

Peasants' Income Diversification in Bangladesh

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Abstract: The study aims to explore pattern and grounds of income diversification of the peasants in Bangladesh. By applying a mix method approach, the study interviewed 103 peasants from two villages of northwestern Bangladesh and analyzed the data accordingly. Evidence shows that drought, seasonality, discriminatory tenancy arrangement and in-effective market mechanism substantially reduce farm income and reshape peasants' livelihood in many ways. Subsequently, peasants strive to earn more from various off-farm sectors to cope with recurrent challenges, and with a hope to ameliorate their capability for future investment. Income diversification strategies, however, do not show a strong affiliation with income well-being and successful coping of the peasants. Therefore, this paper recommends for formulating a better policy to protect peasant livelihood.

Keywords: Peasants, Income diversification, Coping, Rural development, Bangladesh.

I. INTRODUCTION

The nature, social bases and socioeconomic consequences of peasantry were among the most longstanding foci in rural sociological research that received a substantially increased attention and exhibited considerable theoretical reformation in the 1970s and 1980s in many countries (Buttel *et al.* 1990). However, 'peasant as a concept' is still complicated because of its contentious history. In general, it is often referred to poor and landless farmers and agricultural laborers who have low social status (Webster 1926). From a social point of view, peasants always occupied the lowest position in the social, political and economic hierarchy (Singharoy 2004, Freedman 1999, Shanin 1971, Wolf 1966). Beteille (1974) identified peasants of Indian subcontinent from three major perspectives, such as (a) they were attached to land either as owner, tenant, or sharecropper (b) they occupied a lower economic and political position in the society, and (c) oppression and exploitation of the peasants had a political dimension. Scholars also distinguished 'peasants' as rural cultivators, for whom subsistence agriculture is the most important means of livelihood (Sivakumar & Hansen 2007, Schüren 2003). They habitually live in rural areas and accomplish a major share of their financial gain from agricultural practices. However, income from agriculture typically depends on weather and climate variability (Wreford *et al.* 2010, Salinger *et al.* 2005), market mechanisms (Chowdhury & Hagglblade 2000), tenancy arrangement (Noman & Joarder 2011) and access to services. If the said attributes do not function well, peasants face an increasing need of looking for alternative income sources to supplement their small scale agricultural activities (Yizengaw *et al.* 2015, Khatun & Roy 2012, FAO 2001). Ellis (2000) indicated that

rural inhabitants diversified their income sources in both on-farm and off-farm sectors efficiently to reduce income risks and to improve their standard of living. He also noted that there were two opposing theories regarding the actual driving force that causes the emergence of rural livelihood diversification — the 'agriculture optimistic' and 'agriculture skeptic' theories. Agriculture optimist stance is related to the emergence of diversification as a result of success in agriculture while the agriculture skeptic view sees diversification as responding to the failure of agriculture to generate secure livelihoods for those in rural areas. Both the views are basically derived from success and failure of agriculture. Delgado & Siamwalla (1997), however, stated that expansion of off-farm sectors and access to open market had great influence on diversifying income sources of the rural households in many parts of the world. Livelihood risks to different socioeconomic and environmental constraints also play an important role for income diversification (Barrett *et al.* 2001). Reardon *et al.* (1992) found diversification process as a self-insurance by which individuals mitigate their risk exposures eventually. Barrett *et al.* (2001) found income diversification of the rural households as one of the major key methods for ex-ante and ex-post coping with drought and relevant events. Wan *et al.* (2016) argued that income diversification helped rural households living in a drought prone area of China to make their livelihood system more stable. Most of the literatures stated here argue diversification as an efficient strategy to raise income and to manage different socioeconomic and environmental risks.

But, there are many reasons inducing income diversification out of farming. Sometimes, individuals adapt multiple income sources to make an entry into high-return niches whereas some are forced into it because of low-return of agricultural practices. The peasants of the northwestern Bangladesh suffer from low agricultural productivity because of number of combined factors. The region is highly prone to drought (Shahid & Behrawan 2008) that causes crop failure from 10 to 70% (Ericksen *et al.* 1997). Like many other parts of the country, the peasants of this region also experience income fluctuations in almost each year due to erratic market system. They usually sell their product at relatively low price in post-harvest period, whereas they buy food at high price during pre-harvest months (Salam *et al.* 2012, Dorosh & Shahabuddin 2002). Besides, a significant number of peasants cultivate land under different tenancy arrangement (Taslim 1995). They barely have any say in the arrangement of contracts because of their lower position in the society, and their fear of eviction from farmland (Noman & Joarder 2011). Since they face prodigious challenges to get access to service

