Policy Failure on Poverty Reduction in Bangladesh: Seeking an Alternative through RNFE

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Abstract

Poverty remains an overarching problem for policy makers in Bangladesh since its independence in 1971. Though the country has experimented different socialist as well as open market policies to alleviate poverty, still more than 40 per cent of its population remain below the national poverty line. This paper attempts a critical evaluation of the contemporary poverty reduction policies implemented in Bangladesh and argues why such policies have failed to succeed at the given socio-economic structure of Bangladesh. A framework of analysis has been developed to delineate these arguments graphically. Furthermore, this paper demonstrates why the development of Rural Non-Farm Economy (RNFE) would be a better policy option to alleviate poverty under the current socio-economic context of Bangladesh, and presents a statistical model that can be used as an alternative framework for poverty reduction through RNFE development in Bangladesh. Similar models may also be adopted in other developing countries of Asia.

1. Introduction

Bangladesh has experienced a 5–6 per cent growth in real GDP over the last ten years[2] (European Community 2007; World Bank 2010a; World Bank 2010b); after considering a 1.32 per cent growth rate in population[3] though, per capita GDP managed to grow at an average rate of four per cent during the period. However, due to the discontent in government poverty reduction policies, widespread poverty still remains a major policy concern for the country. While per capita income (using Purchasing Power Parity) in 2009 was USD 1585 or more than USD 4 per day, 40 per cent of people still remain below

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[2]Real GDP is projected to grow at a 5.5 per cent rate in 2010 (World Bank 2010b). During the period 2001–09, the average growth rate in GDP was 5.8 per cent. This average rate, however, shows an increasing trend in the later part of the decade and attained a 6.3 per cent rate during the period 2006–09. See more on World Bank 2010a.

[3]This was the projected rate of population growth in 2009–10. See more on Government of Bangladesh (GOB) (2010).

the national poverty line (Government of Bangladesh (GOB) 2010; World Bank 2010a). The incidence of poverty in rural areas is even higher than that in urban areas[4]. Further, though the poverty headcount ratio based on the national poverty line has declined to its current 40 per cent level from 51 per cent in 1995, the rate of poverty reduction is sluggish in rural areas (World Bank 2010a). As shown in Table 1, the rate of poverty reduction in rural areas needs to be doubled in order to attain the target of the Millennium Development Goals (MDGs)[5] by 2015.

Table 1: **Annual rate of poverty reduction (attained vs. MDG target required), 2007**

Rates	**Rural**	**Urban**	**National**
Existing rate of poverty* reduction (1990-2007)	1.82	2.27	2.01
Required rate to attain MDG target by 2015	3.46	2.31	3.00

Source: Extrapolation from (1) Mid-term progress report on MDG 2007 GOB (2007a); (2) Bangladesh economic review 2007, GOB (2007b).
*The official rate of poverty is calculated using Cost of Basic Need (CBN) approach which is a uni-dimensional approach to measure poverty (BBS 2007). MDGs mean Millennium Development Goals.

The concept of uni-dimensional poverty mentioned above considers poverty from a single dimension like lack of adequate food or income. Income is the major though not the sole factor contributing to human poverty (UNDP 2000; Sen 2009). Empirical study indicates that even when services like education or health care are provided free of cost, opportunity cost or other hidden charges may obstruct poor rural households with lower income or endowment to enjoy those services[6] (Transparency International 2006). However, contemporary development policies in Bangladesh have failed to ensure a broad based income growth for rural poor. This paper will demonstrate

[4]According to the latest Household Income and Expenditure Survey (HIES), the percentage of rural and urban population living below the national poverty line was 43.8 per cent and 28 per cent respectively (BBS 2007b). The 40 per cent national poverty rate was much closer to the rate of poverty in rural areas because three-quarters of the total population of Bangladesh lives in rural areas. See more on GOB (2010) and UNDP (2010).
[5]The objective of MDG is to halve the number of people who live below USD 1 per day (PPP) during a period between 1990 and 2015. See more on GOB (2009).
[6]For example, sometimes the informal payment needed to be made for the safe delivery of a baby in a public hospital is around two months average income of households in Bangladesh. Though these services are freely provided in public hospitals, hidden costs to such services include the rent-seeking in public hospitals (Transparency International 2006).

why contemporary poverty reduction policies based on agriculture and industrial development have failed to reduce widespread poverty in the country and how development of Rural Non-Farm Economy (RNFE) could accomplish this poverty reduction objective in a much better way.

In this paper RNFE is defined as a set of different forward and backward linkage activities to agriculture, craft activities, and rural services including:

- the supply of fertiliser and seeds;
- repairing agricultural machinery;
- transporting agricultural goods to the market;
- petty trading activities (e.g. hawking, vending and shop-keeping); and
- services of rural doctors, teachers, and other self-employed workers or employees in different craft activities[7] (e.g. blacksmith and pottery).

However, agricultural activities like crop production, animal husbandry, poultry, fishery, and nursery businesses are not included as RNFE.

2. Objectives and Methodology

The objective of this paper, firstly, is to demonstrate the shortcomings of contemporary poverty reduction policies in Bangladesh and understand why such policies have failed to alleviate widespread poverty, especially in rural areas and among women. It also seeks to answer whether development of RNFE could be a better alternative strategy for effective poverty reduction in the country. After discussing the nature and extent of poverty in section 3, section 4 highlights alternative pathways that the government may use to overcome such poverty. The next section presents a framework of analysis that can be used to choose the most effective pathway for poverty reduction, considering the socio-economic context of Bangladesh. The framework for policy evaluation developed in this section is also used to evaluate the effectiveness of past poverty reduction policies and identify their loopholes.

Section 6 is then used the same policy evaluation framework to predict the success of RNFE development as an alternative poverty reduction policy in Bangladesh. This section also includes an alternative framework developed for poverty reduction through RNFE development and presents results from an empirical survey among 357 rural households in Bangladesh. It demonstrates the strength of RNFE capabilities in reducing their poverty among rural households. The Structural Equation Modeling (SEM) is used to analyze 42 variables under six different factors that may affect household capabilities to get involved in high income RNFE activities and to get rid of their poverty. 22 of those variables were found statistically significant and loaded under four different factors that were used in section 6.2 to develop a statistical model on

[7]According to the Macquarie Online Dictionary, handicraft means *"a particular manual art or occupation"* and *"the product of such manual art or occupation"*. See more on Macquarie Online Dictionary 2010.

poverty reduction through RNFE development in Bangladesh. A list of statistically significant variables is given in Appendix A.

3. Poverty and its Nature in Bangladesh: A Review

In Bangladesh, poverty[8] affects 27 million people who do not have the ability to consume at least 1805 kilo calories per day (GOB 2010). The poverty head count index and poverty gap index[9] shown in Table 2 indicate that both the incidence and depth of poverty has been reducing over the years. Moreover, a reduction in the squared poverty gap index[10] indicates that the severity of poverty is also reducing. However, in all three aspects, poverty remains higher in rural areas (Bangladesh Bureau of Statistics (BBS) 2007; GOB 2010). A comparison between percentage changes in the poverty gap and squared poverty gap shown in Table 2 indicates that extreme poverty is declining in a faster pace than the overall rate of poverty reduction in the country. Though in both urban and rural areas, extreme poverty has declined at a similar pace, still 69.3 per cent[11] of the total number of extreme poor resides in rural areas. Therefore, poverty reduction in rural areas needs some special emphasis from the government and policy makers in Bangladesh.

