}^{n_i} \left(\frac{1}{n_i} \right) \log \left(\frac{1/n_i}{y_{ij}/Y_i} \right) \right] + \sum_{i=1}^m \left(\frac{n_i}{n} \right) \log \left(\frac{n_i/n}{Y_i/Y} \right)$$

since considering the fact that $\sum_{j=1}^{n_i} \left(\frac{1}{n_i} \right) = \frac{n_i}{n_i} = 1$,

the second term is rewritten as

$$= \sum_{i=1}^m \left(\frac{n_i}{n} \right) \sum_{j=1}^{n_i} \left(\frac{1}{n_i} \right) \log \left(\frac{n_i/n}{Y_i/Y} \right) = \sum_{i=1}^m \left(\frac{n_i}{n} \right) \log \left(\frac{n_i/n}{Y_i/Y} \right)$$

Therefore, we get

$$L = \sum_{i=1}^m \left(\frac{n_i}{n} \right) L_i + \sum_{i=1}^m \left(\frac{n_i}{n} \right) \log \left(\frac{n_i/n}{Y_i/Y} \right) = L_w + L_B,$$

where

$$L_i = \sum_{j=1}^{n_i} \left(\frac{1}{n_i} \right) \log \left(\frac{1/n_i}{y_{ij}/Y_i} \right) = \sum_{j=1}^{n_i} \left(\frac{1}{n_i} \right) \log \left(\frac{\mu_i}{y_{ij}} \right).$$

It should be noted that the between component can be rewritten as:

$$L_B = \sum_{i=1}^m \left(\frac{n_i}{n} \right) \log \left(\frac{n_i/n}{Y_i/Y} \right) = \sum_{i=1}^m \frac{n_i}{n} \log \left(\frac{\mu}{\mu_i} \right).$$

In equations (1) and (3), $1/n$ is the population share of a household and $\frac{y_{ij}}{Y}$ is the expenditure share

of the j th household in-group i . The indices T and L compare population share and expenditures for all households, and hence measure the level of inequality among the households in terms of per capita expenditure. In particular, Theil index T uses expenditure shares as weights, while the Theil index L uses population shares as weights. Thus, Theil index T is sensitive to changes in the upper-expenditure categories, whereas the latter is

sensitive to changes in the lower-expenditure categories.

The study also uses the Gini coefficient as a measure of inequality as it fulfills the desired properties (mean independence, population size independence and the Pigou-Dalton condition) as a measure of inequality in welfare. However, it is not additively decomposable unlike the Theil indices.

Suppose that there are n households in a sample and they are arranged in non-descending order of per capita expenditure as $y_1 \leq y_2 \leq y_3 \dots$

Then the Gini coefficient is defined as (see, for example, Anand (1983)):

$$G = 1 - \sum_{i=1}^{n-1} (F_{i+1} + H_i) = \sum_{i=1}^{n-1} (F_i H_{i+1} - F_{i+1} H_i)$$

Where F_i = the cumulative population share of

households up to i th household;

H_i = the cumulative expenditure share of households up to i th household;

and

$$F_0 = H_0 = 0.$$

The Gini coefficient can also be defined as:

$$G = \frac{1}{2n^2 \mu} \sum_{i=1}^n \sum_{j=1}^n |y_i - y_j|$$

Besides these three measures, the results for GE (-1) are also presented. This is keeping in mind the bottom level sensitivity of this measure along with the Theil L index. Given that Bangladesh is a low-income country; such measures are more relevant to analyzing inequality in its case.

C. Data sources

The main survey instrument to assess household expenditure and other characteristics is the Household Expenditure Survey (HES) collected by the Bangladesh Bureau of Statistics (BBS). Bangladesh Bureau of Statistics (BBS) has a long tradition of conducting the HES, which dates back to the pre-independence period. After independence, this type of survey was first conducted in 1973-74. Since then including the latest survey in 1995-96, BBS has completed twelve rounds of HES (BBS, 1996). The principal

method of data collection was direct interview method based on a pre-prepared questionnaire.

There have been some questions over the quality of HES data due to the lack of a uniform method of recording data and the lack of panel data at the household level. The greatest controversy arose with regard to apparent fall in rural poverty, between 1981-1986, as pointed out in studies using the HES data. This was questionable as the same period was a witness to declining macro-economic indicators as recorded by the BBS national accounts data. However, the quality of surveys from 1983-84 onwards are considered more reliable than previous ones (Sen, 1995). BBS data excludes information of investment expenditures. The expenditure schedule thus defined includes expenditures on food and non-food basic necessities including clothing, footwear, health, education, recreation and entertainment, transport etc. Expenditure on food as a proportion of total consumption expenditure is expectedly high at approximately 70 percent.

