

# The Impact of Micro-Level Determinants of Poverty in Bangladesh : A Field Survey

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## Abstract

*This paper addresses some important issues on the concepts and determinants of poverty. The word 'poverty' can be considered to have a cluster of different overlapping meanings, depending on which subject area or discourse is being examined. In this study, the concepts of poverty will be examined from an economic point of view. Poverty may be due to national, sector-specific, community, household or individual. Determinants of poverty can be grouped into categories based on the channels through which they affect the poverty levels. In fact, there are no single determinants of poverty; the plight of some poor could be due to several factors, each contributing to some degree of observed poverty. In most cases, however, poverty is likely to be the result of several mutually reinforcing factors that together define its scope and pervasiveness. Section one examines the introduction, section two focuses on objectives of the study, section three analyzes the methodology of the study, section four explore the concepts of poverty, section five explains the determinants of poverty, section six analyses the results and discussion of a model and final section explore conclusion.*

## Keyword

*Impact, micro-level, poverty, concept and determinants.*

## I. Introduction

Poverty is a global issue. Despite changes in development paradigms in the last half of the 21st century, the promise to bring wellbeing to all human being remained unfulfilled. About more than 1.2 billion people in the world are struggling to survive at the margin of human existence on under one dollar a day, about 2.7 billion people in the world are living on less than two dollars a day, more than 114 million children of primary school age have never stepped inside a class room, about 29,000 children die each day from largely preventable malnutrition and diseases and 800 million people stay hungry in which 300 million are children. About 2.6 billion people of the world's population, i.e., about 40 percent are depriving from basic sanitation and one billion people are suffering to unsafe drinking water (UN millennium project 2002). According to the World Bank, in the next 25 years, the world's population will roughly increase by additional 2 billion. About 97 per cent of this increase will be in developing countries (World Bank 2000). The increase population will be the problems of environmental degradation, unemployment and poverty. The elimination of poverty is currently a key issue of all developing countries. The main justification for this is the central objective of the Millennium Development Goals (MDG) that were agreed by 140 countries at the UN Millennium Summit in New York, is halving of poverty by 2015.

## II. Objectives of The Study

The basic objective of this study is to provide a guide line of concepts and micro – level determinants of poverty. For this purpose the specific objectives are :

- to review the poverty concepts;
- to identify the socio-economic and demographic factors that affect household poverty status

## III. Methodology of The Study

Poverty is not a new topic in economic development. Considerable research has been performed on the issue of poverty and its long run social and economic effects in developed as well as in developing countries. In the present study an attempt is made to concepts of poverty and analyzes the socio-economic and demographic determinants of poverty. To identify the socio-economic and

demographic factors of poverty, the study attempts to construct a log-linear multiple regression model considering indicators like: the age and education of household head, household land holding status; value of non-land assets; household size; number of earners to household size; dependency ratio, and occupation of the household head.

Both primary and secondary data are used for the study but emphasis has been given on primary data. Primary data are used to estimate different indicators of poverty. Secondary data have also been used for necessary comparison and comments. Secondary data are collected from Bangladesh Bureau of Statistics monthly and yearly Bulletins; Household Expenditure Survey and various government and Non-government institutions and departments; individual studies and reliable internet sources.

## IV. Concepts of Poverty

In economic terms, poverty means, a country, region or household are poor when the per capita income of a country or the income of a household is very low. In political terms, poverty means, a country, a region or a group of people are poor which are dependent on more powerful groups or individuals in order to express their own rights or choices. In social terms the manifestation of poverty is revealed when a country, region or household breeds all types of socially unacceptable behaviors like drug addiction, crime, prostitution, violence in a family or in a community and terrorism, all of which degrade human self respect, moral and social values of the society as a whole, when more and more people in the community become intolerant of each other and are rude towards each other in their day to day life.

## A. Absolute And Relative Poverty

There is a long tradition of debate about relative versus absolute definitions of poverty. A relative definition is more appropriate in the developed countries whereas in the developing countries, an absolute definition is relevant. Absolute poverty is viewed as an objective and scientific definition that is based on the nation's subsistence. Absolute poverty describes the conditions in which the basic needs cannot be met. The relative poverty is living conditions and resources in the society in relations to others. The relative poverty is the unequal distribution of resources and

associated with a matter of social equity. It is relate to average income of the society and social exclusion.

**B. Chronic Poverty and Transient Poverty**

The transient poverty is the poverty that is caused by variability in consumption. On the other hand, chronic poverty is that the mean consumption of a household with below the poverty line across all periods. Chronic poverty different from transient poverty, but the difference between the two is likely to call for distinct policy attitudes and responses. The chronic poor suffer from persistent deprivation. The chronically poor are also those who need external help to get out of the poverty trap and they remain poor despite implementation of policies to tackle poverty.