and resources, they are more vulnerable to the market and vagaries of weather. These factors in combination with many other social factors cause lower agricultural productivity as well as income of the peasants. Consequently they employ a diverse set of activities to explore their income opportunities at various levels outside crop cultivation as an immediate response to these challenges. They mostly engage them in wage employment and animal husbandry. Some of them also change their cropping patterns. But, lack of human capital and limited access to infrastructure, market and technologies sometimes put peasants to pursue more subsistence-oriented activities that ultimately cause smallholders' poverty to persist and result into avoidant coping. The major concern remains whether the peasants can overcome seasonal fluctuations by involving them in multiple sources of incomes or not. Therefore, the goal of the study is to examine the pattern of income diversification and its association with income-wellbeing and coping status of the peasants living in a drought prone area of Bangladesh.

This paper is organized as follows. The next section represents the brief of the study area and methodology. The section 3 deals with income diversification, income status and their association with coping status while section 4 concludes the paper.

II. METHODOLOGY

The study is exploratory in nature. It was conducted in August, 2016. Primarily Sapahar upazila of Naogaon district was selected purposively after reviewing the poverty and drought maps of Bangladesh as developed by the World Bank and Bangladesh Agriculture Research Council (BARC) respectively. At the second stage, two adjacent villages namely Babupur and Haripur from Tilna union of Sapahar were selected based on the secondary data collected from the department of agriculture extension office, and consultation with the agriculture extension workers of Sapahar upazila. The study also considered the fact that the majority of households of the villages would be engaged in farming or crop cultivation. Household was the unit of analysis, and household heads were interviewed as respondents. Peasant household was considered as the marginal or small farmer whose primary occupation is farming, and depends on agriculture at subsistence level. The study used BBS's classification in identifying marginal and small farmers based on their ownership of farmland. According to Bangladesh Bureau of Statistics (BBS), marginal and small farmers occupy 0.2 ha to 0.40 ha of farmland respectively (Orr *et al.* 1995). Hence, all the marginal and small farmers from two villages (56 and 47 from Babupur and Haripur villages respectively; 103 in total) were selected as sample. To spot all the marginal and small farmers, the study collected a baseline survey report of 2014 and secondary data from a local NGO (Dabi Moulik Unnayan Sangstha of Naogaon, Bangladesh) working in the villages, and from upazila offices correspondingly. Household was the unit of analysis, and household heads were interviewed by a structured questionnaire. The questionnaire was mostly close

ended for taking the advantage of analyzing data with ease, and to collect data in a shorter period of time. It was divided into three sections. The first section dealt with the basic demographic information of the respondents while the mid-section was for collecting data on different income sources at household level. The last section was to identify the grounds of income diversification and its association with income well-being and coping.

Income in this paper is defined as the cash or cash-equivalent yield from a peasant household's assets. It is typically classified into three groups by its sources, such as (i) income from crop cultivation, (ii) off-farm income and (iii) income from current transfer from non-government organizations or/and government organization. The categorization of income sources was adapted from income diversification as classified by the International Labor Organization (ILO 2004, cited in the United Nations Economic Commission for Europe, 2011). The sum of income from the farm and household production of services for own consumption is referred to as income from crop cultivation. It is noteworthy to mention here, the study overlooked the debates between 'off-farm', 'non-farm', and 'nonagricultural' activities. Rather, it goes in line with the definition of 'off-farm' given by Haggblade *et al.* (2002). They define 'off-farm income' as the activities that include agricultural wage employment in other's farm along with all other activities outside agriculture. In classifying income of rural households, Ellis (2000) also includes labor as off-farm income. Thence, the study includes wage employment (either in agricultural sector or other sector), petty business, craft works, rickshaw/van pulling, construction works and so on under the off-farm income activities. Transformation of agriculture to mango orchard is a unique characteristic of the study area. Plantation, harvesting, management and marketing strategies of mango farming are somehow different from that of traditional agricultural practices (Noman and Joarder, 2011). So, it is also taken under the off-farm income. Precisely, off-farm income is meant in this study as the income from all other activities outside crop cultivation. Current transfers, in distinction, are the cash or cash equivalent objects that peasants get from government organizations and/or nongovernment organization (NGO) under social security programs at regular intervals. 'Total income' is the sum of the income from production, off-farm income and transfer income. Income well-being in this paper is perceived based on the per-capita income of the household and their status with poverty line. Per-capita income was calculated total household income divided by total household members. Coping, on the other hand, refers to the specific efforts that people employ to master, tolerate, reduce, or minimize stressful events (UNISDR 2009). The study considered respondent's perception regarding his/her position in measuring 'coping-status'. It was categorized into following five scales: (i) failing to cope; (ii) neither coping nor failing (iii) coping partially; (iv) coping moderately; and (v) coping successfully. Following the questionnaire survey, 2 focus group discussions (FGDs) and 4 key informant interviews

