Labour Migration and Remittance Use: Determinants and Their Effects on Farm Households in Selected Areas of Bogura District in Bangladesh

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ARTICLE INFO	ABSTRACT
	The present study was conducted to analyze various socio-economic aspects of households with migrant and non migrant, influencing factors of labour migration and the impact of remittance on agricultural production. This study was conducted in two upazilas of Bogra districts namely Gabtoli and Shahjahanpur. The study areas were selected purposively. A sample of 60 respondents was being chosen purposively; 30 from households with migrant and 30 from households without migrant. Logistic regression model was used to measure the influencing factors of labour migration. Educational level of household head, household size, land size and household higher educated person of the selected household had a significant impact on labour migration in the research areas though the land of the household had a negative impact on labour migration. Descriptive statistics were used to measure the impact of remittance of the household with migrant. The average annual agricultural income (crop farming) of household with migrant is higher than household without migrant. The migration had brought positive changes in different types of livelihood assets. This study recommends that policy makers should create a more enabling economic environment and to provide procedural and structural support to the migrant workers to accrue the benefits of labour migration in relation to the country's overall development.

Introduction

Labour migration has become an integral part of Bangladesh's economic and social development. Each year a large number of people voluntarily migrate overseas for both long and short term employment. During the financial year of 2016-2017, a total of 5.51 lac Bangladeshis left the country to work abroad (BER, 2017). Migration becomes an important livelihood strategy in rural Bangladesh. The movement of population from one place to another, has been a universal phenomenon remains an essential component of economic development, social change and political organization. Every year thousands of people especially in under-developed and developing countries leave country to find a new way of life.

Migration is considered as an important livelihood and survival strategy for most of the rural poor farm households in Bangladesh (Akhter, 2015). Migration involves the shift of individuals and groups with consequences for output structure and growth, employment and social change (Jackson, 1969).

Population redistribution has taken place in all nations; all over the world throughout history, but today it is most prominent in the so called developing countries (Joshi, 1999). Migration is a cause and consequence of poverty and on the other way poverty can be condensed or induced by population movement. There are various reasons for migration and it varies from country to country and even within a country. Socio-economic, demographic and cultural factors are responsible for these variations.

One of the most important resources of a country is its labour force. With populations growing and labour participation rates shrinking in richer countries of the world and demand for labour from globalized labour markets is increasing, the influence of labour migration on the size and composition of a country's work force is becoming increasingly and undeniably. The number of labour migration is increasing day by day in many countries especially in developing countries. In developing countries there are very significant flows with considerable impacts on individuals, households and on regions (Mendola, 2006).

Bangladesh has a long history of labour migration and it is not a new phenomenon in Bangladesh. It existed in the historic and Mughal periods. During the British period, migration was very low in this subcontinent because of economic, social and cultural reasons. After partition of India in 1947, migration in Bangladesh was mainly international being pursued by the influx of refugees from India. However existing estimates from the BBS sample vital registration system (SVRS, 2011) suggest that lifetime migration has increased significantly. A large number of labour forces are now working in the different countries of the world including the Middle East. Among international migration from Bangladesh, 52% falls into the category of the less skilled group, and 33% are skilled migrants and the remaining 15% are semi-skilled migrants (BMET, 2017).

Agriculture is the dominating sector in the economy of Bangladesh contributing 16.79% to the gross domestic product (BER, 2017). For sustainable development, poverty reduction and agricultural revolution is important. Low productivity and low use of farm inputs, crop disease, pest infection, poor agricultural techniques and equipment, low soil fertility and poor infrastructures are amongst the main factors that have affected yields. Agriculture is important for sustainable development, poverty reduction and food security improvement (Groote *et al.*, 2011). By saving their remittances they can boost their capacities to acquire productivity-enhancing capital, resulting higher yield in agricultural sector. It can be a risk coping strategy for the weaker sections of the society and helped developing the saving habits among migrant households. Migration is often considered as a driver of growth and an important route out of poverty with significant positive impact on people's livelihoods and wellbeing (Anh, 2003). Households can benefit from the migration of their family members by receiving remittances. Remittances help to create more investment in the agricultural sector and these factors create more employment in the country. It helps the country to increase its export of manufactured goods, raw materials, low quality finished products etc. Due to the investment of foreign remittance in agricultural sector more improved agricultural technologies such as tools and machinery are used to support agricultural enterprise. Agricultural technologies are new varieties, improved management practices, agricultural machinery etc. According to Mendola (2008) those households having international migrant members are more likely to adopt modern farming technology, which in turn contributes positively to agricultural productivity. Most of the research is done with focus on analyzing the determinants of migration (Mohit, 1990; Hossain, 2001; Farhana *et al.*, 2012; Michael and David, 2009; Ullah, 2004).

