

## **Poverty and Vulnerability: A Review of Bangladesh Situation**

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### **Abstract**

The present paper is based on a) the insights gained from the author's long experience of live-in poverty field research, classroom poverty course teachings and implementation of poverty programs; and b) the review of research-based poverty studies and theoretical poverty literature. The paper discusses and analyzes some aspects of poverty and vulnerability issues taking Bangladesh as a case. Having discussed various concepts of poverty, the author argues that poor people suffer from various disadvantages of which poverty is just one. The paper dwells on measurement and determinants of poverty, develops a conceptual framework for explaining the story of poverty reduction in Bangladesh and concludes that Bangladesh has made remarkable progress in poverty reduction although inequality has increased. The paper finds that the major factors that explain poverty reduction in Bangladesh include, among others, the following: a) pro-poor and labor demand friendly growth across all sectors of the economy; b) access of the poor to microcredit services; c) international remittances; d) small family size and low dependency ratio; e) access to health and education facilities; f) need-based foreign aid; and g) wider connectivity of the poor with social and economic institutions. The paper finds that while the poor people have received some benefits from Social Safety Net Programs (SSNPs), the programs have been largely ineffective to protect the vulnerable poor from various shocks mainly due to inadequate funding to them and deficiencies in their governance. The paper suggests policy measures for creating greater impacts on poverty reduction. The major measures include strengthening of labor friendly pro-poor growth programs; increasing targeted programs including microcredit program; enhancing access to health and education facilities, mobilizing need based foreign aid; and revamping of SSNPs.

**Keywords:** Poverty, vulnerability, inequality, growth, microcredit, remittance, human capital, social safety nets

### **I. Introduction**

The concern for the poor has always been there among religious leaders, historians, litterateurs, economists, and social scientists. All great religions, out of their concern for the poor, encouraged charity. Some religions have institutionalized the provision of charity and financial support to the poor. In literature across the globe, the plight of the poor has been depicted in such a passionate way that cannot but touch our heart and make us sad and think. Chandidas, Rabindranath Tagore, Nazrul, Tolstoy and Dickens are among many scores of literary luminaries who have brought out the plights of the poor in their

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writings. Adam Smith (1776), the father of modern economics, pointed out the overriding importance of poverty alleviation for the development and happiness of all societies. According to him, no society can prosper and become happy if majority of its members are poor and live in misery.

Out of his concern for freeing the poor workers, the proletariat from the exploitation of capital, Karl Marx (1867) advanced his theory of social and economic change which is known as Marxism. His thoughts divided the world into two major ideological blocks –socialist and capitalist. The collapse of the Soviet Block in the 1990s does not seem to have diminished much the influence of his revolutionary ideas on socialist thinkers and activists.

Since the time of Adam Smith, the science of economics has grown into several branches which contribute to the understanding of issues in development and help policy making for development. The study of poverty, vulnerability and inequality has occupied an important position in development economics especially since the 1970s.

Developed countries, various UN organizations, bilateral and multilateral aid agencies, NGOs and national governments are making concerted efforts to address the problems of poverty and vulnerability within a market economy framework. The efforts have produced considerable success but much more needs to be done, both in scale and depth, to achieve the desired goal of poverty eradication.

The present paper is based on a) the insights gained from the author's long experience of live-in poverty field research, classroom poverty course teachings and implementation of poverty programs; and b) the review of research based poverty studies and theoretical poverty literature. The paper makes a modest attempt to discuss and analyze some aspects of poverty and vulnerability issues taking Bangladesh as a case. The contents in the article are organized as follows: Section II introduces the concepts of poverty and vulnerability; Section III is devoted to the measurement of poverty; Section IV develops a conceptual framework for analyzing Bangladesh poverty; section V presents a short account of Bangladesh's achievements of poverty alleviation; Section VI explains the determinants of the Bangladesh achievements of poverty alleviation; and Section VII discusses very briefly the impacts of Covid-19 on the economy and poverty of Bangladesh; and Section VIII, which is the final section, summarizes the discussions and indicates policies.

## **II. Concepts of Poverty and Vulnerability**

In the midst of unprecedented affluence of wealth and income across the globe, the presence of abysmal poverty is an insult, an affront to our civilization. Essentially to make policies for poverty alleviation, the concept of poverty has been defined in many ways. According to the World Bank (World Bank, 2000) poverty is pronounced deprivation in well-being, where well-being is measured by an individual's possession of income, health, nutrition, education, assets, housing and certain rights in a society such as freedom from servitude. Poverty is also considered as lack of opportunities, powerlessness, and vulnerability.

Chambers, Saxena and Shah (1990) consider poverty as one of the five clusters of disadvantage which together constitute a deprivation trap. The other four clusters are physical weakness, isolation, vulnerability, and powerlessness. As elaborated by Chambers, Saxena and Shah (1990, p.10):

“... physical weakness refers to lack of strength, under-nutrition, poor health, physical disability, and a high ratio of dependents on active adults; isolation refers to physical remoteness, ignorance and lack of education, and lack of access to services and information; poverty refers to lack of income (flows of food and cash) and of wealth (stocks of assets); vulnerability to exposure to contingencies and the danger of becoming poorer and more deprived; and powerlessness to inability to adapt, cope and choose, and weakness in the face of exploitation and demand by the powerful.”

Chambers (1990, p. 10) argues that the “five clusters of disadvantage interlock and reinforce one another and form a deprivation trap” for the poor. According to Sen (1987), people who lack the capability to function in society might live in condition of lower well-being or be more vulnerable to shocks. These people, in other words, are poor. Thus poverty means either lack of command over resources and severe constriction of the choice set or a specific type of consumption deemed essential to constitute a reasonable standard of living in a society, or lack of ability to function in a society. According to Lipton (1997), a useful sense of poverty is absolute private consumption poverty or PCP: private consumption per person falling below a poverty line.