**C. Income/ Consumption Perspective of Poverty**

Identification of poverty is the most commonly used in this approach, especially, applied in welfare economics. Poverty means - a person is poor if, and only if, his or her access to economic resources is insufficient to acquire enough commodities to meet the basic material needs adequately. This approach, in general, focuses on material needs. In gauging poverty, all human needs are measured by two main items of income/consumption which are part of material needs. The method is based on monetary terms which allows for simple calculation and this approach is also employs some statistical techniques to gauge poverty, such as - headcount index, poverty gap index and severity of poverty.

**D. Basic Needs Perspective of Poverty**

This approach to the identification of poverty takes the income approach one step further. It defines poverty as the deprivation of material requirements for meeting basic human needs. The concept of deprivation goes beyond the lack of personal income to include the access of basic needs, such as - food, shelter, schooling, health, water, sanitation facilities and opportunities for both employment and participation and these are used as indicators for measuring poverty. The basic needs concept varies across populations. Its concept is relative and it is not limited to physical needs for personal survival, but it includes community services and facilities, such as - infrastructure and other non-material assets.

**E. Human Capability Perspective of Poverty**

The Capability of poverty is a deprivation or failure of a person to achieve or develop certain basic functioning or capability, where basic capabilities are considered a person’s achieved abilities to adequately fulfill certain crucial roles at a minimal level. The concept of capability is broad and is not limited to basic capability such as income, education, health and nutrition, but also includes other capabilities such as human rights, opportunity, and so on. Capability includes the concept of freedom, which includes freedom in social and economic arrangements, political and civil rights.

**V. Micro-Level Determinants of Poverty**

There are a variety of characteristics of micro level, which are usually associated with poverty, i.e., the age structure of household members, education, gender of the household head, and the extent of participation in the labor force. In recent times, other components that fall under this category have included domestic violence prevention, and gender-based, antidiscrimination policies. The following discussion organizes these characteristics into groups and discusses them in detail. These groups are demographic, economic and social characteristics.

**A. Demographic Determinants**

There are some demographic factors in micro or household level, which play a significant role in determining the poverty status. It would be appropriate to provide a brief explanation of how these factors are correlated with poverty.

**1. Household Size and Proportion of Dependent**

The household size is an important demographic variable that has an impact on poverty. A household where the members are many, they possess a high proportion of dependents, are likely to be poor relative to smaller ones. In the present analysis, the dependency ratio is calculated as the ratio of the number of family members below 15 and over 65 not in the labor force to those in labor force in the household. A larger households with a high portion of dependents are more prone to poverty is plausible. Research studies show that there is an inverse relationship between household size and poverty. The following table indicates the incidence of poverty by household size.

Table 1 : Poverty Incidence by Size of Household (Percentage)

Year	Household size					
	1-2	3-4	5-6	7-8	9-10	11+
1995-96	31.0	50.3	57.5	54.4	54.2	41.7
2000	28.4	41.0	52.3	54.9	54.8	37.6
2005	19.1	33.3	43.6	46.6	44.8	35.5
2010	15.1	24.4	35.1	44.0	37.2	25.2

Source : Various HIES

**2. Age of The Household Head**

Poverty mainly affects people who are under or above productive ages. Generally, young people have low income because their early experience in the labor market starts with low income and fewer hours of work. As individuals age, there is gradual gain in education, work experience and labor network. The estimates of HCR by age of head of household showed very interesting pattern in various year in Bangladesh. During 1995 to 2010, the HCR increases for the age ≤ 29 of head to 30-39 and then falls gradually for the subsequent age groups. It recorded the lowest HCR for the head of age of 60+. This may happen due to more than one earner in the large family, where the head of age 60+ are likely to reside. The following table indicates the incidence of poverty by age of the household head.

Table 2 : Poverty Incidence by Age of Household head (Percentage)

Year	All ages				
	≤ 29	30-39	40-49	50-59	60+
1995	58.7	62.6	52.6	49.6	41.6
2000	49.0	56.2	50.0	44.8	40.9
2005	45.9	47.7	40.7	33.5	33.1
2010	35.6	37.0	31.4	25.8	28.1

Source : Various HIES

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## B. Economic Determinants

Apart from income or consumption –which is typically used to define whether a household is poor – there are a number of other economic characteristics that correlate with poverty, most notably household employment and the property and other assets owned by the household.