[8]In Bangladesh, generally poverty is calculated in Cost of Basic Need (CBN) approach – a uni-dimensional approach that solely depends on the level of consumption by the households. Those who do not have an ability to consume 2122 kilo calories per day are considered poor. The last official statistics of a 40 per cent rate of poverty come from the Household Income and Expenditure Survey (HIES) 2005. See more on BBS (2007)

[9]This indicates the depth of poverty. A poverty gap is the additional amount of consumption (income) that is required to bring the total number of poor people above the poverty line. The poverty gap is calculated by subtracting the actual consumption of poor from the minimum required consumption (income) suggested in a poverty line. This gap is assumed to be zero for all non-poor. A poverty gap index is then calculated by adding the gap for all poor and dividing the result by the number of poor. Therefore, the poverty gap index measures the extent to which poor people on an average fall below the poverty line. See more on Haughton and Khandker (2009).

[10]A squared poverty index takes into account the inequality among poor. While a simple average poverty gap is measured to calculate the poverty gap index, the squared poverty gap index for every individual poor is weighted by the percentage distance of original consumption from the poverty line. So, a person who is poorer and far away from the poverty line gets higher weight. After getting the summation of weighted poverty gap for each poor, it is divided with the aggregate minimum consumption required for all poor to attain the minimum consumption indicated by the poverty line. An average shortfall is calculated by dividing total weighted poverty gap with the total minimum consumption. This average figure is then squared to get the squared poverty index. See more on Haughton and Khandker (2009).

[11]This rate is calculated by dividing the number of extreme poor in rural area by the total number of extreme poor in the country.

Table 2: **Trend on poverty reduction in Bangladesh 1991-2005**

	2005*	**2000**	**% change (2000 to 2005)**	**1991-92**	**% change (1991-92 to 2000)**
Head count index					
National	40.0	48.9	-3.9	58.8	-1.8
Urban	28.4	35.2	-4.2	44.9	-2.2
Rural	43.8	52.3	-3.5	61.2	-1.6
Poverty gap index					
National	9.0	12.8	-6.80	17.2	-2.9
Urban	6.5	9.1	-6.51	12.0	-2.5
Rural	9.8	13.7	-6.48	18.1	-2.8
Squared poverty gap index					
National	2.9	4.6	-8.91	6.8	-3.8
Urban	2.1	3.3	-8.64	4.4	-2.7
Rural	3.1	4.9	-8.75	7.2	-3.8

Source: GOB 2010

One reason for higher rural poverty is increased landlessness among rural people. As Bangladesh is not industrially developed yet, poverty and food insecurity in Bangladesh are directly linked to the ownership of land. As depicted in Table 3, 57.08 per cent of households are effectively landless with a land holding less than 0.5 acre. More than 50 per cent of these households also remain below the absolute poverty line. The distribution of land tenure is skewed and concentrated in the hands of few big land holders (BBS 2007). Therefore, though the agricultural sector remains as the largest employer in the economy, due to widespread landlessness, poor wages[12] and seasonality in employment opportunities, this sector fails to generate subsistence income to the virtually landless poor (GOB 2010). A high rate of absolute poverty among the landless poor (see Table 3) also indicates that agro-based poverty reduction policies have lower impact on reducing their poverty, and that peasant households do not have access to any alternative means of income to escape poverty.

[12] Laborers in agricultural sector are receiving much lower wages than those involved in the industrial sector. While the base wage of Tk.100 (AUD1.43) for industrial workers in 1970 increases to Tk.6128 (AUD 87.54), in the fiscal year 2008–09, for agricultural workers the wage index increases to only Tk.4274 (AUD 61.06) for the same period. This rate is even lower than the Tk.5026 (AUD 71.8) index value for the general wage level increase in the economy.

Table 3: **Percentage of people below the national poverty line (2005*)**

Land Holding	**% of households (2005)**	**% in Absolute poverty (2005)**
Land less	4.15	66.60
0.01-0.04 acre	15.84	65.70
0.05-0.49 acre	37.09	50.70
0.50-1.49 acre	24.04	37.10
1.50-2.49 acre	9.28	25.60
2.50-7.49 acre	8.63	17.40
>7.50 acre	0.99	03.60

Source: Estimation from HIES 2005 (BBS 2007).

* This is latest Household Income and Expenditure Survey (HIES) conducted by the Bangladesh Bureau of Statistics (BBS)

Women in rural Bangladesh are even more vulnerable to agro-centric development. This due to many social stigma that restrain women from working in field or even compel them to forfeit their inherited land to their brothers (Khair 2008; Monsoor 1999).

While agriculture has a lower potential for poverty reduction in rural areas, especially for rural women, the prospect for employment and income generation through industrial sector is not impressive either. In terms of employment generation, the industrial sector is contributing only negligibly. For example, according to the latest labour force survey, only 13.53 per cent of the total labour force was engaged in the manufacturing sector (GOB 2010). The ratio of participation of women in the industrial labour force was also very low (GOB 2010). Moreover, as industrial profits are concentrated in the hands of limited number of capitalists, it can be expected that the less educated and less skilled labour force might not be able to share the benefits of growth attained through private industries.

Following this socio-economic context of Bangladesh, the forthcoming sections explain a framework to evaluate poverty reduction policies in Bangladesh and then evaluate the potential of RNFE development as an alternative poverty reduction policy in comparison with other contemporary poverty reduction policies of Bangladesh.

4. Options for Enhanced Effectiveness of Poverty Reduction Policies in Bangladesh

A linkage between the lack of endowment for rural poor and their lower accessibility to different government services to eradicate poverty, as mentioned above, indicates that government has two different options to enhance the capabilities of the poor and thereby to reduce their poverty:

(a) the government may increase subsidies to cover any hidden costs and thereby attract the poor to access government services; or

(b) the government may create better job opportunities for the poor by enhancing their endowment and making them more capable to access government services to reduce their poverty.

For a resource poor country like Bangladesh, the second option is more viable for the government. Furthermore, the availability of limited land resources, low rate of capital formation and lack of women empowerment all remain important factors to decide about an effective poverty reduction policy for Bangladesh.

Thus, the next issue is to critically analyse the major poverty reduction policies that governments have taken over the years to enhance the endowment of the poor, and why the development of RNFE would be a better alternative compared to those other policies taken so far. However, before moving to that discussion, a framework of analysis is developed in the next section. The framework is then used to compare the opportunities for the development of RNFE in comparison with other major developmental policies implemented by the government so far to enhance the income and endowment of the poor.

5. Poverty Reduction Policies in Bangladesh: A Critical Evaluation

It has already been noted that different governments in Bangladesh have taken initiatives to reduce poverty by building capabilities of the poor, and that one common factor hindering the poor from getting equal access to government services is the inadequacy of their endowment. Endowment includes all tangible and intangible assets that are legally owned by a person. This section now discusses different government policies that have been taken to reduce poverty and enhance endowment of the poor. However, as mentioned earlier, a framework is developed first to make a comparative analysis of the different poverty reduction policies taken so far.

5.1 A Framework to Evaluate the Effectiveness of Alternative Poverty Reduction Policies

It is imperative to find an alternative poverty reduction strategy that would provide better endowment to the poor and make them able to access different goods, services, and amenities to escape poverty from all dimensions of their lives. The factors impacting this include:

- the scarcity of agricultural land,
- the high rate of unemployment and underemployment,
- the lower wage rate of unskilled labourers,
- lack of infrastructure and other government facilities required for broad-based industrial development, and
- lower access to different government services by the poor.