All that have been said above are, by and large, quantitative aspects of poverty. There are qualitative dimensions of poverty as well which may include, among others, perception of insecurity of life and livelihood, sense of lack of freedom from harassment and abuse at home and at work, absence of dignity in day-to-day transactions, distrust of the state officials and the lack of expectation that life will improve for future generations. As is well-known, some people are in chronic poverty and others in transient poverty (Ravallion 1988). Further, some people are absolutely poor not being able to meet the basic needs of life and others are relatively poor being victims of inequitable distribution of income and wealth in a society.

Vulnerability, defined as being in risk and danger of falling into greater poverty, is one of the disadvantages suffered by the poor. Vulnerability is both an outcome and cause of deprivation. One is vulnerable because one is disadvantaged and one is disadvantaged because one is vulnerable. Some (Wijkman & Timberlake 1984, Canon 1994, Winchester 1992 and UNDP 1990) argue that disasters or shocks to which poor people are vulnerable, are characteristics not of hazards but of socio-economic and political structures and processes. They maintain that disasters are pre-determined by the existence of vulnerability, and hazard events trigger them – conditions for vulnerability are created by human systems. Other than the poor, the non-poor may also be

vulnerable depending on the scale and depth of disasters and the resulting shocks. Shocks are divided into two categories: covariate and idiosyncratic. The former includes those that affect a large number of people having some common characteristics such as place of residence or nature of occupation. Idiosyncratic shocks, on the other hand, are those that affect a person or a family, such as loss of job, death due to accident or prolonged illness. Osmani, Ahmed, Latif and Sen (2015) identify three types of shocks in rural Bangladesh: – a) asset shocks; b) income shocks, and c) expenditure shocks—that make people vulnerable. Using Amartya Sen’s entitlement approach to analyze vulnerability, Hakim (1997) finds that because of inadequate and volatile physical and insufficient non-physical endowments, the entitlements of char (river islands) people are reduced and so the char people are highly vulnerable and their vulnerability is perennial.

### **III. Measurement of Poverty: Who Are the Poor and Vulnerable?**

Although there are some disagreements among the poverty analysts about the methodology for measuring poverty, there appears to be a consensus among them about the needs for poverty measurement. It is now agreed that poverty needs to be measured to a) identify the poor; b) make policies for poverty alleviation; and c) identify and implement programs for poverty alleviation. There are three steps to measure poverty. The first step is to identify an indicator, the second is to determine a standard of the indicator and the third step is to generate a summary statistic or index to aggregate the information regarding the indicator. There are a lot of disagreements about the choice of an indicator that would capture welfare with some reasonable accuracy. Generally speaking, there are three candidates for the indicator: income, consumption expenditures, and calorie intake. Income is not accepted as an indicator because income is relatively unstable; it may be understated and income from some sources is difficult to measure. Calorie consumption per day per person is another candidate for indicator. This indicator also suffers from several problems—it is not always easy to measure calorie intake and not easy to establish appropriate minimum amount of calories required per person. Further, poverty measurement based on calorie intake may give misleading information about poverty overtime and poverty between rural and urban areas (Ravallion & Bidani, 1994). Moreover, one can think of measuring outcomes rather inputs. For example, nutrition status is outcome of food intake—the input. Therefore, one can think of measuring poverty considering nutrition status of population. But measurement of nutrition status would require anthropometric study which is difficult and time consuming. Some might think of anthropological method which requires close observation at the household level over a longer period of time. This method is not accepted because it is time consuming, and cannot ensure representative and quantitative information of a large population. Among the quantitative indicators, poverty analysts generally accept consumption expenditure for measuring welfare although consumption expenditure is not fully free from problems.

Accepting consumption expenditure as the measure of welfare, a poverty line is defined as the level of consumption expenditures needed for a household to

escape poverty. Consumption expenditures include expenditures both on food and non food items. And this method of setting poverty line is known as Cost of Basic Needs (CBN) method. While measuring poverty, two, rather than one, poverty lines are set—lower and upper poverty lines. It is obvious that those who live below the lower poverty line are poorer than those who live below the upper poverty line. It is also obvious that there are no universally acceptable poverty lines for all poor or for all countries because there are differences in level of consumption expenditures. Poverty lines are not fixed, and they change as a result of changes in income levels and inflation rates.

Once we identify an indicator and define a poverty line, we can go for identifying the appropriate summary indices of aggregate welfare. Although economists have identified a number of summary indices, the following three are commonly used for poverty measurement:

a) Headcount Index: It is the most commonly used measure and is very easy to construct. It simply measures the proportion or percentage of population that is counted as poor. It shows the incidence of poverty. This index, however, cannot take into account the intensity or depth of poverty. It does not provide a picture of the status of those whose consumption expenditure level falls below the poverty line. Is their average consumption just below the poverty line consumption or far away from the poverty line consumption level? Headcount index cannot give answer to this question. Further, this measure cannot tell us anything about the distribution of consumption expenditures among the population below the poverty line.

b) Poverty Gap Index: This index measures the proportionate poverty gap in the population whose consumption expenditure is below the poverty line consumption. In other words, this index deals with those who are poor and shows the average gap of their consumption from the poverty line. This, in fact, is the measurement of depth or intensity of poverty.

c) Squared Poverty Gap Index: The index gives greater weight to the poorer population among the poor and indicates as to whether or not improvement in consumption level has taken place among the poorer section of the population, or improvement is confined to the better off among the poor. In other words, this index indicates inequality among the poor. While it is not difficult to calculate the index, it is difficult to perceive intuitively.