### 1. Unemployment and Poverty

Unemployment and poverty are the two major challenges that are facing the world economy at present. Unemployment leads to financial crisis and reduces the overall purchasing capacity of a nation. This in turn results in poverty followed by increasing burden of debt. Lack of effective aggregate demand of labor is one of the principal reasons for unemployment. In the less developed economies a substantial portion of the total workforce works as surplus labor. This problem is particularly prevalent in the agricultural sector. Due to excess labor, the marginal productivity of the workforce may be zero or even negative. It is true that unemployment and poverty are mostly common in the less developed economies. Unemployment is a major factor contributing to poverty in Bangladesh. There are many people in Bangladesh who lack the opportunity of being employed.

### 2. Assets And Poverty

Assets have been argued as determinants of household's wealth. If a household lacks assets, then they face poverty. The assets have been classified by the studies to include natural, physical, human, social and financial assets. In Bangladesh, communities classified themselves into the rich and the poor based on asset ownership. On the basis of communities, rich people are those who have their own land and other properties, livestock for cultivation, and money for investment, and can afford sufficient meals, wear good clothes, send their children to school, have jobs and mobility, and are free from disability. Poor people are those who are denied access to credit and loans, suffer from periodic food insecurity and deficits, no assets and no capital and are forced to seek credit to cover their daily expenditures, live in rented tin or bamboo houses, mostly work as day labourers and are landless without farmland.

## C. Social Determinants

Aside from demographic and economic indicators, there are some social indicators are correlated with poverty and household living standards. The social indicators generally selected are education and shelter. In the following sub-sections how these indicators relate to poverty will be discussed.

### 1. Education and Poverty

Education is an important dimension of the non homogeneity of labor. High educational attainment may imply a greater set of employment opportunities and specifically in the rural context, a better awareness of the full potential of new agricultural technologies and associated agricultural practices. The educational index is constructed by dividing the total number of educational

points by household size. In view of its potential role, we hypothesize a positive relationship with household welfare and a negative one with poverty incidence. The table 5.3.2 indicates the incidence of poverty by level of education of Household Head.

Table: 1: Poverty incidence by level of education of Household Head (%)

Level of education	1995-96	2000	2005	2010
No education	67.0	63.1	54.7	42.8
Completed up to S.S.C	45.2	38.45	33.25	29.15
Completed above S.S.C	15.5	15.1	9.3	7.5

Source : Various HIES

There is a positive relationship across most societies between the wages and salaries (or expenditures) people receive at work and the level of education which they have attained. In Bangladesh, according to HIES - 2010, per capita income of households with illiterate head is Tk. 1,807, per capita income of households with heads who passed class I-V is Tk. 2,205. On the other hand, per capita income of households with heads being graduate or equivalent educational level is Tk. 5,800 and a household with heads as doctor is Tk. 24,064. It is observed that, per capita income increases with the education of household head.

### 2. Shelter and Poverty

Inadequate access to shelter by households may cause them to be unable to exploit the economic benefits that are associated with this productive asset, thus making them vulnerable to a myriad of adversities which could lead to poverty. Shelter refers to the overall framework of the personal life of the household. It is evaluated by three components: housing, services, and the environment. Housing indicators include the type of building (size and type of materials, i.e., mud and straw, and baked and unbaked bricks); the means through which one has access to housing and household equipment.

## VI. Results and Discussions

A log-linear multiple regression model was developed to predict the level of poverty in Bangladesh using a number of key economic variables that were considered a priori to have major influences on poverty levels. The major determinants includes, Households Size, Age of the Household Head, Education Level of Head, Number of Earners of the Household, Numbers of Dependent, Household Landholding Status, Value of Physical Assets, Occupation of the household Head. By far the most widespread technique used to identify the contributions of those different variables to poverty is regression analysis which is divided into two main types of analysis (Houghton and Khandker 2009). The first type attempts to explain the level of per capita expenditure or income as a function of variables which are considered as causes or correlated of poverty. The second type attempts to explain whether a household is poor or not. Both types of regression techniques are applied to build up this model.

The proposed model is –

$$\log \frac{y_i}{z} = \alpha_0 + \alpha_1(SH) + \alpha_2(AH) + \alpha_3 D_j \sum_{i=1}^3 (EH) + \alpha_4(EAH) + \alpha_5(DH) + \alpha_6(LH) + \alpha_7(ASH) + \alpha_8 D_j \sum_{i=1}^3 (OH) + \alpha_9(AH)^2 + u$$

Where, z is the poverty line,  $y_i$  is per capita expenditure,  $\alpha$  is the

coefficient of the independent variables,  $u$  is the error term. All variables are statistically significant at about 1 per cent level of significance except size, education, assets, landholding, earners and occupation of the household. The value of  $R^2$  is the range from 0.84 to 0.99.