(KIIs) with different stakeholders were conducted to get in-depth insights on collected information. Representative members from different groups such as peasants, wage earners and agricultural block supervisors were present in the discussions. Both quantitative and qualitative techniques were applied to analyze the field data. At first data were processed with Microsoft Excel by using simple statistical techniques. Afterward, different descriptive statistics such as frequency analysis, cross-tabulation and graphical presentations were applied to analyze the data. Qualitative information collected through FGDs and KIIs were interpreted through a narrative approach and analytic description.

III. RESULTS AND DISCUSSIONS

A. Pattern of Total Household Income and its Sources

The study shows that peasant households earn their income from a diverse set of activities. Crop production, as a single source, still contributes majority of the total household incomes whereas off-farm income sector contributes substantially to the same. It constitutes more than half of total household income.

Considering sector-wise contribution of diversifying income efforts, it is observed from the Table 1 that all the peasant households produced crop for market and earned about 33% of their total income on an average. The income ranged from BDT 50 thousand (BDT 80 = USD 1) to BDT 237 thousand. All the respondents but 4 produced for their own consumption. The market value of the household consumables contributed nearly 13% to their total income. In total, crop cultivation generated 46% of total household incomes. Off-farm sector, on the other hand, contributed more than 52% to the total annual income.

It was observed that households with little farmland rely heavily on off-farm employment for their livelihoods. Livestock and poultry rearing was the most preferable activity under the off-farm cluster as 93% of the respondents were engaged in this sector. Peasants in the study area are more likely to keep poultry, sheep, goats and cattle. Group discussions revealed that the animal husbandry was one of the major sources of animal protein. In addition, livestock acted as buffer-stock during emergencies. In calculating income from animal husbandry, the study considered the consumption of meat and milk at household level, as well as the earnings from selling of livestock and poultry. The average income from livestock or poultry rearing was about BDT 23 thousand that ranged from BDT 5 thousand to 83 thousand per annum. It depicts that small-scale livestock husbandry was very common among the peasant households.

On the other hand, 55% percent respondents had changed their farmland into mango orchards and made nearly BDT 48 thousand annually on an average. There were 44 households that gained a significant share of their incomes from wage employment. There was a huge difference between the highest and the lowest income – BDT 9 thousand to 90 thousand

annually. It demonstrates that peasants with poor resources base are more inclined to earn from wage engagement. Fishery was also preferable among 29% of the respondents followed by petty-business (11.7%) and van-rickshaw pulling (10.7%). Only 8 households brought in salaried income. The peasants took in nearly 1.6% of their income under different social security programs implemented by the government and non-government agencies. It also indicates a bare access of the peasants to different social security programs.

Table 1 – Pattern of income diversification and their contribution to the total household income (in BDT)

#	Income components	N	Minimum	Maximum	Contribution to total household incomes (%)	Mean
1	Income from Crop Production					
1a	Return from crop production (production for market)	103	50,000	2,37,000	33.40	55,310
1b	Income from the production of household services for own consumption	99	2,000	68,600	12.66	24,157
Sub-total (1)			11,200	3,55,400	46.06	78,529
2	Off-farm Income					
2a	Wage employment	44	9,000	90,000	7.60	34,197
2b	Livestock and poultry rearing	96	5,000	83,500	12.57	23,483
2c	Mango orchard	55	7,000	3,50,000	16.34	47,916
2d	Fishery	30	1,000	1,21,200	2.98	17,577
2e	Petty business	18	12,000	1,00,000	3.06	45,000
2f	Salaried employment	8	30,000	2,50,000	4.15	98,667
2g	Van/rickshaw pulling	14	20,000	1,08,000	3.86	55,510
2i	Others (handicrafts, tailoring etc.)	10	1,200	90,000	1.82	31,720
Sub-total (2)					52.38	84,263
3	Financial Support/Current Transfer from GO or NGO					
3a	Financial support from GO	43	1,200	60,000	0.96	2,514
3b	Financial support from NGO	6	600	30,000	.60	13,600
Sub-total (3)					1.56	2,788
Total Household Income		103	52,100	5,25,500	100	1,65,580