#### **IV. Determinants of Poverty and Vulnerability: A Conceptual Framework**

##### **Economic Growth**

Economic growth, especially when it is pro-poor, may play the key role in reducing poverty. Pro-poor growth is one that enables the poor to participate in the process of generation of growth and ensures that they benefit from the outcomes of growth. For growth, generally following conditions (Kanbur 1998, Sachs 2005) are necessary: a) physical capital; b) human capital; c) governance; d) perfect or competitive market, e) macroeconomic stability, f) developed infrastructure, g) investment, h) openness to trade and foreign investment, and g) simultaneous and mutually supportive development of industry, agricultural and

services sectors. A close look at the conditions for growth would reveal the fact that these conditions are also important for poverty reduction. However, to make growth pro-poor, targeted programs may also be implemented so that the conditions mentioned above are oriented towards poverty alleviation. Further, special emphasis may be given on creating assets of the poor, which among others, may include: a) human assets indicated by capacity for basic labor, skills and health; b) natural assets such as land and open access common property; c) physical assets such as access to land and infrastructure; d) financial assets such as savings and finance; and e) social assets such as networks of contact. Access to assets is not enough, returns to assets should be ensured protecting the returns from all kinds of risks and shocks including those arising out of market fluctuations, climatic hazards and political instability.

It may be mentioned here that measures for poverty reduction are not in conflict with growth. In fact, mitigation of widespread conditions for poverty may support growth, among others, in the following ways (Todaro, 2012): first,, increasing the productivity of the poor and thereby raising per capita income and output growth; second,, the increase in income of the poor may contribute to national savings,; third, the demand for the locally produced goods will increase as the poor, unlike the rich, consume locally produced goods which will provide stimulus to local production, employment and investment; and finally, will act as a powerful material and psychological incentives to the poor to participate in growth process which is vitally important for sustaining growth.

**Microcredit:** Microcredit, innovated and institutionalized by Prof. Yunus, may contribute to poverty reduction significantly. Microfinance Institutions (MFIs) provide four categories of services – financial, enterprise development, social intermediation and social. Financial services which mainly include credit, savings and insurance, help borrowers to undertake new enterprises and expand their existing enterprises to increase their income to come out of poverty. The other services of MFIs support the financial program of the poor. Microcredit program may support wide varieties of small scale production activities in agriculture, industry and services sectors (Yunus, 2004). The program may also smooth consumption of the poor thereby helping them to avoid highly exploitative advance labor and crop sales. Microcredit services although were started in rural areas, currently they are available in urban areas as well. MFIs, in fact, have moved from the margins of the system towards the mainstream (Ahmed, 2004).

**Land:** Generally in the rural areas, land is the most important productive asset for the poor. However, in a small and share farm dominated agriculture, where a large section of farming population is increasingly getting employed in non-farm activities, land appears to have lost its importance as a major determinant of poverty. In fact, land-asset based poverty trap which was a major concern (Carter & Barret, 2006) in poverty discourse, appears to have subsided remarkably. Further to note is the fact that land reform in the current economic and political environment seems a remote possibility.

Education works as a very important determinant of poverty. Human capital, which is attributed to education, contributes significantly to national output and income (Benhabib & Spiegel, 1994; Psacharopoulos, 1991). At the micro level, growth in average years of schooling per worker has been found to be associated with growth in output per worker. Education helps production of technologically sophisticated goods and adoption of foreign technology. It has been historically established that long-term economic growth and reduction in poverty were preceded by increase in literacy level of population. Japan, Korea and China are the classic examples in this regard. Like education, health is also a key determinant of poverty reduction. Lack of adequate health care has been found to be an important source of erosion of the income of the poor (Sen, 1997). Health includes both physical and mental health. The existence of education and health facilities is not enough—economic and physical access of the poor to the facilities is also very important. Further, the quality of the services also matters for poverty reduction.

**Productivity:** Increase in productivity is a key factor to the reduction of poverty. Higher productivity of poor farmers and workers supported by appropriate institutional arrangement that protects the rights of workers and enables the workers to enjoy the fruits of their increased productivity, will go a long way to reduce poverty. For increasing the productivity of the poor, creation of knowledge capital covering technological and scientific knowhow is important. Education and training can create this knowledge capital.

**Non-farm employment opportunities:** To relieve rural economy of the burden of excess or surplus labor and thereby reduce poverty, creation of massive non-farm employment opportunities is vitally important (Kanbur, 1998). For this, labor-demand friendly industrialization programs across various locations of a country are necessary. The industrialization programs may include big, small, medium, micro and agro-processing enterprises. Industrialization programs highly concentrated in certain urban areas may cause transferring of rural poverty and unemployment problems to urban areas (Todaro, 2012). In this context, the insights gained from the two-sector model of Lewis (1954) and the experiences of countries like Korea, Taiwan, and Japan will be useful. The target may be reaching the turning point of Lewis, which China is said to have already reached. China, it appears, has no more surplus labor in the rural sector.

**Well-Functioning Markets for Ensuring Fair Price:** Well-functioning input and output markets free from the presence of monopolistic power and rent seeking interests of public sector corporations and utilities may enable the poor to get fair price for their outputs and buy inputs at competitive prices. The competitive markets create conditions for the poor to specialize and trade and save and invest. Because of the manipulations of the monopolistic forces/and also because of climatic factors, volatility of input and output prices will reduce the return on small investments of the poor and constrain reduction of poverty.

**Infrastructural Facilities Including Roads, Electricity, Ports, etc.:** Access of the poor to a wider network of roads and communication facilities removes their physical and psychological isolation, facilitates their production and

commercial activities connecting them with input and output markets and financial institutions which will contribute to increase their income and reduce their poverty (Kanbur, 1998; Sachs, 2005). Roads and communication also help the poor to access educational and health facilities. Access to electricity has been found to have contributed to reduction of poverty (Rahman, 1995).

**Access to Information:** Access of the poor to information about market prices, sources of inputs and outputs, innovations in new production technologies, health and education facilities and legal rights and responsibilities and so on and so forth is vitally important for lifting them out of poverty. Like other resources, information is also an important resource for the poor.

**Larger Number of Working Members in the Family and Low Dependency Ratio:** A poor family having larger number of working members in the family and with low dependency ratio is likely get out of poverty more quickly than a family with one earning member and high dependency ratio. Such families as having high dependency ratio are likely to have child labor to supplement the income of the lone earning member.