The value of the coefficient SH is negative sign. This implies that, the household size has a negative impact on the household welfare. The higher the household size the lower the household welfare. With a decrease in the household size the probability being poor will fall, as a result the welfare of the family increases. This conclusion is consistent with the earlier observation that the incidence of poverty increases with the household size. The coefficient of household size is -0.017, it means that if other things are remaining the same, the size of household increases by one unit which will reduce the household welfare by 1.70. Field survey data shows that the incidence of poverty increases with the increases of household size.

The value of the coefficient AH is negative sign, it implies that welfare decreases due to youth unemployment and inexperience. The value of the coefficient  $AH^2$  is positive sign and relationship between welfare and age is non-linear. This implies that, with an increase in the age of the household head the probability being poor will fall as a result the welfare of the family increases. In the context of our country, there is a joint family system in rural areas, the older of the household head, the higher of the household's earnings and accumulation of resources. Field survey data shows that the incidence of poverty increases with youth unemployment and inexperience and incidence of poverty decreases with  $AH^2$ .

Table 6.1 : Summary Results of Coefficients and t-statistic of Multiple Regression Model of the Selected Indicators

Name of the Independent Variables	Coefficients	t-statistic
Size of the Household (SH)	-0.017	-4.84
Age of the Household (AH)	-.0143	-1.67
	.0002	2.63
Education of the Household (EH)	.0877	5.30
Earners of the Household (EAH)	.0283	4.48
Dependent of the Household (DH)	-.0148	-3.27
Landholding of the Household (LH)	.0136	4.78
Assets of the Household (ASH)	.0062	5.64
Occupation of the Household (OH)	.0136	5.75

Source : Field survey

The coefficient of EH has a negative effect on poverty. This implies that the more educated an individual, the greater the potential to exploit resources and technology and avoid poverty, higher the education higher the welfare of the family. The coefficient of household education is 0.0877, it means that if other things are remaining the same, one per cent increases in education of household will increase the household welfare by 8.77. Field survey data shows that the incidence of poverty decreases with the increases in education of household.

The coefficient of EAH has negative effects on poverty. This implies that the more earners of the household lower the poverty and increase the household welfare. The coefficient of earner of household is 0.0283, it means that if other things are remaining the same, one unit increases in earners of household will increase the household welfare by 2.83. Field survey data shows that the

incidence of poverty decreases with the increases in earners of household.

The coefficient of DH has positive effects on poverty, higher the dependency ratio lowers the welfare of the family. The coefficient of dependency ratio is -0.0148, it means that if other things are remaining the same, one unit increases in dependency ratio of household will decrease the household welfare by 1.48. Field survey data shows that the incidence of poverty increases with the increases of dependency ratio.

The coefficient of LH has negative effects on poverty, higher the landholding higher the welfare of the family. The coefficient of household landholding is 0.0136, it means that if other things are remaining the same, one unit increases in landholding of household will increase the household welfare by 1.36. Field survey data shows that the incidence of poverty increases with the decreases of household landholding.

The poultry and livestock play a vital role in the development of rural Bangladesh. From the field survey, it is evident that the coefficient of ASH has negative impact on poverty, increases of ASH, and increases of welfare of the family. The coefficient of household assets is 0.0062, it means that if other things are remaining the same, one unit increases in assets of household will increase the household welfare by 0.62. Field survey data shows that the incidence of poverty decreases with the increases of assets of household.

There are more occupations create in rural Bangladesh. From the field survey, it is evident that the coefficient of OH has negative impact on poverty, increases of OH, and increases of welfare of the family. The coefficient of household occupation is 0.0136, it means that if other things are remaining the same, one unit increases in occupation of household will increase the household welfare by 1.36. Field survey data shows that the incidence of poverty decreases with the increases in the occupation of household.

## VII. Conclusion

Poverty is a multi-dimensional concept. It is not only about income and consumption, but also covers other dimensions such as shelter, education, health, nutrition, powerlessness, voicelessness, vulnerability, fear, freedom and the like. It is necessary to understand the level on which the causes emanate from. This chapter has discussed the determinants of poverty from micro level that are relevant to the context of Bangladesh in the right way. The right way is not only helpful in formulating the right strategies, but it also avoids the problems of inefficiency and ineffectiveness of the programs. At the micro level, poverty is caused by a number of factors. It results from lack of income, lack of access to educational, lack of access to credits and lack of access to public infrastructure. The forces continually create poverty through their policies, programs, and projects. In really, these sources of poverty causes cannot operate individually, but they can operate together and leading to poverty. A clear understanding of why some people are poor is essential if any in-roads are to be made towards (effectively) tackling the roots and causes of poverty.

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