The main aim of this study was therefore to assess the effects of labour migration on household's livelihoods and agriculture in the selected areas of Bangladesh. The specific objectives of the study were as: to determine the socio-economic characteristics of the selected households with migrant and households without migrant, the influencing factors of labour migration, use of remittance and its effects on agriculture and household with migrant; and problems faced by the households with migrant's and some policy guidelines.

Materials and Methods

Migration can be categorized into different types depending on different aspects. Based on time period, migration can be temporary, permanent and seasonal, on the basis of purpose it can be labour migration, forced migration, migration can be categorized as internal and international on the basis of location, and legal and illegal migration with processes involved in migration (Maharjan, 2010). In the present study, only international labour migration is considered. The study was conducted to explore the factors influencing labour migration and impact of remittance on the living standard of the farm households left behind members. To understand the materials and methods used in this research, this section is discussed in the following aspects: study area and sampling design, data collection, and empirical method used for analyzing the determinants of labour migration and remittance use behaviour of the farm households.

Study area and sampling design

This study was conducted at two upazila of Bogura districts namely Gabtoli and Shahjahanpur. These study areas were selected purposively considering the migration situation and agricultural practices of the areas. To identify the sample farm household at first the purposive sampling technique was applied. The sample households with migrant and households without migrant were randomly selected from the list of population in the study area. This study was based on both primary and secondary sources of data and information. Sample survey method was used for primary data collection.

The secondary sources of information include government annual reports, official statistical abstracts and researches undertaken in the study area. Moreover, data published in different public books, policy document about farm and non-farm sectors as well as research journals was also important to accomplish the research. The research data were collected from the BBS, BER, Country Profile and various published papers and journals.

Data collection

The primary data were collected from 30 households with migrant and 30 households without migrant. Required data were collected through interviewing the head of each non-migrant household and other family member of the migrant household. Economic profile of households with migrant and households without migrant, socioeconomic profile of expatriate, amount of remittance, expenditure, savings and investment related information, income and employment related information, agricultural activities of the farmers, agricultural technology use in the farm and finally problems and constrains were included in the interview schedule. The data were collected during the period from February to April, 2018. A questionnaire was used to interview for the selected group of household with migrant and household without migrant. Each respondent was given a brief description about the aim and objectives of the study before beginning the interview. The questions were asked in a simple manner and friendly environment with explanation where it was felt necessary. The information supplied by the respondent was recorded directly on the interview schedule. The filled-in questionnaires were checked after the interview in order to avoid errors and omission. Data were collected in local unit, which were converted into standard units while processing and editing the data.

Analytical techniques

In the present study several analytical methods were undertaken to meet particular research objectives. Descriptive statistics were taken into account to analyze data and to describe socioeconomic characteristics of respondents, types of occupation, household's income and expenditure etc. In order to investigate the extent of influence of the determinants on the decision making status of labour migration, logistic regression analysis (*Logit* model) was used. In *Logit* model, all the regressors are involved in computing the changes in probability (Guzarati, 2004). This model predicts the probability of an outcome that can only have two values (i.e., a dichotomy). The prediction is based on the use of one or several predictors (numerical and categorical). A logistic regression produces a logistic curve, which is limited to values between 0 to 1. In the present research, the following logit model was used to identify the influencing factors of labour migration in the study area:

$$Z_i = \ln[P_i \div (1 - P_i)] = \beta_0 + \beta_1 Q_1 + \beta_2 Q_2 + \beta_3 Q_3 + \beta_4 Q_4 + \beta_5 Q_5 + U_i$$