**Wider Connectivity of the Poor:** Wider connectivity of the poor, especially of the poor villagers with formal and informal social and economic institutions, may determine their poverty status. Connectivity, facilitated by the access to network of roads and communication and information, may provide the poor opportunity for availing credit facility and carrying out their production and business activities in a profitable manner. Connectivity may also help physical access to health and education facilities. Further, it may raise their awareness to seek redress from unlawful acts of the powerful people.

**International Remittances:** International remittances may have the following impacts: a) reduce poverty; b) smooth consumption; c) ease working capital constraints of small farms and enterprises (World Bank, 2006). Yoshihino, Taghizadeh-Hesary and Otsuka (2017) and Marson and Subramaniama (2018) also find very significant impact of international remittances on poverty reduction. It needs to be noted that if majority of the workers who work abroad and send remittances home are not poor but belong to rural rich and urban middle class families, poverty impact of international remittance may not be very significant. However, if the remittance earning families spend money for building houses and undertaking microenterprises and businesses, avenues for employment for the poor are created and thus the poor may get benefits from international remittances.

**Need Based Foreign Assistance:** Foreign assistance targeted mainly to address the poverty problem may help poverty reduction (Sachs, 2005). Bilateral or multilateral soft loans and grants provided for targeted poverty alleviation programs such as microcredit, asset transfer, conditional cash transfer, nutrition support, primary education and health care, school feeding, small scale irrigation and road communication and marketing centers, may contribute significantly to poverty alleviation.

**Social Safety Net Programs:** Social Safety Net Programs (SSNPs) cannot generally reduce poverty, but they may help the vulnerable among the poor not to

fall into deeper poverty. To enable SSNPs to play their role effectively, they should be adequate in size and scale, targeted properly and leakage/corruption free. Stefan Dercon (2002) reviews the literature on poor households' risk management and risk coping strategies and identifies the limitations of effectiveness of SSNPs and discusses policy options. According to Stefan Dercon (2002), while SSNPs may be beneficial, their impact sometimes is limited on households' vulnerability to poverty.

**Concerted Efforts:** Given the fact that poverty is embedded in the socio-economic and political structures and that it has high rates of incidence, depth and severity, it may not be possible for any single organization to alleviate it, not to speak of eradicate it. Alleviation of poverty may need concerted efforts of governments; big, medium, small and micro entrepreneurs in industry, agriculture and services sectors and civil society members, NGOs and bilateral and multilateral international donors (Banerjee & Duflo, 2011).

## **V. Bangladesh's Achievements of Poverty Alleviation**

Bangladesh has achieved remarkable success in poverty reduction. Before presenting Bangladesh's achievements, we may discuss, at some length, Bangladesh's approach to poverty measurement. In Bangladesh, poverty measurement is carried out by Bangladesh Bureau of Statistics (BBS) following Cost of Basic Needs (CBN) method consisting of the following steps (BBS, 2019):

Step 1 consists of estimating a food poverty line defined as per capita monthly expenditure on a bundle of food items that is necessary for ensuring minimum nutritional requirements. The nutritional requirement is taken as 2,122 kcal per day per person, and the food bundle consists of 11 items including coarse rice, wheat, pulses, milk, oil, meat, fish, potatoes and other vegetables, sugar, and fruits.

Step 2 comprises of computing non-food allowances at two different levels—lower and upper. The lower level non-food allowance is estimated by taking into consideration the actual non-food expenditures of those households whose total expenditure is close to the food poverty line. The non-food allowance at the upper level is estimated by considering the actual non-food expenditures of those households whose food expenditure is close to the food poverty line.

Step 3 involving derivation of two poverty lines is pretty straightforward. The lower poverty line is derived by adding lower non-food allowance to the food poverty line and the upper poverty line by adding upper non-food allowance to the food poverty line. In Bangladesh, for the year 2016, lower poverty line consumption expenditure per capita per month has been estimated at Tk.1862 and upper poverty line expenditure at Tk.2268 (BBS, 2019). It may be mentioned that BBS calculates several poverty lines to capture, among others, regional, urban and rural poverty situations.

As is shown in Tables 1a and 1b, poverty under all three measures—head count, poverty gap and squared poverty gap—has decreased persistently during the period from 2000 to 2016. Under head-count measure, the lower poverty line

poverty at the national level has decreased from 34.3% in 2000 to 12.9% in 2016 and the upper poverty line poverty has come down from 48.96% in 2000 to 24.3% in 2016. Similarly, there has been reduction in poverty gap and squared poverty gap at the national level. While in 2000 poverty gap among the lower poverty line poor was 7.5%, in 2016, it came down to 2.3%, for the lower poverty line poor the squared poverty gap reduced from 2.4% in 2000 to 0.6% in 2016. Similar trends in the reduction of poverty gap and squared poverty gap can be observed among the upper poverty line poor (Tables 1a and 1b). Some other studies, such as by Osmani, Ahmed, Latif and Sen (2015) and World Bank (2019) find similar trends in poverty reduction in Bangladesh.

Bangladesh during 2000-2016 lifted around 25 million people out of poverty (World Bank, 2019). It needs to be noted that poverty reductions were accompanied by some other indicators of wellbeing which include sustained drops in fertility and child mortality, improvements in nutrition and life expectancy, increased access to electricity, clean water and sanitation, broad based expansion in education and other improvements in non-monetary aspects. Bangladesh is not only one of the top achievers in poverty reduction among the countries of South Asia, but it is also a top performer in improving the non-monetary dimensions of welfare (World Bank, 2019).

It is rather disconcerting to note that although incidence, depth and severity of poverty have reduced both in rural and urban areas, poverty is found higher in rural than that in urban locations under all measures of poverty. However, as can be gleaned from the tables, rural poverty has decreased at a higher rate than that of the urban. Further, poverty is found to be higher in the western part of the country than that in the eastern part (BBS, 2019) lending support to the view of East-Divide in terms of poverty status.