Table 1 gives some broad statistics for the entire dataset. The total number of individuals in the dataset is 39,051 of which 12,598 live in the urban area and 26,453 in the rural area. The dataset comprises mainly males who number 36,356 while women make up the rest 2,695 members of the population for the survey. Altogether the dataset contains 7,420 households.

Table 1
Descriptive Statistics by location and gender

Category	No. of Individuals	Mean household Expenditure
All groups	39051	5257
Location		
<i>Urban</i>	12598	4123
<i>Rural</i>	26453	7640
Gender		
<i>Male</i>	36356	5345
<i>Female</i>	2695	4084

Source: Based on author's calculations from HES 1995-96

III. RESULTS AND DATA ANALYSIS

A. Overall trends in inequality in Bangladesh

Table 2 shows the distribution of income in Bangladesh between 1973-74 to 1988-84. A

slightly increasing trend is observed in the Gini coefficient over the years. The period immediately after 1971 i.e. after independence witnessed wide spread devastation coupled with famines and other ravages of nature. The lower Gini in this period is indicative of lower income inequalities associated with an economy before entering its first development stage (Kuznets, 1955). The urban Gini index rose in 1981-82 to 0.41 coinciding with the first implementation of the SAP. The slightly increasing trend in the 1980s is in keeping with the increased urbanization and industrialization at this time. The Gini index from 1985-86 onwards shows a higher trend that is normally associated with an economy in transition. The distribution in 1985-86 was particularly skewed with the rural bottom 40 percent of the population getting only 14 percent of the income. The Bangladesh economy at this stage was in the process of implementing the structural

adjustment program under the structural adjustment facility of the IMF. This seems to have played a role in increasing inequality as seen by the larger share accruing to the urban rich in 1988-89.

B. Decompositions of inequality by household expenditure

Decomposition by gender

Gender has been recognized as a major factor in deciding the resources controlled by an individual in Bangladesh. Women have access to fewer resources than men due to constraints on female inheritance and control of factors of production. Affluent women also command greater resources than poorer ones (North-South Institute, 1985). Female-headed households in Bangladesh are formed mainly in response to adverse economic, demographic and social factors.

Table 2: Trends in income distribution

Year	Income accruing (Bottom 40 %)		Income accruing (Top 5 %)		Gini Co-efficient		
	Rural	Urban	Rural	Urban	Rural	Urban	All gps.
1973-74	19.1	17.8	16.0	18.6	0.35	0.38	0.34
1981-82	18.8	16.0	16.7	20.8	0.35	0.41	0.34
1983-84	18.2	17.8	18.1	16.9	0.35	0.37	0.35
1985-86	13.9	19.2	21.3	18.0	0.36	0.37	0.36
1988-89	18.0	17.5	19.8	20.0	0.37	0.38	0.37

Source: Bangladesh Bureau of Statistics, HES 1995-96, as quoted in Hye, 1996.

Female-headed households in Bangladesh have been identified as being of two types:

1. De jure households comprising of women who have been divorced, widowed or abandoned and are responsible for their own survival and their children.
2. De facto households where the male head of the household lives outside the village for livelihood purposes (male out-migration) and visits the family occasionally.

Some characteristics of these households include a high proportion of female members, smaller household size (62 percent in De jure households), higher proportion of earning members (40 percent in De jure households) and low economic dependency ratio (Hamid, 1995).

Mean per capita expenditure is surprisingly higher for female-headed households than male-headed

households for the rural sector and all groups (table 3). However, male-headed urban households have slightly higher per capita expenditure than female-headed urban households. The high per capita expenditure of female-headed households in general can be accounted for by the higher number of female and child members. This leads to a higher proportion of earning members and the resulting lower dependency ratio. Moreover, productive expenditure such as education and health care of female children, higher spending on nutrition etc. has been higher in female-headed households in Bangladesh. This has been the main cause of women being chosen as the primary beneficiaries of poverty alleviation programs such as Grameen Bank's microfinance loans (Wahid, 1994). It is also notable that in the sample a higher number of female-headed households (35.3 percent) are urban based compared to only 31.7 percent of male-headed households. Since urban wages tend to be higher, the greater number of

female-headed households in the urban area contributes in making the mean per capita expenditure for female-headed households for all groups higher than that of the male-headed households. The urban to rural ratio is higher for male-headed households indicative of the more lucrative jobs for men in the urban sector. It is

lower for women demonstrating the lower average wages for women in both sectors. This can be explained by the higher proportion (36 per cent) of female-headed households depending on wage labor than male-headed households. (Hamid, 1995). The female wage ratio was however only 40 percent of the male wage (BIDS, 1990).