Where, P_i is the probability of households with migrant and households without migrant; $P_i = 1$ indicates households with migrant and $P_i = 0$ indicates households without migrant; Dependent variables: Z_i= probability of households with migrant; Independent variables: Q_1 = Age of the household's head (years); Q_2=Educational level of household head; Q_3 = Household size (no.); Q_4 = Land (Farm size in ha); Q_5 = Number of educated member in the household; β_0 = Intercept; β_1 to β_5= Regression coefficients of the dependent variables; and U_i= Error term

Results and Discussion

Socioeconomic characteristics of farm households

A household is defined as a group of people who live together, share the same domestic economy and eat together in the same house. In this study, the household size has been defined as the total number of persons who regularly found in the same household, living together and taking meals from the same kitchen under the administration of a single head of the family. The composition of a farm household includes father, mother, husband, wife, brother, sister etc. Family size and its composition are related to occupation and income. In the present study, age of the respondents was classified into three categories such as 15-30 years, 31-44 years, 45-59 years and 60-75 years. The average age of the selected respondents of the household with migrant was 42 years ranging from a minimum of 23 years to maximum of 75 years and the average age of the selected respondents of the household without migrant was 45 years ranging from a minimum of 25 years to maximum of 74 years. Although in Bangladesh, economic active persons are considered in the age range of 15-59 years of old (HIES, 2010) but age does not always indicate the activity of the people. Thus even with age above 60, some people are active and contribute to the family income.

Education is the process of facilitating learning or the acquisition of knowledge, skills, values, beliefs and habits. There is a strong relationship between society and education. To examine the educational level of the respondents, educational levels were classified into five categories such as illiterate, primary, secondary, higher secondary and graduate. In household with migrant, the observation from this study revealed that 26.27% of the respondent was illiterate, 23.33% of the respondent engaging in primary school education. 36.67% of the household completed their secondary education. It was observed that only 10% respondents attended higher secondary education while 3.33% completed graduation as indicated in the Table above. In household without migrant, the observation from this study revealed that 43.33% of the respondent was illiterate, 20% of the respondent engaging in primary school education. 16.67% of the household completed their secondary education. It was observed that only 13.33% respondents attended higher secondary education while 6.67% completed graduation as indicated in the Table 1.

Table 1. Socioeconomic characteristics of sample households by migration status

Characteristics	Household with migrant	Household without migrant
Average age of household head	42	45
Education of household head		
Illiterate (Can sign only)	8 (26.27)	13(43.33)
Primary	7(23.33)	6(20)
Secondary	11(36.67)	5(16.67)
Higher Secondary	3(10)	4(13.33)
Graduate	1(3.33)	2(6.67)
Main occupation of the household head		
Agriculture	16(53.33)	14 (46.67)
Service	3 (10)	3(10)
Small business	2(6.67)	4(13.33)
Transportation & construction worker	6(20)	3(10)
Day labour	0(0)	3(10)
Household work	3(10)	3(10)
Average farm Size (ha)	1.19	0.608
Family size		
2-3 members	7 (23.33)	12(40)
4-5 members	21(70)	16(53.33)
6-8 members	2 (6.67)	2(6.67)
Number of observations	30	30

Source: Field survey 2018; Note: Figure in parentheses indicate the percentage

Occupation of household head is one of the determining factors of respondent status. The people of Bangladesh engage in different occupations for maximizing their earnings. In household with migrant family, most of the household head were engaged in agriculture which was about 43.33%. While 13.33% were involved in transportation works, 10% were involved in poultry/livestock farming, 6.67% were involved in small business, 10% were involved in private sector job and 10% of the total migrant's household head involved in household work. In household without migrant family, most of the household head were also engaged in agriculture which was about 40%. While 6.67% were involved in govt. service, 10% were involved in poultry/livestock farming, 13.33% were involved in small business, 3.33% were involved in private sector job and 10% of the total non- migrant's household head involved in construction work.

The findings from the study area indicated that 23.33% of the surveyed household with migrant had 2-3 members. Further observation showed that, 70% of the surveyed households had 4-5 members and only 6.67% households had 6-8 members. On the other hand, the study area indicated that 40% of the surveyed household without migrant had 2-3 members. Further observation showed that, 53.33% of the surveyed households had 4-5 members and only 6.67 % households had 6-8 members.