**Table 1 a: Bangladesh Poverty Status (CBN Method)**

Key Findings	HIES 2016			HIES 2010		
	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7
<b>Lower Poverty Line</b>						
Head Count (%)	12.9	14.9	7.6	17.6	21.1	7.7
Poverty gap	2.3	2.6	1.3	3.1	3.7	1.3
Squared poverty gap	0.6	0.7	0.4	0.8	1.0	0.4
<b>Upper Poverty Line</b>						
Head Count (%)	24.3	26.4	18.9	31.5	35.2	21.3
Poverty gap	5.0	5.4	3.9	6.5	7.4	4.3
Squared poverty gap	1.5	1.7	1.2	2.0	2.2	1.3

Source: BBS, 2019

**Table 1 b: Bangladesh Poverty Status (CBN Method)**

Key Findings	HIES 2005			HIES 2000		
	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7
<b>Lower Poverty Line</b>						
Head Count (%)	25.1	28.6	14.6	34.3	37.9	20.0
Poverty gap	4.6	5.3	2.6	7.5	8.3	4.1
Squared poverty gap	1.3	1.5	0.7	2.4	2.6	1.2
<b>Upper Poverty Line</b>						
Head Count (%)	40.0	43.8	28.4	48.9	52.3	35.2
Poverty gap	9.0	9.8	6.5	12.8	13.7	9.1
Squared poverty gap	2.9	3.1	2.1	4.6	4.9	3.3

Source: BBS, 2019

While poverty has reduced significantly over the years, inequality has increased. Gini coefficients using three indicators – income, expenditure and consumption – have been calculated to measure inequality. The calculated coefficients show that inequality has increased (Table 2). Some other studies such as by Khan and Sen (2001) have also found that overall inequality of income has increased.

**Table 2: Distribution of Income**

Key Findings	HIES 2016			HIES 2010		
	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7
<b>Gini coefficient</b>						
Income	0.482	0.454	0.498	0.458	0.430	0.452
Expenditure	0.329	0.306	0.335	0.327	0.282	0.343
Consumption	0.324	0.300	0.330	0.321	0.275	0.338

Source: BBS, 2019

## VI. Determinants of Bangladesh's Achievements of Poverty Alleviation

The explanation for poverty reduction success of Bangladesh is undertaken in this section following the conceptual framework developed in Section III.

**Economic Growth:** Bangladesh's economy has experienced persistent growth which is reasonably high in the recent past compared with its peers. Although the growth has been accompanied by some degree of inequality of income and wealth, it has contributed to poverty reduction (World Bank, 2019). In fact, it has vindicated the point made by Kanbur (1998) and other economists. All the three sectors of the economy – agriculture, industry and services – that have contributed to growth have created job opportunities not only for the educated

middle- and upper-class people, but also for the urban and rural poor. Garments industry which is the largest employer of the country provides job opportunities to members, especially the female members, of both rural and urban poor families. The country's food and beverage, leather goods, and pharmaceutical industries have also registered growth participated by SMEs and women enterprises along with large enterprises. Generally speaking, industrialization in Bangladesh has been labor demand friendly. In 2018 in Garment Sector, a total of 3.6 million workers were employed (CPD, 2018). The country's housing sector has also witnessed rapid growth over the years. This sector, it is reported, provides 3.5 million jobs (*The Daily Star*, September 21, 2020).

In the recent years, agriculture sector has witnessed a considerable diversification. Agriculture is no more crop agriculture as it used to be in the 1950s, 60s and 70s. Fisheries, livestock, poultry, horticulture and vegetables sub-sectors have witnessed a rapid growth beyond the expectations of many experts in the field. Irrigation, HYV seeds, fertilizers and pesticides based green revolution, which has been fuelled by privatization of agricultural inputs, has brought about a tremendous improvement in the Bangladesh's small farm dominated agriculture. Cropping pattern has changed replacing low-yield local variety rice with very high-yield rice and grossed cropped area has increased substantially which is reflected in increased cropping intensity. Rice cultivation is no more a seasonal activity; it is now almost a round-the-year phenomenon. The net result is that the country's food grains production today is almost four times higher than what it was in 1971. In 1971, the country used to produce less than 10 million tons which today has increased to about 40 million tons (BBS, 2019) making the country nearly self-sufficient in food production. Along with the increase in food production, there has been a significant increase in commercial vegetables production. Farmers, especially small and marginal farmers and functionally landless families, are engaged in year-round vegetables production. They are using every inch of their land suitable for vegetables production. It is interesting to note that seasonality in the production of vegetables is disappearing fast—some varieties of vegetables are now being produced almost in all seasons, most prominent examples are tomato, beans and carrots.

A revolution has occurred in inland (sweet water) fisheries sub-sector. The present author conducted a study in the mid-eighties on pond fisheries in Bangladesh and found that most of the ponds in the country were derelict—not being used for fish cultivation. An experiment of fish cultivation in a pond conducted by the present author in collaboration with a poor landless group failed. Even until 1980s, cultivation of fish by people other than professional fishermen was socially considered a prohibited activity—it was a stigma. Today, it is a different story. Young people, some with a university degree, have taken commercial fish cultivation in ponds, *haors* and *baors* as an occupation. No more is there any social sanction. Another development in inland fishing is cultivation of fish in flooded plain lands. During the monsoon, the lands in some parts of the country get flooded and remain under water for about six months. The gentleman fish farmers take lease of the land from farmers and cultivate fish there. The

commercial fish cultivation ventures of the new generation of fish farmers have been facilitated by research in the field, supply of fish feeds by another group of emerging entrepreneurs, and generous credit support from the banking system and Palli Karma Sahayak Foundation (PKSF), an apex microfinance and capacity building organization created and supported by the Government of Bangladesh (GOB). No wonder, Bangladesh now occupies the 4<sup>th</sup> place in the world in inland fish production.

Similar development has taken place in poultry and livestock sector. A large net-work of commercial poultry farms have been set up by young entrepreneurs supported by research, extension services and financial support. Beef fattening programs of micro-entrepreneurs and commercial beef farms of young educated entrepreneurs are now meeting almost the entire demand for beef and chicken of the country.