(Source: field survey, 2016)

B. Major Factors Deriving Income Diversification

The peasants usually depend on agriculture both for income and food security. There were four major challenges identified

through FGDs and by KIIs that reduced income and induced production losses of the peasants at considerable level. The Fig. 1 portrays that the peasants were at great risk from the impacts of different kind of social and environmental constraints. The majority of farmers (88.35%) reported that their input costs (seeds, fertilizers, pesticides and so forth) for cultivating crop increased significantly in terms of the return they made from market after selling their product. About 71% of the peasants indicated that they experienced seasonal unemployment of two to three months almost each year for their sole dependence on single crop cultivation (rain-fed *aman*). A similar pattern was also observed regarding the impact of drought on crop cultivation. Climate variability reduced crop production of 69% of the respondents each year at various degrees. A significant number of the households (46.6%) alleged that a grave share of their profit from crop cultivation went to the pockets of the landlords because of discriminatory tenancy arrangement.

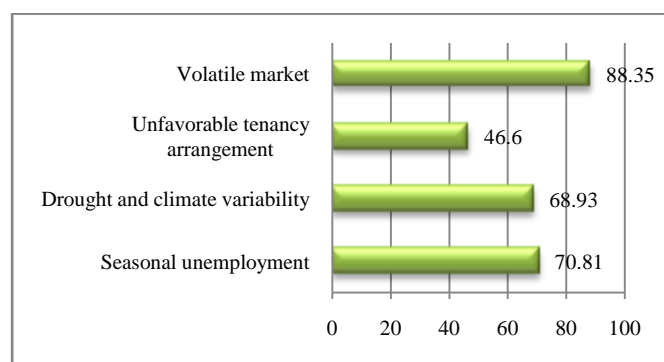


Fig. 1 - Major grounds of deficit in income and loss of production (Source: field survey, 2016)

C. Status of Income Well-being and Coping

Regardless having multiple sources of income, the majority of households could gain a lower income yearly. The Fig. 2 categorizes the income into five clusters. It shows that nearly 53% (sum of the first two-cluster) of the total households earned less than BDT 150 thousand annually. A total of 17 households (16.5%) made in between BDT 150 thousand to 200 thousand, while 9 households brought in BDT 200 thousand to 250 thousand per year. About 21% of the households gained an earning over BDT 250 thousand.

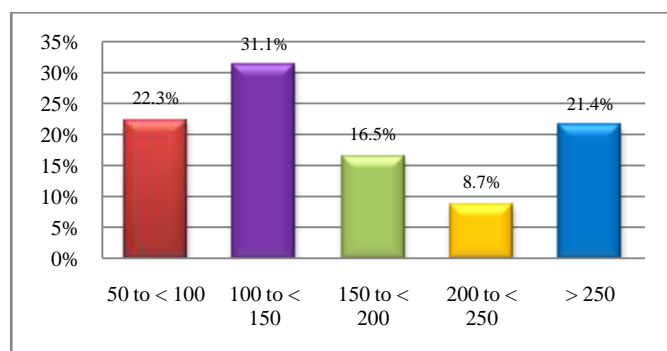


Fig. 2 - The distribution of income groups (Source: field survey, 2016)

If the total household incomes are calculated into per-capita incomes then it indicates a high rate of poverty persists among the peasant households. The Table 2 depicts that about 41% of the households earn less than BDT 80 (USD 1.0) per capita. Per capita income from BDT 80 to less than 120 (USD 1.0 to less than 1.5) was accounted for about 27% of the households. If aggregated, per-capita income below USD 1.5 stood for 67% of the households. These households undoubtedly live under a severe impoverishment compared to the national standard and average people living under poverty line (poverty headcount ratio is USD 1.9 a day, source: <https://www.indexmundi.com/bangladesh>). Another 19.4% of the peasants had a slight better income compared to that of previous two clusters. Nearly 9% of the respondents had per capita per day income of USD 2.0 to less than 3.0. The percent of peasant households bringing in more than USD 3.0 per person cut only 3.9%. Overall, about 88 percent of the peasant households had less than USD2 per capita income.