Farm size is the total farm land owned by the household measured in hectare. Land and asset represent the wealth status of the household. The households with higher land and asset are considered much richer than others. Here household farm size is computed adding homestead land, pond gardening, cultivable land household owned, mortgaged in land and deducting mortgaged out land. Land holding = Own land (Homestead + Pond + Home garden area + Cultivated land) + Rented in + Mortgaged in - (Rented out + Mortgage out). Table 1 shows that the household with migrants have an average farm size of 1.19 hectare and the household without migrants have an average farm size of 0.608 hectare. Interviews with the sample household with migrants and household without migrants on land use indicate that it was practice for farmers to cultivate aus, aman, and boro rice and different kinds of vegetables in their field.

Socioeconomic characteristics of migrant labour

In the present study, age of the migrant labour was classified into three categories such as 15-30 years, 31-44 years and 45-59 years. The average age of the selected respondents of the migrant labour was 35 years ranging from a minimum of 24 years to maximum of 55 years. Similar results also found in the studies of Akhter (2015) and Afsar (2009). In migrant labour, the observation from this study revealed that 33.33% of the respondent was illiterate, 20% of the respondent engaging in primary school education. 23.33% of the household completed their secondary education. It was observed that only 20% respondents attended higher secondary education while 3.33% completed graduation as indicated in the Table 2.

Occupation plays an important role in migration. The data clearly indicate that, majority of the migrant labour i.e. 43.33% were construction worker, 10% of the migrant labour are cleaner who are mostly less skilled or semi-skilled, 13.33% were involving in small business, 6.67 % were involving in transportation worker, 20 % were involving in private sector job, and 6.67% are involving in other sectors. BER (2018) also reveals that 39.84% workers are less skilled while semi-skilled and skilled workers are 15.43% and 43.07% respectively which is nearly similar to the findings of the present study.

Generally, migrant's knowledge and skill increase with the increase of period of stay in abroad. The Table 2 shows that the migrant labour was highest 50% for period of stay between 6-10 years followed by 26.67% for 1-5 years.

Table 2: Socioeconomic characteristics of migrant labour

Characteristics	Number	Percentage
Age group (Years)		
15-30	7	23.23
31-44	19	63.33
45-59	4	13.33
Average Age	35	-
Educational level		
Illiterate (Can sign only)	10	33.33
Primary	6	20
Secondary	7	23.33
Higher Secondary	6	20
Graduate	1	3.33
Name of the occupation		
Small business	4	13.13
Construction worker	13	43.33
Transportation worker	2	6.67
Private sector	6	20
Cleaner	3	10
Others	2	6.67
Period of staying in abroad of migrant labour (in year)		
1-5	8	26.67
6-10	15	50.00
11-15	5	16.67
16-20	2	6.67
Sources of fund of migrant labour		
Formal	10	33.33
Informal	13	43.33
Own saving	7	23.33
Number of observations	30	100

From the study it was found that, the household with migrants had variety source of initial capital for starting. The analysis of data shows that, 43.33% of household in the surveyed villages are getting start-up capital from informal sources such as private money lenders and borrowing from family or friend. Meanwhile 23.33% respondent obtained their start-up capital from their own sources. Based on the discussion with the respondent, it was revealed that own savings involves income from, crop sales, selling of assets and livestock's etc. 33.33% respondents had got access to capital from formal sources but most of the respondents did not want to take loan from the formal sources due to tight conditions and long procedures.

Empirical results of factors influencing labour migration

To analyse the influencing factors of labour migration Logit model was estimated. Four out of five independent variables included in the model were found significant in explaining the causes of labour migration. These variables are educational level of household head, household size (no.), land (farm size in ha), household higher educated member of the households with migrant and households without migrant in the research areas. Therefore, the estimated equation was as follows:

$$Z_i = 0.335 + 0.003Q_1 + 0.148Q_{2} + 0.093Q_3 - 0.164Q_4 + 0.311Q_5$$

The result shows that age of household head had a positive value of coefficient which was 0.003. It demonstrated that the family member who are senior in age influence the younger to migrate abroad. The coefficient of educational level of household head had a positive value which was 0.148 and statistically significant at 1% level of probability. The result implied that other thing remaining constant, the members whose family education levels are higher than other members have a significantly higher probability of migration.