Microcredit programs and financial institutions in the country have provided generous credit support to family based small scale and medium- and large-scale entrepreneurs to produce milk. Their efforts are being facilitated by the country's milk processing enterprises like Milk Vita, Arong, and Pran. Milk is also used in a large quantity by the country's growing sweat-meat producers. Bangladesh, in fact, is now nearly self-sufficient in milk production.

In horticulture subsector also, Bangladesh has made remarkable progress. Mangoes, guavas, lichis, lemons and bananas of improved varieties are now being produced in a large scale. Supported by agricultural research and extension, attempts are now being made by young and educated farmers to produce foreign fruits like strawberry, apple, orange, date and Thai Lichhi. In some cases, success stories are being reported. The growth in different subsectors of agriculture has played a significant role in rural poverty reduction through employment creation and increased income (World Bank, 2019).

As a result of industrialization, rapid urbanization, growth in agriculture sector, significant development in the networks of road and inland river communications, and emergence of a large middle- and high-income class of people, services sector of Bangladesh has registered a very rapid growth—the sector now is the largest contributor to the country's GDP, its contribution being 56.53% (BBS, 2017). The sector's contribution to employment creation is also high being 39% which is double the contribution of industrial sector and almost equal to the contribution of agriculture sector (BBS, 2019). The contribution of services sector to poverty reduction was very significant—it was slightly higher than 20% during 2010 which increased close to 40% during 2010-2016 (World Bank, 2019). This phenomenon may be explained by the fact that the sector largely employs poor workers—skilled, semi-skilled and unskilled workers. In road transport subsector alone, for example, there were about 30.3 million registered vehicles in 2017 (BBS, 2017) - it is a common knowledge that these vehicles mostly employ poor workers. Likewise, other subsectors of services sector are pro-poor in terms of provision of employment.

**Microcredit:** In the early stage, the average microcredit loan size was small which the poor used for self-employment either by expanding their existing

income generating activities (IGs) or by taking new IGs. Eventually, many borrowers have taken up wage employment based microenterprises taking higher average amount of loans, thus providing employment for family members as well unemployed poor neighbors and villagers. Over the years, depth, outreach and diversity of the program have increased significantly. Microcredit services are also provided to the hardcore poor; they are now available in almost all villages of the country including the remotest areas like hill tracts and river islands; and MFIs now finance varieties of income generating production activities including, among others, agriculture, food processing and storages (Bangladesh Microfinance Statistics 2017-18, 2019). Thus, the poverty alleviation role of microcredit program has been further strengthened enabling the program to make an enhanced contribution to poverty reduction.

Several field based studies have identified the poverty alleviation role of microcredit. Osmani (2012) studied the role of microcredit in asset accumulation and poverty reduction in Bangladesh and finds that a) microcredit helps asset acquisition, but such impact of microcredit is much stronger for the poor than for the non-poor. According to Osmani (2012), microcredit reduces extreme poverty by about 9% and moderate poverty by about 5%. His research indicates that poverty impact of microcredit is higher when microcredit is used for productive purposes. In a larger field-based study, Osmani, Ahmed and Latif (2015) find that in Bangladesh, among other factors, microcredit plays a poverty alleviation role. In another study Osmani and Latif (2013) identify the poverty alleviation role of microcredit. Imai and Azam (2010) also find that access to microcredit for productive purposes significantly increased per-capita household income. Khandker and Samad (2014) has investigated the impact of microcredit and concludes that continuous participation of poor households in microcredit program help the households earn more, consume more and thus they come out of poverty. According to them, microcredit has reduced poverty particularly extreme poverty in Bangladesh. Their estimate suggests that 10% of the total extreme poverty reduction has been contributed by microcredit. Health shocks contribute to household poverty. Maitra and Islam (2008) examined the role of microcredit in absorbing health shocks and consumption smoothing. They find that some households may resort to sales of productive assets and livestock for consumption smoothing and absorbing health shocks. But the households having access to microcredit need not sell livestock in order to insure against health shocks. Microcredit, thus, has an insurance role to play, and therefore, the welfare implications of microcredit remains high. Imai and Azam (2010) in their study find that household access to microcredit for productive purposes significantly increased per capita household income.

**Access to Land:** Land, it appears, is a determinant of poverty. Incidence of poverty has been found to be higher among the landless and the functionally landless (BBS, 2019). However, land based poverty trap does not appear to exist. The issue has been investigated by some economists. Quisumbing and Baulch (2014), based on their empirical findings in Bangladesh, find little evidence of such asset-based poverty trap. Osmani, Ahmed, Latif and Sen (2015) do not find

conclusive evidence of asset-based poverty trap although there is a very close association between initial and current ownership of land and non-land assets. They find that although the poor are constrained to gain land asset, they are able to accumulate non-land assets which provide them an opportunity for coming out of asset-based poverty trap. Poverty is more acute among land poor households and generally asset poor households.

**Provision of health and education services to create human capital:**

While achievement in the provision of health and education services is much less than it is expected, the successes in these areas appear to have contributed to poverty alleviation. Programs for immunization, availability of health services to the villages through the Upazilla Health Centers and Community Health Clinics have positive impacts on health of the poor. In this context, it may be pointed out that while physical access of the poor to the health services has improved substantially, the economic access remains less than the expected level (Mannan, 2013). Further, the burden of health cost on the poor is high. As Sen (1997) points out, such burden was 7-10% of the income of hard core poor. Osmani, Ahmed, Latif and Sen (2015) in a larger field-based empirical study, find that poverty is determined by, among others, education. Poverty decreases to 29% for household heads with primary level education. In contrast, poverty decreases to 17 % among people having illiterate heads. Even after about 50 years of independence, around 35% of the country's population is illiterate (BBS, 2019). Further, school dropout rate is found high. In spite of their limitations, education and health programs appear to have contributed to poverty reduction.