Table 2 - Per capita income of the peasant households

Per capita income (per person per day)	Total (N=103)
less than 80 taka (Less than USD 1.0)	40.8%
80 to 120 taka (USD 1.0 to less than 1.5)	27.2%
120 less than 160 taka (USD 1.5 to less than 2.0)	19.4%
BDT 160 to less than 240 (USD 2.0 to less than 3.0)	8.7%
More than 240 taka (More than USD 3.0)	3.9%

(Source: field survey, 2016)

There is a little information available on how peasants prepare and cope with drought and relevant socioeconomic constraints in this region. Findings from FGDs reveal a number of autonomous coping strategies among the peasants that differs considerably if access to asset and service varies. The study asked the respondents to posit themselves in overall coping status of the household. A five-scale statement was used in this regard. The Fig. 3 shows that a significant percent (22%) of the peasants claimed that they went bad in coping with different constraints. The position had not been changed to 23% of the respondents whereas about 29% contented partial coping. Only 16% and 9.70% of the respondents dealt the circumstances reasonably and successfully respectively.

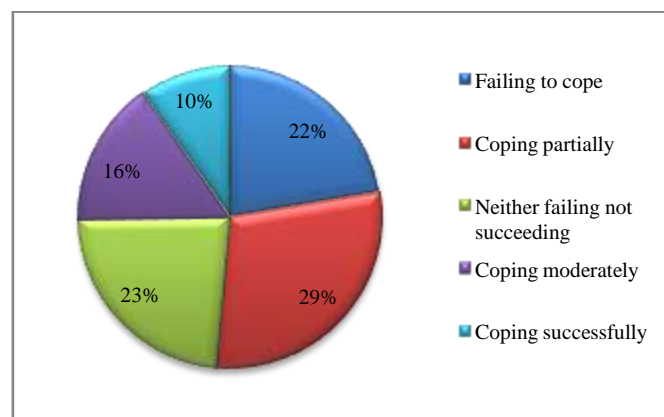


Fig. 3 - The percent of overall coping status of the peasant households (Source: field survey, 2016)

Overall, a significant number of peasant households confront impoverishment and income stress persistently at larger extents throughout the years. There barely has any affiliation between income diversification and economic well-being as well. The relationship between household income and coping status, however, possess a significant association. It is observed from the study that almost all the households indicated failing to cope belonged to the lowest income clusters whereas individuals coping moderately and successfully belonged to the higher income clusters (Table 3). For example, all the peasant households coping successfully were from the highest income cluster that made over BDT 250 thousand annually.

Table 3 – Association between coping and total household income

Overall coping status at household level	Category of total household income (in thousand BDT)					Total (N=103)
	50 to < 100	100 to < 150	150 to < 200	200 to < 250	>250	
Failing to cope	18	4	1	0	0	23 (22.3%)
Neither failing nor succeeding	1	8	6	5	4	24 (23.3%)
Coping partially	4	20	6	0	0	30 (29.1%)
Coping moderately	0	0	4	4	8	16 (15.5%)
Coping successfully	0	0	0	0	10	10 (9.7%)
Total	23 (22.3%)	32 (31.1%)	17 (16.5%)	9 (8.7%)	22 (21.4%)	103 (100%)

(Source: field survey, 2016)

IV. CONCLUSION

Bangladesh has attained remarkable progress in many sectors including per capita income and food production. But, findings of this study show that advantages of development actions are yet to reach peasant community as majority of them still live under poverty line. To mitigate risks at various levels, peasants embrace a number of income activities at once. Ever rooted exposures to various socioeconomic and environmental constraints, however, do not allow them to make an entry into high-income niches and productive sectors. As a result, income diversification strategies suffer from building a positive association with income well-being and efficient coping. The paper suggests development agencies to make more investment in farm sector since crop production as a single unit provides major share of peasant households' income. Peasants also need a proper tenancy arrangement as well as an effective market mechanism to protect them from decimations.

For further interpreting, one ought to contemplate that the study dealt a tiny sample size that may be non-representative in several cases. In calculating the income well-being, it failed to take into consideration of purchasing power parity (PPP). Besides, the study used a very few of the peasants' livelihood dimensions to comprehend the result. Yet, it hopes to

contribute a little in the systematic upbringing of studies associated with peasant livelihood in Bangladesh.

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