Household size had a positive value which was 0.093 and it mean that the family with a larger household size than others have a higher probability of migration, other thing remaining constant. It was statistically significant at 5% level of probability. The coefficient of land size of household had a negative value which was -0.164 and it was statistically significant at 10% level of probability. The result implied that the family that have lower land size than others a significantly higher probability of migration. It indicates that other thing remaining constant wealthier people are not interested to migrate abroad as a labour Which is also found in the study of Afsar (2009) which confirmed that the poorer segments of the population are increasingly adopting migration as a livelihood strategy to overcome the poverty despite the escalating cost of overseas migration.

Household higher educated person had a positive value which was 0.311 and it meant that the family with a larger number of higher educated people than others have a higher probability of migration. Because they are more conscious about better opportunity and higher income. It was statistically significant at 1% level of probability.

Table 3. Estimates of logistic regression of influencing factors of labour migration

Variables	Coefficient (β)	Standard error	t
(Constant)	0.335	0.261	1.284
Age of household head (Q_1)	0.003	0.003	0.811
Educational level of household head (Q_2)	0.148***	0.035	4.188
Household size (Q_3)	0.093**	0.040	2.318
Land (Q_4)	-0.164*	0.091	-1.808
Number of educated persons in the household (Q_5)	0.311***	0.071	4.396

Source: Author's estimation based on field survey, 2018; Note: *, ** and *** indicate significant at 10%, 5% and 1% probability level, respectively.

Effects of migration on agriculture and on farm household's livelihoods

Table 4 showed that the highest income source of the households with migrant is remittances which includes 27.54 % of total income per year. After agriculture (20.06) %, the major sources of income respectively service sector (16.12%), small business (11.19%), transportation worker (6.72%), poultry/livestock farming (6.14%), day labour (5.37%) and others (6.84%). In case of households without migrant, about 24.66% income come from service sector, after agriculture (16.72%), the major sources of income respectively small business (15.58%), transportation worker (10.14%), poultry/ livestock farming (8.65%), day labour (9.07%) and others (15.17%). The average annual agricultural income (crop farming) of household with migrant and household without migrant were Tk 89593.66 and Tk 62663.76, respectively. To test the difference of the results, Independent sample two tail t-test method was also used to evaluate the income from agricultural production of the sample household. From Table 5, the mean value of rice production was Tk 33590 for the household with migrant and the mean value of rice production was Tk 24383.33 for the household without migrant. Mean difference of rice production between household with migrant and household without migrant

was 9206.67 which is significant at 1 % level. The mean value of wheat production was Tk 12500 for the household with migrant and the mean value of wheat production was Tk 9753.77 for the household without migrant. Mean difference of wheat production between household with migrant and household without migrant was Tk 2746.23 which is significant at 5 % level. The mean value of jute production was Tk 17774.33 for the household with migrant and the mean value of jute production was Tk 14893.33 for the household without migrant. Mean difference of jute production between household with migrant and household without migrant was Tk 2881 which is significant at 5% level.

The mean value of vegetables production was Tk 25729.33 for the household with migrant and the mean value of vegetables production was Tk 13633.34 for the household without migrant. Mean difference of vegetables production between household with migrant and household without migrant was Tk 12095.99 which is significant at 1% level. The study found that migration effects on agriculture is positive. Mendola (2008) also found that those households having international migrant members are more likely to adopt modern technology which in turn contributes positively to agricultural productivity.