Based on the nature of poverty and structure of the economy discussed earlier, the following criteria are used to evaluate an alternative strategy suitable for boosting endowment and reducing poverty:

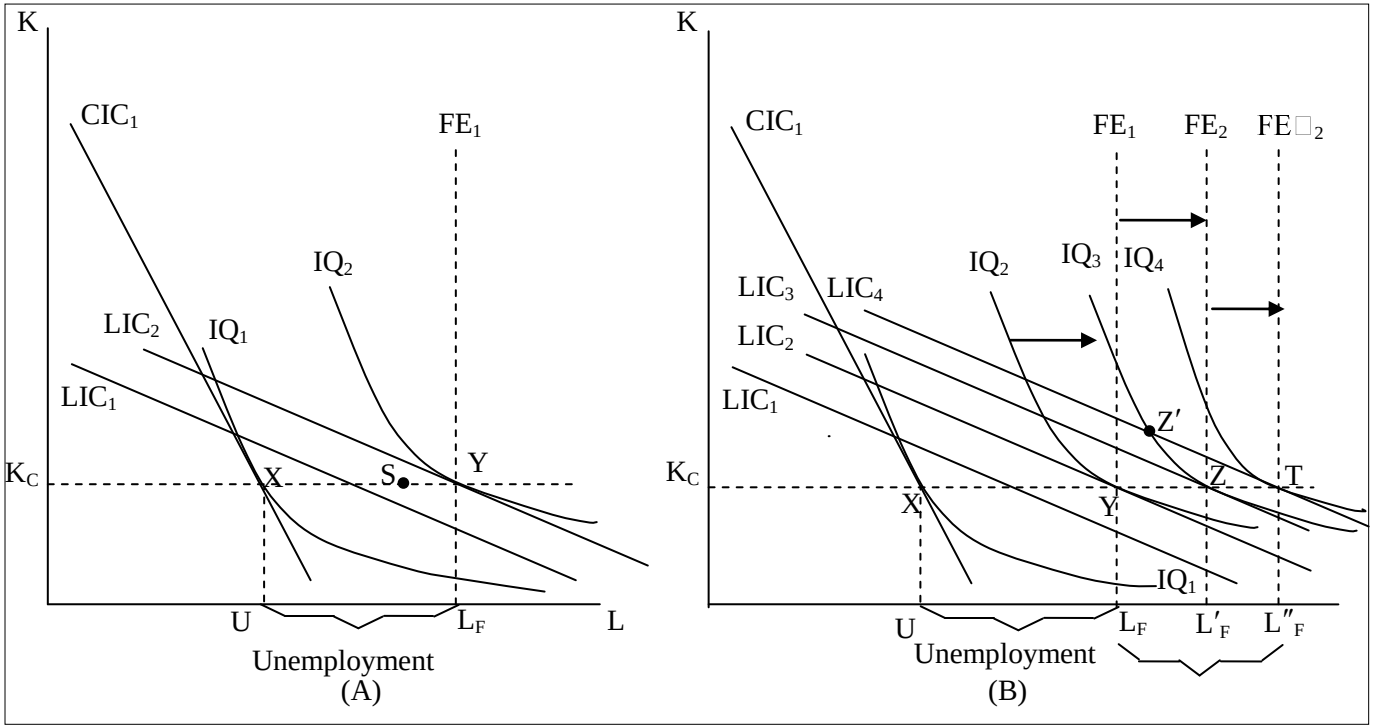
(1) relies less on the availability of land and heavy infrastructure;

(2) generates more employment for the available unskilled and low-skilled labour force;

(3) allows the poor to share the benefits of government services through better income; and

(4) creates more jobs for women who usually suffer a larger burden of intra-household poverty due to their lower engagement in economic activities.

Using these four criteria, a framework (Figure 1) has been developed to evaluate the effectiveness of alternative strategies for poverty reduction through enhanced endowment for poor.



Not in Labor Force

Figure 1: **Framework to choose an effective poverty reduction policy**

5.1.1 Structure of the Framework

In both of panel A and panel B, unemployment is measured on the horizontal axis from right to left, starting from the full employment level[1] at L_F. The use of capital is shown on the vertical axis. The vertical line at L_F indicates that labour supply is fixed at this label and so does not change as the use of capital changes on the vertical axis. The horizontal line at K_C is drawn to show the capital constraint of the economy. It is assumed that for a certain period of time, the maximum available capital stock is fixed at K_C and so does not vary with the use of labour, once the maximum level is attained at K_C. This is consistent with the lower level of investment and capital formation in Bangladesh (GOB 2011). Two different types of Iso-Cost cures, CIC and LIC, are taken in both panel A and panel B. The CIC curves are drawn for capital intensive industries and are relatively steep because in capital-intensive industries, the marginal rate of substitution of labour for capital remains low.

On the other hand, LIC curves are drawn to represent Iso-Cost curves for labour intensive production and are relatively flat because the marginal rate of substitution of labour for capital remains high for labour intensive industries. Iso-Quant (IQ) curves are drawn to show different levels of output. Higher IQ curves show higher production. Optimal production decisions can be made where any IQ curve becomes tangent with another Iso-Cost curve (like points X, Y or Z). The level of employment is determined on the horizontal axis where an Iso-Quant curve is tangent with an Iso-Cost curve. The level of unemployment is then measured by deducting the level of employment from the full employment level (e.g., L_F). The equilibrium level of production changes due to an upward or downward shift in Iso-Quant or Iso-Costs curves. Since the land is already scarce in Bangladesh, and the paper is seeking an alternative poverty reduction policy that is not directly linked with available land, availability of land resources is not included explicitly, rather implied as constant, in this framework.

5.1.2 Choice of Appropriate Technology

If stock of capital is constrained at K_C and labour supply is constrained at the full employment level L_F, by using labour-intensive technology the country will be able to produce at the Iso-Quant curve IQ_2 and attain full employment at L_F (panel A). Production at L_F in panel A ensures maximum use of scarce capital resources and a full employment of labour. However, by using a capital intensive technology at point X in Panel A, the country can attain only a lower Iso-Quant curve IQ_1 that will cause huge unemployment of UL_F.

[1] Full employment level is attained where all people in the labour force are employed. At this level, there is no cyclical or seasonal unemployment. However, at the full employment level or at 'full employment level of unemployment', there is no frictional, structural or classical unemployment that may happen at an above equilibrium wage rate that creates excess supply in the market. See more on Dornbusch et al (2006).

Therefore, while formulating its poverty reduction policy, the country will be better of economically by following strategy 1, which ensures higher production and lower unemployment. Another important consideration is the elasticity of factor substitution. As discussed earlier, Bangladesh is a labour abundant and capital scarce country. Therefore, choice of a labour intensive technology as shown on point Y of panel A will be appropriate for the country. However, as the unskilled surplus labour of the economy is not suitable for employment in the urban industrial sector, an appropriate sector must be identified where this surplus labour force can suitably be employed.

5.1.3 Relevance of Labour-intensive Technologies to Poverty Reduction and Gender Equality

Income from this labour intensive production is more evenly distributed among a large number of labourers in the economy. In contrast, capital intensive production concentrates income in the hand of a limited number of well-off capitalists. Therefore, greater reliance on labour intensive technologies will provide higher employment and a better share for the poor to income generated through such production. Further, by using this strategy, the country may be able to reduce gender disparity in income. For example, if such income generating activities can be promoted, in which women can participate suitably without breaking social norms that sometimes restrain them from working outside as agriculture or formal sector labourers, the resulting higher participation of women will make a rightward shift in the full employment level from L_F to L'_F (Panel B). Using this greater labour force and capital stock constrained at K_C, the country will be able to produce an even higher level of GDP at point Z of IQ_3. Therefore, using this strategy is worthwhile for attaining higher growth, more equitable income distribution and a greater level of gender equality in the country.