Table 3: Mean monthly per capita expenditure by gender in 1995-96

Gender	Mean Per Capita Expenditure (Tk.)	Mean Urban Expenditure (TK.)	Mean Rural Expenditure (TK.)	Urban-Rural ratio in Mean Exp	Share of Urban Household (%)	No. of Household (% Share)
Male	843	1237	660	1.87	31.7	90.0
Female	900	1215	729	1.67	35.3	10.0
All groups	849	1235	667	1.85	32.1	100.0

Source: Based on author's calculation

Table 4: Inequality decomposition by gender

Gender	Theil T	Theil L	GE (-1)	Gini
Male	0.233	0.196	0.203	0.348
Female	0.241	0.221	0.245	0.370
All groups	0.234	0.199	0.207	0.350
Within group	0.234	0.199	0.207	
(% share)	99.9	99.9	99.9	
Between group	0.000	0.000	0.000	
(% share)	0.1	0.1	0.1	

Source: As for table 3

The low between group contribution to total inequality by the Theil Indices (table 4) indicates that gender is not an important factor behind explaining total inequality. Hence, policy measures to decrease gender inequality won't have much impact on reducing total inequality. However, the higher Gini index measure of 3.70 for female-headed households is indicative of more within group inequality in this group as compared to the male group.

Table 5: Mean monthly per capita expenditure by marital status and gender in 1995-96

Marital Status	Mean Per Capita Expenditure (Tk.)	Mean Expenditure (Tk.)		No. of households (% share)
		Male	Female	
Married	846	838	981	90.7
Unmarried	1027	1014	1223	3.3
Widowed	823	782	831	5.3
Divorced	630	759	598	0.6
All groups	849	843	900	100.0

Source: As for table 3

Decomposition by marital status

Marriage as a social association plays an economic role in a traditional society such as Bangladesh. The marital status of an individual, especially women, could be decisive in their expenditure patterns. Marriage brings about extra income in the

form of dowry, inheritance or an extra pair of hand for men in rural areas. Marriage for women provides security, standing and a source of support that are dependant on their relationship with their husband. There appears to be a high number of widows among women who are over 65 years of age. This is mainly due to the age gap of married

couples and also partly due to the social taboo of an older widow seeking remarriage (Hamid, 1995). In the case of women, it is generally perceived that a woman who is widowed, divorced or abandoned is the most vulnerable in terms of sources of income.

This is reflected in table 5 where the mean per capita monthly expenditure for a divorced female is the lowest at Tk.598 The mean expenditure for a widowed female is also low at Tk.831. The plight of widowed women is reflected in their increased participation in the labor force after age 65 as opposed to men whose participation in economic activities declines after age 50 (Hamid, 1995). Interestingly, the mean expenditure for a divorced or widowed male is also low at Tk.759 and Tk.782 respectively. This backs up the previous assertion

of marriage playing an important economic function.

Table 6 reflects the higher effect of marital status on women rather than men with the between group component explaining 3.5 percent of total inequality by the Theil index L for women. This is opposed to the low 0.3 percent explanatory power of between group component for men. The relative well being in terms of expenditure for female headed households when decomposing inequality by gender hides the inequality within female headed households i.e. between De facto and De jure households. Thus, when considering policies to reduce inequality, allowances must be made for the more vulnerable groups within women such as widowed, divorced or abandoned women (De jure households).

Table 6: Inequality decomposition by marital status and gender

Marital Status	Theil T		Theil L		GE (-1)		Gini	
	Male	Female	Male	Female	Male	Female	Male	Female
Married	0.232	0.250	0.195	0.231	0.202	0.262	0.347	0.378
Unmarried	0.266	0.358	0.222	0.299	0.237	0.333	0.367	0.413
Widowed	0.105	0.217	0.101	0.203	0.108	0.226	0.252	0.355
Divorced	0.166	0.084	0.160	0.084	0.173	0.090	0.313	0.232
All groups	0.233	0.241	0.196	0.221	0.203	0.246	0.348	0.370
Within group	0.233	0.234	0.195	0.213	0.203	0.238		
(% share)	99.7	96.9	99.7	96.5	99.7	96.6		
Between group	0.001	0.008	0.001	0.008	0.001	0.008		
(% share)	0.3	3.1	0.3	3.5	0.3	3.4		

Source: As for table 3

Table 6 reflects the higher effect of marital status on women rather than men with the between group component explaining 3.5 percent of total inequality by the Theil index L for women. This is opposed to the low 0.3 percent explanatory power of between group component for men. The relative well being in terms of expenditure for female headed households when decomposing inequality by gender hides the inequality within female headed households i.e. between De facto and De jure households. Thus, when considering policies to reduce inequality, allowances must be made for the more vulnerable groups within women such as

widowed, divorced or abandoned women (De jure households).

IV. CONCLUSIONS

This paper attempted to study an aspect of the gender inequality situation in Bangladesh during 1995-96. The paper looks at the effect of gender characteristics on household expenditure inequality in Bangladesh during 1995-96. In this vein, the paper examined the effect the gender of a household head and their marital status has on the per capita household expenditure.