Table 4. Income of households with migrant and household without migrant by different sources

Sources of income	Household with migrant		Household without migrant	
	Average Income (BDT/yr.)	Percentage	Average Income (BDT/yr.)	Percentage
Agriculture (crop farming)	89594	20.06	62664	16.72
Poultry/Livestock farming	27428	6.14	32428	8.65
Day labour	24000	5.37	34000	9.07
Small business	50000	11.19	58372	15.58
Service sector	72000	16.12	92400	24.66
Remittances	123000	27.54	0	0
Transportation worker	30000	6.72	38000	10.14
Other	30535	6.84	56860	15.17
Total	446557	100	374724	100

Source: Author's calculation based on field survey, 2018

Table 5. Average income from agricultural production of the sample household

Independent sample t-test	Mean		Mean difference	Standard error	Standard deviation	t-value
	Household with Migrant BDT/yr	Household without Migrant BDT/yr				
Rice	33590	24383.33	9206.67	1421.53	7786.05	6.48***
Wheat	12500	9753.77	2746.23	894.39	4898.75	3.07**
Jute	17774.33	14893.33	2881	1447.08	7926.01	1.99**
Vegetables	25729.33	13633.34	12095.99	1564.35	8568.30	7.73***

Source: Author's calculation based on field survey, 2018; Note: *, ** and *** indicate significant at 10%, 5% and 1% probability level, respectively; BDT- Bangladeshi Taka.

Expenditure patterns of the household with migrant and household without migrant

Data regarding expenditures have been collected by different categories. Table 6 explains the average expenditure of household with migrant and household without migrant by different categories. Average household expenditure of household with migrant is accounted Tk 295656 of which Tk 94500 is spent for food, Tk 104922 for non-food, Tk 96234 for durable and others. Average household expenditure of household without migrant is accounted Tk 254739 of which Tk 87032 is spent for food, Tk 86365 for non-food, Tk 81342 for durable and others. Sarker and Islam (2018) showed that expenditure has also increased in case of remittance receiving households. Table 6 shows that the percentage distribution of non-food expenditure of household with migrant and household without migrant. In households with migrant, the largest share of non-food spending in marriage ceremony in expenses of (24.05%), followed by wear & cosmetics (19.06%), medical expenses (8.58%), loan repayment (7.28%), education (10.48%), fuel and transport (7.62%), religious festivals (11.44%) and house maintenance (11.48%). In households without migrant, the largest share of non-food spending in wear and cosmetics expenses of (19.10%), followed by marriage ceremony (18.53%), medical expenses (11.03%), loan repayment (9.76%), education (9.73%), fuel and transport (8.68%), religious festivals (11.58%) and house maintenance (11.58%). Table 7 shows that in households with migrant, about 64.76% of the total share of spending on durable items is used to purchase land in the study area. Other durable items are furniture, mobile, ornaments, agricultural equipment where percentage are 10.94%, 5.44%, 8.88% and 9.98% respectively. In households without migrant, about 65.44% of the total share of spending on durable items is used to purchase land in the study area. Other durable items are furniture, mobile, ornaments, agricultural equipment where percentage are 13.93%, 5.88%, 6.54% and 8.21% respectively.

Table 6: Distribution of average yearly expenditure of households with migrant and household without migrant

Category of expenditure	Household with migrant (Amount in Tk)	Household without migrant (Amount in Tk)
Food	94500	87032
Non-food	104922	86365
Durable	96234	81342
Total	295656	254739

Source: Author's calculation based on field survey, 2018

Agricultural technology used by the household with migrant and household without migrant

Agricultural technology refers to technology for the production purpose used on a farm to help farming.

Agricultural technology includes machines for tilling the soil, planting seeds, irrigating the land, cultivating crop, harvesting, threshing grain, livestock feeding etc. Most used agricultural technology in the study area is hybrid seed, new variety, tractor, water pump, chemical spray etc. Table 8 shows that in household with migrant hybrid seed is used by 24 farmers (24.49%) in the study area. Hybrid seed increase production per area than the local seed. New variety is adopted by 19.39%. Tractor is used by 18.37% farmers for land preparation in the study area. Water pump is used by 20.41% farmer and help farmer to irrigate in crop field. Pest and insects are managed by farmer 17.35% through chemical spray. Chemical spray reduces the loss of production.

In household without migrant hybrid seed is used by 15 farmers (21.23%) in the study area. Hybrid seed increase production per area than the local seed. New variety is adopted by 20%. Tractor is used by 22.86% farmers for land preparation in the study area. Water pump is used by 18.57% farmer and help farmer to irrigate in crop field. Pest and insects are managed by farmer 17.14% through chemical spray.