5.2 Evaluation of Poverty Reduction Policies taken in the Past

Components of this framework described above are applied in the subsequent discussion of this section to evaluate the effectiveness of the government policies taken so far. A discussion in the next section compares the effectiveness of these policies in comparison with the potential that can be attained through RNFE development as a means of poverty reduction in Bangladesh.

5.2.1 Development through Agriculture with Scarce Land Availability

Since Bangladesh's first Five Year Plan (FYP) in 1973, agricultural development has always had a high priority on the country's development agenda. In the fifth FYP for 1997-2002, 16.46 per cent of total resources were allocated to the development of agriculture. This was the highest allocation to any individual sector followed by 15.85 per cent for industry (GOB 1998). It is

pertinent to mention that agriculture has remained the highest priority sector for all subsequent years.

Table 4: **Annual development expenditure to agricultural sector (1990-2009)**

Year	1990-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
% of total	4.7	4.5	4.42	4.15	4.04	3.13	5.20	6.10	6.66	6.27

Source: Bangladesh Economic Review, GOB (2010)

Due to this high allocation and priority for development in the agricultural sector, Bangladesh attained self-sufficiency in food production by the year 2000 (Talukder 2005). Most of the credit for this goes to the conversion of rice growing areas from traditional to the modern system of agriculture, which relies on modern varieties of seed, fertilisers, pesticides etc. (Baffs and Gautam 1996). The growth in the gross area used for rice cultivation, however, was negligible (0.20 per cent) (Baffs and Gautam 1996). Though investment in large capital machinery was not necessary for such agricultural growth, one contributing element for sustained growth in agriculture was the liberalisation of agricultural input markets and the importation of minor irrigation equipment that was earlier controlled by the government (Hossain 2002; Hossain et al, 2006).

Adaptation of a high yielding modern system of agriculture also increases the cropping intensity, requires greater use of agronomical inputs in the rice fields, and increases the demand for agricultural labour (Squires and Tabor 1994; Hossain et al 1990; Squires and Tabor 1994). Therefore, agricultural growth under the green revolution can satisfy the first two criteria of the framework developed earlier in section 4.1. Though such growth initiatives do not rely on increased use of land and other heavy capital machinery, they still fail to fulfil the third criteria for development set in section 4.1 above. The reason for the failure is the large number of landless rural households who cannot directly share the benefits of the agro-based development. Since around 60 per cent of rural households in Bangladesh are either landless or holding a land much less than 0.5 acre (BBS 2007), it can be reasonably expected that a large majority of the poor cannot benefit from agricultural growth. Lower landholdings create a form of disguised unemployment in the economy. Moreover, due to the seasonality of agricultural production, full employment at point L_F (Figure 1, Panel A) cannot be attained all over the year. Disguised unemployment and seasonal unemployment push the economic equilibrium back to a sub-optimal point like point S.

Further, women do not benefit much from this agricultural development because of social stigma: women cannot work outside and are confined in low-skilled agricultural processing jobs at home, which are mostly unpaid (Akhter et

al 2010; Rahman 2000). Though many landless poor may earn their subsistence by working as agricultural labourer, opportunities are highly skewed against women. Participation of women in the hired agricultural labour force is less than two per cent of the total hired labour force in agriculture (Rahman 2000). Moreover, it is also argued that displacement of agricultural labour due to the automation of post-harvest processing activities mostly affects women (Ahmed 1992). As women cannot benefit from the increased labour demand in the field, and are mostly affected by the labour saving technology used in post-harvest processing activities, the net effect on women's employment due to modern agricultural development in Bangladesh is likely to be negative. Women who are capable to be employed in different income generating activities but are unable to participate in agricultural labour force constitutes a group 'not in labour force' as shown in Figure 1 (Panel B). This unutilized manpower creates inefficiency in labour market and put some extra burden on agro-centred poverty reduction policies.

Since agricultural growth cannot meet the third and fourth criteria set under section 4.1, for promoting a gender equalising pro-poor development, agricultural growth cannot be proposed as a strategy to alleviate widespread poverty in Bangladesh.

5.2.2 Import Substituting Industrialisation

Though the attainment of food self-sufficiency has been the prime objective of every government since independence, another corollary objective has been industrial development – with the aim to transform the economy from an agrarian to an industrial one. Increased allocation of the development budget to the industrial sector reveals that this has been a policy preference by governments over the years.

Table 5: **Allocation of annual development budget to industrial sector (2002-2010)**

Year	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
Amount	1945.8	4614.6	5105.2	3190.0	2222.9	2473.1	2636.5	1315.8
% of total	1.26%	2.74%	2.72%	1.64%	1.24%	1.34%	1.34%	1.57%

Source: GOB 2010

Data on Table 5 indicate that, with few exceptions, allocation to industrial development has gradually declined over the years. A comparative analysis of the allocation made to public and private sector industrialisation, as depicted in Figure 2, indicates that heavy involvement of government through public sector industrialisation has declined over the years. Soon after independence in 1971, the then government took a socialist approach and nationalised many industries to promote industrial growth in the country by import substituting industrialisation (Raihan 2008). However, a change in

political government in 1980 meant the socialist agenda was abandoned from a national policy perspective. Moreover, a consistent dull performance of state owned organisations and a requirement for frequent injections of money to state owned organisations from national budget was the major reason for the dethronement of this state owned import-substituting industrialisation policy in Bangladesh (Ahmed 2000; Monem 2005).

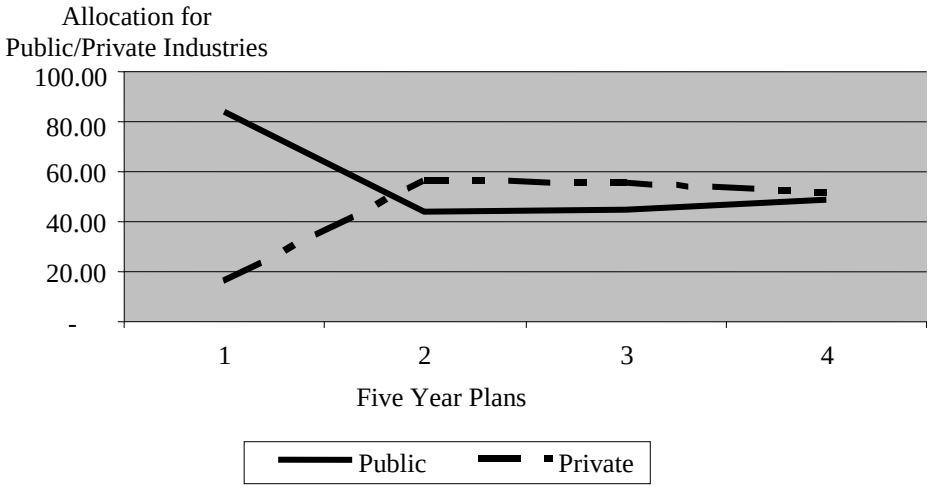


Figure 2: **Shift in allocation from public to private sector (1973-2002)**
Source: Fifth Five Year Plan, Ministry of Planning (GOB 1998, p.53) (1997, 1992, 1987, 1980), Bangladesh.
*5th FYP is the latest FYP prepared by the Planning Commission, Ministry of Planning, Bangladesh. See more at <http://www.plancomm.gov.bd/library_dtls.asp?LibID=7>

If the development policy of import substituting industrialisation is compared with the criteria set in Section 4.1, it is evident that such policy was less dependent on land and tried to mitigate the scarcity of capital under public financing. State owned import substituting industrialisation under the first FYP was also able to create three million new jobs during the five year period from 1973 to 1978 (GOB 2005).