**Off-farm and nonfarm employment opportunities:** Off-farm and non-farm employment has made an important contribution to poverty reduction, especially in the rural areas (World Bank, 2019). The growth in agriculture, services and industry sectors, and the contribution of microcredit have created off- and non-farm opportunities for the poor and lifted them out of poverty. In a paper based on micro data from Household Income and Expenditure Surveys, Inchauste and Oliveri (2014) find that increase in labor income driven by increased productivity both in farm- and non-farm sectors have contributed most to poverty reduction in Bangladesh. The female members of rural and urban poor families have also joined labor market, thus contributing to family income and poverty alleviation.

**Well-functioning input and output markets:** Privatization of import and marketing of agricultural inputs including small scale irrigation equipment has proved to be very beneficial to all categories of farmers including, especially, the small and marginal farmers (IIMI and Bureau of Socio-Economic Research and Training of Bangladesh Agricultural University, 1996). The farming community of the country is now free from the rent seeking interest of public sector monopolies. The growth in agriculture sector, which contributed to rural poverty reduction, may be attributed to the privatization initiatives of the Governments since 1990s. However, some multinational corporations having monopoly power in input market, it appears, work sometimes against the interests of the farmers. Further, markets for agricultural outputs still appear to be suffering from the classical Cob-Web syndrome.

**Infrastructural development:** Since independence in 1971, Bangladesh has achieved remarkable progress in infrastructural development. All district, sub-district and industrial and commercial centers, sea and river ports are connected with the capital city by a wide network of 21, 322 km of paved roads maintained by Roads and Highways Department (BBS, 2017). Besides, there are more than 2,50, 0000 km roads maintained by local government institutions—around 50% of these roads are paved (BBS, 2017). There are bridges over all major rivers except the river Padma. This river too is going to get a bridge as the Padma Bridge, which is under construction, will be open to traffic in the very near future. However, the roads and bridges in some places are not wide enough which causes traffic congestions and accidents. The government is implementing programs to widen the roads. The southern part of the country mainly depends on river transport system which is fairly developed.

In Bangladesh, the access of households including the poor households to electricity has increased. The Palli Biduyt Unnyan Board is responsible for providing electricity services to rural households. Amidst limitations of various kinds, they appear to have been doing a good job. The per-capita electricity/consumption in the country is about 320 kWh (World Bank, 2014).

**Having Larger Number of Working People in the Family and Low-Dependency Ratio:** A relatively successful population education and family planning program with the participation of NGOs has reduced the fertility rate in the country contributing to decrease in population. Further, rapid urbanization and change in values and attitudes have brought about a change in family structure gradually replacing joint families with nucleus families with the consequence of a decrease in average family size which is currently 4.06 (BBS, 2019). This has reduced dependency ratio. In the cases where joint families still exist, there is a larger number of working members in those families as job opportunities are available in non-farm sectors. This is true especially in cases of those families in which female members have taken employment.

**Wider Connectivity of the Poor with Formal and Informal Social and Economic Institutions:** Extensive road and river transport network, spread of modern information technology, job opportunities in farm and non-farm sectors and NGO activities have created wider connectivity of the poor to formal and informal social and economic institutions having positive impacts on poverty reduction.

**International remittance:** Bangladesh is one of the largest remittance earning countries. In the year 2019, Bangladesh received a total amount of US\$ 18 billion international remittance (World Bank, 2020). Although most remittances are not earned by the poor, the poor get benefits from remittances mainly getting employment in the rural housing sector investment and investment in small and microenterprises by the remittance earners (Osmani & Latif, 2013; UNDP, 2018; Zaman, 2008).

**Need-based foreign aid:** A substantial portion of the aid received from multilateral and bilateral donors was need-based aimed at poverty alleviation. In more than two decades, PKSF has received US\$ 573.92 million soft loan and

US\$ 341.07 million grants from donors (PKSF Finance Department) for supporting microfinance programs that have considerable impact on poverty alleviation. The development assistance for the promotion of small scale irrigation systems, for creating rural road communication system and for rural health systems are some prominent examples of need-based foreign aid that contributed to poverty reduction significantly in Bangladesh.

**Vulnerability and Social Safety Net Programs:** Bangladesh implements a wide variety of Social Safety Net Programs (SSNPs) of different categories. The studies conducted on SSNPs find them useful, but inadequate and suffering from various governance weaknesses. A World Bank Study (2005) highlighted the importance of SSNPs. The study finds that the programs are limited in scale and coverage and there are inefficiencies and leakages in their implementation. The leakages of the programs, the study finds, are 5% to 25%. While reviewing the safety net programs in Bangladesh, Barkat-e-Khuda (2011) identifies four categories of the programs as follows: a) employment generation programs; b) programs to cope with natural disasters and other shocks; c) programs supporting children's education; and d) programs for improvement of health. He records some successes as well as some problems of these programs. One major problem with SSNPs which needs special mention is that all that are included in the package of SSNPs are not meant for the vulnerable poor. In FY2020 national budget, 2.92% of GDP was allocated to SSNPs of which only 1.7% was for the vulnerable poor and the rest was for other beneficiaries including Government pension holders and owners of Savings Certificates (Khondker, 2020). The highly inadequate funding for the programs and the deficiencies in the governance of the programs have been made bare by the fact that during the COVID-19 pandemic SSNPs have not been much effective to stop the poor from becoming poorer.

The Bangladeshi poor cannot depend just on the Government's SSNPs to face shocks and resulting vulnerability. They adopt their own measures to deal with shocks and vulnerability. Santos, Sharif, Rahman and Zaman (2011) find that the poor face economic, health and climatic shocks and to cope with the shocks, they use savings, take help from their friends and disinvest assets. Hakim (1997) in his study uses exchange entitlement of approach of Amartya Sen (1977, 1981 and 1995) to analyze the vulnerability of char (river islands) people in Bangladesh. He finds that in the face of vulnerability, the people adopt both risk reducing and risk diffusing strategies. The risk diffusing strategies include, among others, sale of land and distress migration. Osmani, Ahmed, Latif and Sen (2015) in their study divide coping strategies into two categories – erosive and non-erosive. Erosive strategies involve, among other things, selling of assets while non-erosive strategies do not require disposal of assets.