Savings scenario in household with migrant and household without migrant

From the survey, it was observed that each year the remittance receiving households saved part of the remittance which was also found in the studies of Haider *et al.* (2016); Sarker and Islam (2018). In this way, these households save from precautionary motive and keep their savings to defend any unexpected rainy days. From Table 9, it was observed that in household with migrant 30.77% of the total savers keep their savings in bank account. This is one of the most liquid forms of asset formation.

Table 9 also shows that they keep their savings in banks in different forms such as savings account 30.77% and term deposit 23.08%. Besides they provide money to friends and other 29.49% who repay them later on and save at home 16.67%. From Table 9 it was observed that in household without migrant, 26.92% of the total savers keep their savings in bank account. This is one of the most liquid forms of asset formation. Table 9 also shows that they keep their savings in banks in different forms such as savings account 26.92% and permanent deposit 19.23%. Besides they provide money to friends and other 23.08% who repay them later on and save at home 30.77%. From the analysis it was found that in the study area the effects of remittances on agricultural production have positive and significant impact on income generation. So, remittance play significant role to increase agricultural income (crop farming) of the remittance receiving household.

Table 7. Distribution of average yearly expenditure on non-food and durable items of households with migrant and household without migrant

Category of expenditure	Household with migrant		Household without migrant	
	Amount (In Tk)	Percentage	Amount (In Tk)	Percentage
Non-food expenditure				
Wear and cosmetics	20000	19.06	16500	19.10
House maintenance	12042	11.48	10000	11.58
Loan repayment	7642	7.28	8432	9.76
Treatment	9000	8.58	9533	11.03
Fuel and transport	8000	7.62	7500	8.68
Marriage	25238	24.05	16000	18.53
Education	11000	10.48	8400	9.73
Religious festival	12000	11.44	10000	11.58
Total	104922	100	86365	100
Durable items				
Land Purchase	62321	64.76	53232	65.44
Furniture	10532	10.94	11329	13.93
Mobile	5231	5.44	4782	5.88
Ornaments	8548	8.88	5321	6.54
Agricultural equipment	9602	9.98	6678	8.21
Total	96234	100	81342	100

Source: Authors calculation based on field survey, 2018

Table 8. Agricultural technology used by the household with migrant and household without migrant in the study area

Agricultural technology	Household with migrant		Household without migrant	
	Number of respondent	Percentage	Number of respondent	Percentage
Hybrid seed	24	24.49	15	21.23
New variety	19	19.39	14	20
Tractor	18	18.37	16	22.86
Water pump	20	20.41	13	18.57
Chemical spray	17	17.35	12	17.14

Source: Authors calculation based on field survey, 2018

Table 9. Distribution of saving in household with migrant and household without migrant

Category of savings	Household with migrant		Household without migrant	
	Number of respondent	Percentage	Number of respondent	Percentage
Savings account	24	30.77	14	26.92
Term deposit	18	23.08	10	19.23
Friend & others	13	29.49	12	23.08
Savings at home	23	16.67	16	30.77

Source: Authors calculation based on field survey, 2018

Conclusion

It can be concluded from the study that migration is an investment which results benefits in not only monetary but also non-monetary terms for the migrants and their families as a whole. Migration is certainly working as a catalyst in the upliftment of the income of migrants. It also improves the socioeconomic status of the migrants' family. Migration improves the income levels as well as the expenditure patterns of migrants in the place of destination. It also improves the socioeconomic status of the migrants' families by regular remittances. To increase agricultural productivity and improve the wellbeing of rural poor households in Bangladesh it is necessary to invest more in agricultural sector. However, liquidity constraints, many farmers in Bangladesh do not have access to more contribute in this sector. The results

in this study show that remittance receiving households in the region under the study reduce liquidity constraints and invest more in agricultural sector. There is a growing recognition that if migration takes place under conditions of safety and dignity then it accrues benefit to the migrants as well as source and host areas. It is therefore necessary that countries of the region go beyond viewing migrants as sources for harnessing of remittances and acknowledge their positive contribution. The government should provide procedural and structural support for improved governance of this sector from socio-economic and political cost and gains of labour migration in relation to the country's overall development. Given the commonality of issues that affect migrant populations, the government should encourage collaborative

research to objectively analyze the labour market realities of the region and the problems that migrants encounter in the destination countries. Such collaborative research is likely to contribute to informed policy-making.