Despite all these things, public owned enterprises turned out to be largely ineffective and failed to attain higher industrial growth. In fact, it pushed the economy from point Y to point Z′ instead of point T in Figure 1 (Panel B), where the economy is producing IQ_3 inefficiently at a higher cost (LIC_4). This inefficiency reduces growth in an economy. Similarly, analysis of achievement under first FYP reveals that during this period, attained industrial growth was only 0.3 per cent against a targeted industrial growth of 7.1 per cent set in the plan (GOB 1998). Moreover, such a policy could make the government financially overburdened. For example, as of December 1997, 35 per cent of total outstanding debt of the government relates to losing state owned

enterprises (GOB 1998). The failure of government owned enterprises continues even today.

For instance, according to the recent data provided by the Ministry of Planning in 2010, 20 out of 46 state owned organisations were either making a loss, or breaking-even. Though in the fiscal year 2009-2010 all nationalised organisations managed to deposit Tk.4785.3 million (AUD 68.36 million) into the national treasury as dividend, by the end of fiscal year 2009-2010, the total overdue payments of these organisations to government was Tk.7807 million (AUD 111.53 million). Therefore, a policy of import substituting industrialisation through state owned enterprises cannot be suggested as a sound policy for development as it creates inefficiency and makes the economy run below its production possibility frontier.

5.2.3 Export Intensive Industrialisation under Private Investment

As already discussed in relation to Figure 2, discontinuation of export substituting industrialisation through nationalised public enterprises gives rise to a budget allocation towards private sector industrial growth in subsequent FYPs. However, as shown in Table 6, the policy response was not able to attain its target industrial growth over the years.

Table 6: **Achievement of industrial growth under FYPs (1973-2002)**

	Planning period	**Industrial growth under five year plans**		
		Targeted	**Achieved**	**% attained**
First FYP	1973-1978	7.1	0.3	04.23
Second FYP	1981-1985	8.4	4.8	57.14
Third FYP	1986-1990	10.1	4.0	39.60
Fourth FYP	1991-1995	9.2	6.2	67.39
Fifth FYP	1998-2002	11.0	7.1	64.55

Source: Fifth Five Year Plan (FYP) Ministry of Planning (GOB 1998, p.57).
** Fifth FYP is the latest FYP prepared by the Planning Commission, Ministry of Planning, Bangladesh. See more at <http://www.plancomm.gov.bd/library_dtls.asp?LibID=7>

Data in Table 6 indicate that even after the policy transformation from import substituting state owned industrialisation to export promoting private sector industrialisation, attained industrial growth under different planning periods was only one-third to two-thirds of target growth for the individual planning periods concerned. Reasons for the lower achievement in industrial growth relate to the sluggish improvement in infrastructure, for example, electricity, transport and communication, and a lack of skilled labour force (with average schooling of only four years) to meet the increasing demand for private sector industrialisation under increased budgetary allocation over the years

(World Bank 2007). For example, supply of electricity for urban industrial production failed to attain its target in the fourth FYP period, though the demand for electricity greatly exceeded the target set for the period.

Table 7: **Lack of infrastructure (electricity) for private industrial development (1989-1995)**

Agency	Particulars	Actual in 1989-90	Target	Achievement in 1994-95
BPDB	Capability (MW)	1,834	2,743	2,133
	Distribution line km (33 kv and below)	30,256	36,734	34,693
	Consumer connection	850438	1,050,000	1,075,734
REB	Distribution line km	35,333	61,188	65,186
	Electrified village number	8,545	14,530	16,484
	Consumer connection	495,565	962,962	1,174,571

Source: Fourth FYP, Ministry of Planning, GOB (1998)
*Fourth FYP is the second latest FYP and was prepared by the Ministry of Planning, Bangladesh incorporating this data separately. BPDB and REB means Bangladesh Power Development Board and Rural Electrification Board respectively.

Table 7 shows that electricity supplied by Bangladesh Power Development Board (BPDB) to urban industrial consumers has not been sufficient to meet the demand for increased customer connection. The Rural Electrification Board (REB), on the other hand, is capable of meeting the increased demand for its rural consumers including rural enterprises. This superior capability of REB to meet electricity demands for rural consumers will be used as grounds to promote the RNFE in following discussion in Section 6.

Another reason for lower achievement in industrial growth is the lack of good Research and Development (R&D) activities, resulting in poor quality industrial products as indicated by lack of market demand. For instance, in the fourth FYP only 0.16 per cent of the total public sector allocation was spent on the development of science and technology (GOB 1998). Further, in most cases, research projects do not respond to the requirements of private industries (GOB 1998). Thus, the projects do not have any application beyond the premise of respective research organisations. Lower performance in R&D activities failed to shift the Iso-Quant curve, for example from IQ_1 to IQ_2, IQ_3 or IQ_4, with a given supply of labour and capital. Further, as shown by point X in Figure 1 (panel A), capital intensive private industrial growth also creates more unemployment in a labour abundant economy like Bangladesh.

Evaluation of private sector industrialisation as a strategy for poverty reduction under the criteria set above in Section 4.1, therefore, reveals that private sector industrialisation does not rely heavily on land availability. In fact, it can absorb the underemployed labour force from agriculture, but lack of sufficient infrastructure seriously hinders its future prospects. Also, in terms of

employment generation, the industrial sector is contributing only negligibly. As mentioned earlier in section 2, according to the latest labour force survey, only 13.53 per cent of the total labour force was engaged in the manufacturing sector (GOB 2010). The ratio of participation of women in the industrial labour force was also very low (GOB 2010). Moreover, as industrial profits are concentrated in the hands of limited number of capitalists, it can be expected that the less educated, less skilled, and poor labour force might not be able to share the benefits of growth attained through private industries.

6. Use of the Policy Analysis Framework to Predict Policy Effectiveness: Is RNFE an Alternative?

The importance of the RNFE as a means of poverty reduction and sustainable development in rural livelihood is well documented by a number of scholars around the globe. While Himer and Resnic (1969), as early as in 1960s, emphasised rural non-agricultural activities for the development of agrarian economies, analysing comparative economic data from Asia, Africa and Latin America, Haggblade and Hazell (1989) demonstrated that 90 per cent of the multiplier effect due to one unit increase in agricultural income in Asia accrues to the RNFE. Later, reviewing the literature on the RNFE around the world, Lanjouw and Lanjouw (2001) claimed that, though not inevitable in every circumstance, the RNFE might have a positive impact on both growth and poverty alleviation objectives of an economy. Haggblade et al (2002) reaffirmed this idea by stating that growth of RNFE could be beneficial to both the poor and wealthier sections of a rural economy. Furthermore, in their recent works, Haggblade et al (2010) emphasised the promotion of RNFE as a means of poverty reduction to developing economies.

6.1 Suitability of RNFE Development for Effective Poverty Reduction in Bangladesh

This section demonstrates why RNFE would be a better policy option for poverty reduction in Bangladesh as well. Earlier discussion has revealed that agriculture and industry have only limited potential to enhance the endowment of the poor as a means of increasing their capability. Moreover, according to the latest labour force survey, 75 per cent of the total labour force resides in rural areas and 56.4 per cent of the total labour force is engaged in non-agricultural activities (BBS 2009). In Bangladesh, problems such as land scarcity, predominant rural population, widespread dependence on agriculture by the illiterate rural poor, and a less developed urban formal sector, have made it inevitable that RNFE would grow in importance as a potential sector for development (Hossain 2002). The following section demonstrates how the development of RNFE would meet the criteria of development set out in Section 4.1.