**Opportunities:** The real heroes of the Bangladesh story of achievement in poverty are the enterprising and ingenious poor themselves. They have seized the opportunities provided by the civil society members including NGOs, private sector actors, markets, Government agencies and international bilateral and multilateral donors and have changed their lot.

## VII. Post Covid-19 Poverty Situation in Bangladesh

It needs to be noted that achievements in poverty reduction have been considerably wiped out by the devastating effects of Covid-19. Several surveys including those by the Government agencies and multilateral donors present a rather dismal picture of the post covid-2019 Bangladesh economic situation in general and the poverty picture in particular. A survey conducted by BBS and Planning Commission (2020) find that because of the pandemic, extreme poverty has doubled in Bangladesh. By and large, similar negative impacts of Covid-19 have been reported by the recent surveys conducted by BIDS, Power and Participation Research Center (PPRC) and BRAC Institute for Governance and Development and different right groups. The doubling of extreme poverty due to the pandemic only shows the vulnerability of the poor to disasters and shocks. In other words, the country's programs for protecting the poor from vulnerability are very inadequate to say the least.

GDP, as we know, gives is a summary measure of economic performance of a country. While in FY 2018-19 Bangladesh GDP growth rate was 8.15%, in FY 2019-20 it went down to 5.2% due to the negative impacts of Covid-19. The projection for GDP growth rate in FY 20-21 varies substantially from 1.6% to 8.2%. —World Bank's projection is 1.6%, ADB's 6.8%; IMF's 4.4% and that of Bangladesh Government's is 8.2%. Our view is that we may now give more attention to fix the basics —finding the ways to repair the damages to economy than to make projections essentially because the magnitude and duration of the effects of Covid-19, it appears, cannot yet be estimated with some reasonable accuracy. The reason is that we have not yet been able to find both curative and preventive measures against the pandemic. There are indeed a lot of uncertainties and unknowns which may make our projection estimates unrealistic. To be useful for policy making, the projection estimate models may include the uncertainties and unknowns.

The encouraging fact is that Bangladesh economy is bouncing back slowly but steadily. Belying the predictions of many all the components of the country's GDP—consumption, investment, government expenditures, exports earnings, and remittance—are exhibiting positive signs of recovery absorbing the initial shocks of Covid-19. In fact, the country's export earnings have reached almost the pre-pandemic level, remittance earnings have reached record high level surpassing the pre-pandemic benchmark, and the Government's revenue earnings and spending are picking up (*The Daily Star*, September 2020). The people in general are participating in economic activities. It appears that the Government's huge stimulus package of more than Taka one hundred thousand crore supported by appropriate monetary and fiscal policies has started giving the desired results. Given good governance and more such recovery policies, incentives and actions to deal with the health hazards and risks due to Covid-19 on the one hand, and to support labor demand based pro-poor growth on the other hand, Bangladesh is expected to reach the pre-pandemic level of performance in poverty reduction and economic growth in no time. And eventually, the economy will be on the

path to achieve higher rates of inclusive and pro-poor growth resulting in increased pace of poverty reduction.

### **VIII. Conclusion and Policy Implications**

The present paper is based on a) the insights gained from the author's long experience of live-in poverty field research, classroom poverty course teachings and implementation of poverty programs; and b) the review of research based poverty studies and theoretical poverty literature. The paper discusses and analyzes some aspects of poverty and vulnerability issues taking Bangladesh as a case. Having discussed various concepts of poverty, the paper argues that the poor people suffer from various disadvantages of which poverty is just one. The paper dwells on the poverty measurement issues and develops a conceptual framework for explaining the story of poverty reduction in Bangladesh. Based on the official data and the findings of independent studies, the paper concludes that Bangladesh has made remarkable progress in poverty reduction although inequality has increased. The paper finds that the major factors that explain poverty reduction in Bangladesh, include, among others, the following: a) pro-poor growth that was labor demand friendly; b) labor-friendly diversification of agriculture, b) rapid growth of services sector creating job opportunities for the poor; c) industrial sector development opening up job opportunities, especially for the poor female workers; d) access of the poor to microcredit services creating employment opportunities for them in non-farm sector; e) international remittances; f) small family size and low dependency ratio; f) access to health and education facilities; g) need based foreign aid; and g) wider connectivity of the poor with social and economic institutions. The paper finds that while the poor people have received some benefits from SSNPs, the programs have not been able to do much to protect the vulnerable poor from various shocks, especially that from COVID-19 mainly due to inadequate funding to them and deficiencies in their governance.

Reducing incidence, depth and severity of poverty and inequality further, especially in the context of doubling of extreme poverty caused by COVID-19 pandemic, would be a daunting challenge for all concerned. Drawing upon the experience of poverty reduction of the recent past, some policy suggestions may be made here. 1) pro-poor and labor demand friendly growth programs covering all sectors of the economy should be further strengthened; 2) utmost care should be taken to ensure the access of MSMEs to the Government's stimulus package and other incentives; 3) targeted poverty reduction programs should be undertaken in a massive scale as these programs, as we have argued before, will not be in conflict with growth but will support growth; 4) microcredit programs should be scaled up further and all categories of poor in all disadvantaged regions of the country must have access to microcredit programs; 5) access of the poor to quality health and education services should be enhanced substantially; 6) service conditions of workers and employees in the informal sector, which employs around 85% of workforce, should be improved ensuring job security and providing for pension and fringe benefits; 7) possibility of sending poor people

abroad for employment should be explored to enable them to benefit directly from international remittance; 8) universal pension and insurance schemes covering all poor people should be introduced on an urgent basis; 9) need based foreign assistance should be sought; and 10) the country's SSNPs should be revamped—at least 3% of GDP should be allocated exclusively for the poor and vulnerable, coverage of SSNPs should be increased substantially and their governance should be improved significantly.

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