The study reveals that gender inequality did not play much of a role in determining total inequality in 1995-96. However, this result hides the more complex nature of inequality based on the gender of a household head. Hence, the issue of female-headed households requires more in-depth study. This is attempted by examining the effect of marital status of the household head on both male and female headed households. The results show the need to distinguish among the various types of female headed households themselves.

In particular, De jure households (households headed by widowed, abandoned and divorced women) form an especially vulnerable group. Social safety mechanisms such as vulnerable group feeding (VGF) and Food For Work Programmes (FFWP) must treat them as a priority group.

Poverty alleviation is the stated goal of nearly all economic planning documents in Bangladesh. It has had some success in this regard reducing the proportion of the population below the poverty line from 65 percent in 1974 to 48 percent in 1986. The higher average GDP growth of the 1990s raised hopes that the speed of poverty alleviation would be quickened. However, the higher growth has brought about increasing inequality within society. This burden of inequality is disproportionately shared between the sexes as seen by the expenditure patterns of female headed households, especially De jure female headed households. Recent initiatives to employ heads of such households in repairing village roads under government works programmes are a step in the right direction. However, to ensure the reduction of such inequality, policy makers must take into cognizance the importance of gender when designing policies to reduce inequality within society.

REFERENCES

- [1] United Nations Development Program: UN Bangladesh-Towards an Integrated Employment Promotions and Poverty Alleviation. Report of a Mission. UNDP reports. (1994)
- [2] M. Alamgir: Bangladesh: A Case of Below Poverty Level Equilibrium Trap. Bangladesh Institute of Development Studies. (1978)
- [3] A. Rahman and T. Haque: Poverty and Inequality in Bangladesh in the Eighties: An Analysis of Some Recent Evidence. BIDS Research Report No. 91. (1988)
- [4] B. Sen, O.H. Chowdhury, S. Hamid, M. Hossain, H.Z. Rahman: The Face of Rural Poverty in Bangladesh: Trends and Insights. Bangladesh Institute of Development Studies. (1990)
- [5] M. Rahman, S.Huda: "Decomposition of Income Inequality in Rural Bangladesh" *Modern Asian Studies*, **26**, pp 83-93. (1992)
- [6] M. Ravallion, B. Sen: "When Method Matters; Toward A Resolution of the Debate about Bangladesh's Poverty Measures" *Economic Development and Cultural Change*, **44**, pp 761-792. (1996)
- [7] Q. Wodon: Between Group Inequality and Targeted Transfers. World Bank Policy Research Working Paper 2075. (1999)
- [8] S. Yitzhaki, R. I. Lerman: "Income Stratification and Income Inequality" *Review of Income and Wealth*, **37**, pp 313-329. (1991)
- [9] G. Fields: "Decomposing LDC Inequality" *Oxford Economic Papers*, **31**, pp 437-459. (1979)
- [10] H. Theil: *Economics and Information Theory*, Amsterdam: North Holland. (1967)
- [11] F. Bourguignon: "Decomposable Income Inequality Measures" *Econometria*, **47**, pp 901-920. (1979)
- [12] A. Shorrocks: "The Class of Additively Decomposable Inequality Measures" *Econometria*, **48**, pp 613-625. (1980)
- [13] S. Anand: *Inequality and Poverty in Malaysia: Measurement and Decomposition*, New York: Oxford University Press. (1983)
- [14] Bangladesh Bureau of Statistics (BBS) 1996: Report on the Household Expenditure Survey 1995-96. Bangladesh Bureau of Statistics. (1996)
- [15] B. Sen: *Rural Poverty Trends 1963-64 to 1989-90. Chapter 3 in Rethinking Rural Poverty*, ed. Rahman Hossain. Dhaka: University Press Ltd. (1995)

- [16] S. Kuznets: "Economic Growth and Income Inequality" *The American Economic Review*, **45**, pp 1-28. (1955)
- [17] North-South Institute. Rural Poverty in Bangladesh-A report to the like minded Group. (1985)
- [18] H. Hye: *Below the line: Rural Poverty in Bangladesh*, Dhaka: University Press Ltd. (1996)
- [19] S. Hamid: *Female-headed households. Chapter 11 in Rethinking Rural Poverty*, ed. Rahman Hossain. Dhaka: University Press Ltd. (1995)
- [20] A. Wahid: "The Grameen Bank and Poverty Alleviation in Bangladesh: Theory, Evidence and Limitations" *American Journal of Economics and Sociology*, **53**, pp 1-15. (1994)
- [21] Bangladesh Institute of Development Studies (BIDS): Analysis of Poverty Trends Project. BIDS: 62 Village Survey. (1990)