6.1.1 RNFE Employment and Appropriateness for a Labour Abundant Economy

According to the criteria set out in Section 4.1 the optimal development policy in Bangladesh should concentrate on labour intensive production technologies that require lower involvement of scarce land and capital resources. Hence, RNFE employment is appropriate for a labour abundant economy like Bangladesh because unlike the large-scale urban manufacturing sector, RNFE enterprises use labour-intensive technologies (Lanjouw 2001)[2]. In a study conducted on the paddy husking industry of Bangladesh, it has been shown that the change in labour requirements due to a shift from traditional *Dhenki* technology (manual technology used by rural households in Bangladesh to hull paddy) to a small huller mill was only -0.1 (Lanjouw and Lanjouw 2001). Therefore, even automated, RNFE activities remain mostly labour intensive and result in only a small reduction in the number of jobs.

Promotion of small-scale RNFE activities can, therefore, enhance productivity without sacrificing employment. By its higher engagement in RNFE, the economy can attain efficient production points like Y in Figure 1 (panel A) and ensures highest amount of production with its constrained stock of land and capital resources. Furthermore, the ability of RNFE to enhance productivity without sacrificing its labour intensity would enable the economy to advance gradually through the K_CT path shown in panel B of Figure 1.

Moreover, as explained by Lewis (1954), a flourishing non-agricultural sector could be used to absorb the surplus labour in agriculture and thereby increase agricultural productivity and wage rates for agricultural labourers. Though Lewis (1954) emphasised industrial development as a complement to agriculture, as observed by others, through different forward and backward linkage activities to agriculture, including food processing and raw material supply for industrial production, RNFE activities can also absorb excess labour in agricultural sector and contribute to poverty reduction and agricultural growth of an economy (Bezemer and Davis 2003; Davis 2003; United Nations 2009).

Furthermore, RNFE development also promotes the development of domestic industrial sector. Since RNFE entrepreneurs in developing countries usually belong to a lower income class, their purchases are generally confined to locally made goods rather than luxurious imported commodities. Various studies have confirmed the positive relationship between increased income and a bias towards imported commodities. Ranis, Stewart, and Angeles-Reyes (1990) in their study on the Philippines showed that income elasticity of demand for local goods fell from 0.94 to 0.435 as the level of income increased from 3405 Peso to 17930 Peso respectively. Another study conducted in Malaysia by Hazell and Roell (1983) also confirms this argument.

[2]Labour-intensive technologies require a higher number of labourers per unit of capital (Lanjouw 2001). Such technologies are particularly important for those countries having a large supply of labour with a scarce availability of other capital goods.

In Bangladesh also, demand for imported commodities increased – at the expense of domestic manufactures – as income increased (Hossain 2002). As RNFE households mostly belong to lower income groups, poverty reduction and development of RNFE households might have a synergistic effect on domestic industrial development through increased demand for low-priced domestic products. Therefore, a development of RNFE would move the economy through a sustained path of development- $K_C T$, not only because of its own development but also because of the corollary developments in domestic agricultural and industrial sectors.

6.1.2 RNFE as a Source of Employment to an Increasing Number of Rural Poor

Like many other developing countries in Asia and other parts of the world, RNFE activities in Bangladesh are evolving as an important part of its rural economy. This is because RNFE activities are undertaken by rural people as an effective means of tackling the widespread problem of open unemployment[3], underemployment[4], and seasonal unemployment[5] prevailing in rural Bangladesh. As mentioned by Hossain (2004b), according to a BIDS survey conducted in 1987, 49 per cent of rural households in Bangladesh were engaged in RNFE either as their primary or secondary source of employment. In contrast, in a repeat survey jointly conducted by BIDS and IRRI in 2000–2001, as many as 52 per cent of rural households were engaged primarily in RNFE, while another 14 per cent were taking the RNFE as their secondary source of income. In other words, two-thirds of the households in rural Bangladesh are getting their income from RNFE activities (Hossain 2004a). As shown in Table 8, the involvement of rural household to RNFE activities is increasing over the years.

[3] Unemployed are those people who are willing to work at the current market wage rate, actively searching for a job but are currently unemployed. In Bangladesh, the percentage of people unemployed in 2009 was 5.1. The rate varies between males and females. Before the great depression in the 1930s, it was widely believed by the neo-classical economists that unemployment is a short-run evil and will evaporate soon through labour market adjustments. However, during the great depression it was realised that unemployment could be a long run phenomena if organised unions and some other structural barriers such as minimum wage rate restrains the necessary adjustment in the labour market. See more on Dooley and Prause (2004).

[4]This is a situation where people are not unemployed but are employed in work that can be done without fully utilising their productive capacity. Such a situation may arise in labour abundant economy where, for example, so many labourers are engaged in agriculture that their marginal productivity remains zero. In such a case, some of the labourers can be withdrawn and deployed to other productive activities without reducing the total productivity of agriculture. See more on Dooley and Prause (2004).

[5]It is a situation when large number of people in a locality becomes unemployed because of some seasonal downturn in production and consequent reduction in the demand for labour. Over the year, people in a locality may experience such unemployment in a cyclical manner. See more on Layard, Nickell and Jackman (2005).

Table 8: **Percentage of rural households primarily employed in rural non-farm activities**

Year	% employed in Rural Non-farm activities
1981	29%
1982	25%
1991	34%
2000	42%
2004	39%

Source: Lanjouw and Feder (2001); Nargis and Hossain (2006)

Therefore, development of RNFE may improve the livelihood of a large number of rural households, majority belonging to the landless poor.

6.1.3 RNFE as a Means to Empower Women

As mentioned earlier, women in Bangladesh are still facing many social stigmas that hinder their development. Bangladesh is still significantly behind in its pursuit to attaining women's empowerment both economically (Toufique and Turton 2002) and socially (Kamal 1995). In Bangladesh:

> there has been little change in the gender dimension of poverty. Female-headed households are still more likely to live in poverty and females within households are still more likely to be less well-educated, more likely to be malnourished and more likely to fall ill (Toufique and Turton 2002, p.15).

Thus, women are more vulnerable to poverty (ADB 2009). The relatively poor condition of women, especially rural women, and persistent gender inequality have prompted the initiation or strengthening of some rural poverty reducing activities that have a direct impact on the income earning capacity of rural women.

Thus, RNFE development rather than agricultural development could be a more effective tool to attain economic empowerment for women by enabling them to engage in economic activities without violating the social norms[6] that sometimes prevent them from working outside their home (Balk 1997; Kamal 1995; Naved et al 2007). In other words, women can benefit by engaging in RNFE activities for which it might not be necessary for women to go outside – rather they can perform them at home, for example, food processing, craft

[6]In Bangladesh, gender inequality *"owes its persistence largely to the tradition of misogyny deeply rooted in the indigenous culture …Women's mobility is still very restricted in the countryside due to the purdah norm and widespread insecurity. Though poor rural women are now being forced out of the home by their economic hardship, their free movement is still generally condemned by the society"* (Ahmed 2004, p. 7). Thus, due to social and religious customs women usually might not work in the crop fields and most of their works are concentrated in un-paid in-house activities. See more on Hossain (1984); Lanjouw (1998).

making or tailoring. Moreover, a greater involvement of women in labour force would gradually shift the full-employment level of the economy from L to L'_F and L''_F, and enable the economy to produce at point Z or T of Iso-Quant curves IQ_3 and IQ_4 respectively.

6.2 RNFE Development: An Alternative Policy Framework for Poverty Reduction in Bangladesh

Scholars around the world have identified different factors that affect the development of RNFE enterprises (Gibson and Olivia 2010; Haggblade et al 2010; Hashemi and Montesquio 2011; Lay, Mahmoud and M'Mukaria 2008; Masakure et al 2008). Numerous studies are also available that identified different variables that affect capabilities of the poor and poverty among households (Alkire 2007; Anand et al 2005; Clark 2005; Narayen at al 2000; Nussbaum 2000; Quilbush 2006). However, to combine these two different types of literature, this paper adopted a list of important factors identified by Ellis (2000) for sustainable development and farm to non-farm income diversification in rural areas.

Ellis (2000) has identified five different types of capital or endowments that are important to develop a framework to discuss the farm income diversification among rural households. These are:

- natural capital
- manufactured capital
- financial capital
- human capital; and
- social capital.

This list was further extended and rearranged to include some key variables under each category, as identified by scholars in various literatures discussing poverty reduction and RNFE development around the globe.

6.2.1 Theoretical Framework

A number of factors have been identified by scholars around the world that may affect the development of the RNFE and poverty among RNFE households. Existing literature in these fields has been used to understand the most plausible impact of different variables on the development of the RNFE and the reduction of poverty. Firstly, the economic entitlement of poor mostly depends on their possession of agricultural land and has a positive impact to reduce household poverty (Sen 2003), while urban proximity is positively linked with better RNFE income (Deichmann et al 2009). Good health and a minimum level of education are generally considered beneficial for RNFE development and reduction of chronic poverty (Jalan and Ravallion 2000; Oduro and Aryee 2003). However, the impact of skills training on the RNFE is rather ambiguous (McKay and Howe 2007; Shaw 2004).

Beside these basic economic entitlements, access to financial capital or credit is always taken as a promoting factor for better RNFE capabilities (Masakure et al 2008). Another factor that affects household capability to get engaged in high income RNFE activities is access to market or marketing facilities (Gibson and Olivia 2010; Deichmann, Shilpi and Vakis 2009). All these capabilities to earn high RNFE income affects economic entitlement of the poor and their capability to access different basic services like healthcare and education. For example, because of their low involvement in income generation activities, women in Bangladesh are lagging way behind their male counterparts in accessing health care facilities (BBS 2007).

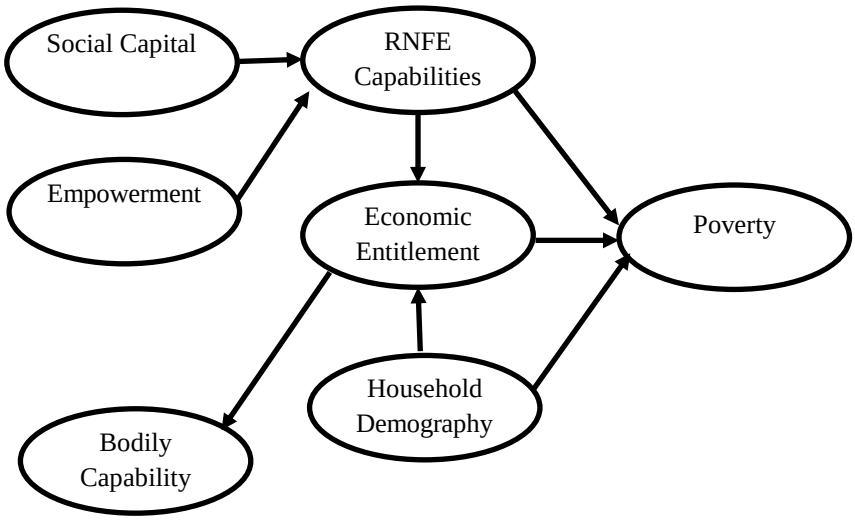


Figure 3: **Framework for poverty and RNFE**

While developing a framework to test the linkage between RNFE capability and poverty, household demography is included to capture dependency burden and sex of earning members in a household. The sex of the income earners has an impact on household poverty because women usually receive lower payment for similar jobs performed by their male counterparts and might not effectively participate in the labor force due to other family responsibilities and different social barriers (Mallik and Rafi 2010). Same has been observed by Salway et al (2003), in Bangladesh. Another factor identified for RNFE development and poverty reduction are access to social capital like including trust (Bastelaer 2000), intimacy (Fafchamps 2004) and frequency of interaction among members (Woolcock 2001; Peters and Jackson 2008) of a group involved in a particular type of RNFE. Besides, empowerment through participation in household decision making (Akhter 2000; Sultana 2004; Khair 2008) etc. also have impact on poverty, especially for women in RNFE.

As there is no universal measure of poverty, for the purpose of this paper, poverty is defined as inability to get three full meals in a day. Need for adequate food is universal as it is the most basic need for people to survive. Further a qualitative string is attached with poverty by measuring the quality of food taken. Such quality was measured by the number of times respondents took fish or meat in a week. Based on the premise of this existing knowledge on RNFE development and poverty, a statistical model has been developed using SEM on household data on poverty and capability to get involved in high income RNFE.

6.2.2 Empirical Model on RNFE and Poverty: A Statistical Model Developed under SEM

An empirical model demonstrated in Figure 4 indicates that poverty among RNFE households is directly affected by three factors namely economic entitlement, RNFE capability, and household demography. Variable included for social capital and empowerment are loaded as a single factor under High Income (HI) RNFE capabilities. A value of 0.95 (R^2 value indicating squared multiple correlation) at the poverty construct indicates that the three constructs (HI RNFE capabilities, household demography, and economic entitlement) together can explain 95 per cent of the total variance in household poverty. A 0.57 path coefficient value from economic entitlement to poverty, in comparison with path coefficient values of other constructs towards poverty, indicates that economic entitlement is still the single most important factor to determine household poverty in Bangladesh. This could be the reason why contemporary poverty reduction policies still emphasize mostly on improving economic entitlement of the poor.

However, a careful look at the empirical model reveals that 0.81 or 81% variance in economic entitlement can be defined by the variability in HI RNFE capabilities. In other words HI RNFE capabilities indirectly explain (0.57x0.81) = 0.46 or 46% of total variance in poverty. When this indirect effect of HI RNFE capabilities on poverty is combined with direct effect of HI RNFE capabilities on poverty, HI RNFE capabilities can explain (0.46+0.43) = 0.89 or 89% of total variability of poverty among households. Household demography as defined by dependency burden, and number of male and female earning members in a household, does not have a strong impact on poverty like, ‘economic entitlement’ or ‘HI RNFE capabilities’.

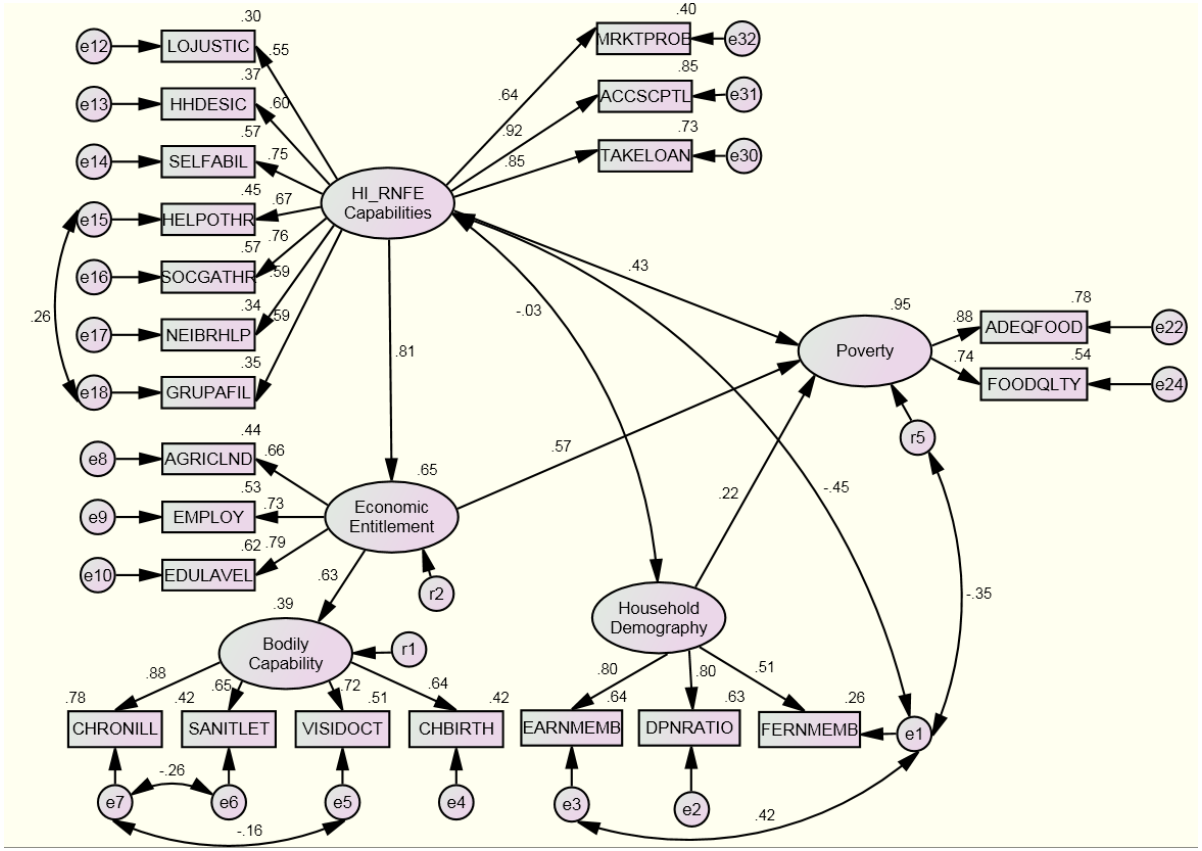


Figure 4: **Empirical model on RNFE and poverty**
*Regression coefficients are standardized

Table 9: **Competing fit statistics of the empirical model on RNFE and poverty**

	Model Fit Statistics						
	χ^2 (df)	**Sig χ^2**	**RMSEA**	**RMR**	**PGFI**	**NFI**	**CFI**
Independence model*	4188.27 (231)	0.000	0.221	0.280	0.218	0.000	0.000
Default model	216.17 (196)	0.154	0.017	0.027	0.735	0.948	0.995

Fit indexes' values in Table 9 indicate that all fit index values satisfy their conventional threshold values. While a value greater than 0.9 is acceptable for CFI and TLI indexes which refer to how well the covariance structure of the empirical data set fits with the covariance structure assumed in the model, RMR and RMSEA measure goodness of fit of the model per Degrees of Freedom (DF). For RMSEA and RMR, index values less than 0.5 are indications of good fit (Byrne 2010). PGFI, on the other hand, is parsimony adjusted goodness of fit index. Like CFI, PGFI examines goodness of fit of a model, taking consideration of total degrees of freedom. A PGFI value, as low as 0.5, is acceptable when other 'goodness of fit' index values exceed 0.9 (Byrne 2010). Since all the fit index values in Table 9 indicate a good fit model and all path coefficient values (regression weights) as marked by single-headed arrows are statistically significant (see Appendix B), it can be reasonably concluded from the model that RNFE development and poverty among RNFE households in Bangladesh are determined predominantly by 'HI RNFE capabilities', 'economic entitlement' and 'household demography'.

7. Conclusion

From the discussion so far, it can be claimed that, compared to other policy interventions for poverty reduction in Bangladesh taken so far, a poverty reduction policy implemented through RNFE development could be more beneficial for the poor. It can provide an alternative income source to landless poor or peasant households who cannot get direct benefits from agro-based development initiatives of the government. It also has more potential for an equitable income distribution, positive repercussion to domestic agricultural and industrial development, and women empowerment. However, empirical studies around the globe haven't shown any definite positive correlation between RNFE employment growth and reduction in rural poverty (Gordon & Craig 2001). Therefore, further research is required to identify how poor rural households can be effectively integrated into high income RNFE activities, rather than taking RNFE as a means of their mere survival.

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Appendix A

Variables used in the poverty model

No.	Name of the variable	Description
1	DPNRATIO	No. of dependents per earning member in a
2	EARNMEMB	No. of earning members
3	FERNMEMB	No. of female earning members
4	ADEQFOOD	Food adequacy
5	FOODQLTY	Quality of food taken
6	AGRICLND	Holding of agricultural land
7	EMPLOY	Period remain employed in the 12 months prior to
8	EDULAVEL	Level of education attained by the respondent
9	CHRONILL	Presence of chronic illness in any member of a
10	SANITLET	Quality of toilet facility used by a household
11	VISITDOC	Ability to visit doctor during illness
12	CHBIRTH	Attended child birth. Reason if un-attended
13	NEIBRHLP	Help expected from neighbours in case of
14	LOJUSTIC	Expectation of getting fair justice
15	SELFABIL	Ability to survive from own fund in case of
16	HHDESIC	Participation in household decision making
17	HELPOTHR	Level of help desired from others in non-
18	GRUPAFIL	Affiliation with any local group
19	TAKELOAN	Frequency of taking credit from bank or NGO
20	SOCGATHR	No. of attendances in social gathering during last
21	ACCSCPTL	Access to capital required for the business
22	MRKTPROB	Whether facing any problem to market product or service produced

Appendix B

Statistical significance of the coefficients in the model on povertyregression weights: (Default model)

			Estimate	S.E.	C.R.	P
Economic_Entitlement	<---	HI RNFE Capabilities	1.547	.159	9.742	***
Poverty	<---	Economic_Entitlement	.600	.081	7.371	***
Poverty	<---	Household_Demography	.215	.039	5.518	***
Bodily_Capability	<---	Economic_Entitlement	1.218	.152	8.034	***
Poverty	<---	HI RNFE Capabilities	1.423	.185	7.691	***
CHBIRTH	<---	Bodily_Capability	1.000			
VISIDOCT	<---	Bodily_Capability	.438	.045	9.757	***
SANITLET	<---	Bodily_Capability	.588	.061	9.602	***
CHRONILL	<---	Bodily_Capability	.546	.053	10.321	***
EDULAVEL	<---	Economic_Entitlement	1.000			
EMPLOY	<---	Economic_Entitlement	1.813	.127	14.250	***
AGRICLND	<---	Economic_Entitlement	1.087	.083	13.123	***
NEIBRHLP	<---	HI RNFE Capabilities	1.672	.178	9.394	***
SOCGATHR	<---	HI RNFE Capabilities	2.244	.198	11.304	***
HELPOTHR	<---	HI RNFE Capabilities	2.025	.169	12.013	***
SELFABIL	<---	HI RNFE Capabilities	2.455	.218	11.246	***
HHDESIC	<---	HI RNFE Capabilities	1.779	.185	9.603	***
LOJUSTIC	<---	HI RNFE Capabilities	1.786	.201	8.878	***
GRUPAFIL	<---	HI RNFE Capabilities	1.000			
ADEQFOOD	<---	Poverty	1.000			
FOODQLTY	<---	Poverty	.746	.045	16.625	***
MRKTPROB	<---	HI RNFE Capabilities	1.045	.104	10.022	***
ACCSCPTL	<---	HI RNFE Capabilities	3.339	.262	12.754	***
TAKELOAN	<---	HI RNFE Capabilities	2.700	.222	12.157	***
FERNMEMB	<---	Household_Demography	.337	.065	5.201	***
DPNRATIO	<---	Household_Demography	1.000			
EARNMEMB	<---	Household_Demography	.498	.079	6.290	***

*** indicates 99% level of confidence; Regression coefficients are unstandardized