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Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

References

Afsar, R. 2009. Unravelling the Vicious Cycle of Recruitment: Labour Migration from Bangladesh to the Gulf States, Working paper, International Labour Office (ILO) Geneva, Switzerland, pp: 1-63.

Akhter, S. 2015. Internal Migration and Its Impact on Farm Production and Food Security: The Case of Bangladesh. *Farming and Rural Systems Economics* edited by Doppler, W., Bauer, S. Birner, R. Vol. 158, Margraf Publishers.

Anh, D.N. 2003. Migration and Poverty in Asia: With reference to Bangladesh, Group Meeting on Migration and Development, Economic and Social Commission for Asia and the Pacific, 27-29 August, Bangkok.

BER., 2017. Bangladesh Economic Review, Department of Finance, Ministry of Finance, Government of Peoples Republic of Bangladesh, Dhaka, Bangladesh.

BER., 2018. Bangladesh Economic Review, Department of Finance, Ministry of Finance, Government of Peoples Republic of Bangladesh, Dhaka, Bangladesh.

BMET., 2017. Bureau of Manpower, Employment & Training, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.

Farhana, K. M., Rahman, S. A., Rahman, M. 2012. Factors of Migration Urban Bangladesh: An empirical study of Poor Migrants in Rajshahi city. Bangladesh - e Journal of Sociology, 9 (1): 105-117. https://doi.org/10.2139/ssrn.2517201

Groote, H. D., Overholt, W. A., Ouma, J.O., Wanyama, J. 2011. Assessing the potential economic impact of bacillus thuringiensis (Bt) maie in kenya. African journal of Biotechnology, 10(23) 4741-4751.

Guzarati, D. N. 2004. Basic Econometrics, 4th edition Newyork, McGraw hill.

Haider, M. Z., Hossain, T., Siddiqui, O. I. 2016. Impact of remittance on consumption and savings behaviour in rural areas of Bangladesh. Journal of Business, 1(4): 25-34. https://doi.org/10.18533/job.v1i4.49

HIES., 2010. Household Income and Expenditure survey. Bangladesh Bureau of Statistics, Government of the People's Republic of Bangladesh Dhaka

Hossain, M. Z. 2001. Rural –Urban Migration in Bangladesh: A Micro Level Study, BCSIR, Dhaka, Bangladesh.

Jackson, J. A. 1969. Migration: Editorial Introduction, in J.A. Jackson (ed.), Migration. London: Cambridge University Press.

Joshi, S. C. 1999. Sociology of Migration and Kinship. New Delhi: Anmol Publishing Pvt. Ltd. pp.2-8.

Maharjan, A. 2010. Labour Out-Migration and its Impact on Farm Families in the Mid Hills of Nepal. Weikersheim: Margraf Publishers.

Mendola, M. 2006. Rural out-migration and economic development at origin. What can we do? Sussex Migration Working Paper No. 40. Migration. London: Cambridge University Press.

Mendola, M. 2008. Migration and Technological Change in Rural Households: Compliments or Substitutes? Journal of Development Economics, 85(1):150-175. https://doi.org/10.1016/j.jdeveco.2006.07.003

Michael, H. and David, S. 2009. Environmental pressures and rural-urban migration: The case of Bangladesh, UNCTAD, http://mpra.ub.uni-muenchen.de/12879/.

Mohit, M. A. 1990. Rural-Urban Migration in Bangladesh: An urban perspective, Journal of Bangladesh Institute of Planners, 1(1&2):47-59.

Sarker, M., and Islam, S. 2018. Impacts of International Migration on Socioeconomic Development in Bangladesh, European Review of Applied Sociology, 11(16): 27-35. https://doi.org/10.1515/eras-2018-0003

SVRS., 2011. Report on Sample Vital Registration System, Bangladesh Bureau of Statistics (BBS), Statistics and Informatics Division (SID), Ministry of Planning, Government of Peoples Republic of Bangladesh, Dhaka.

Ullah, AKM, A. 2004. Bright City Lights and slums of Dhaka city: Determinants of rural –urban migration in Bangladesh, Migration Letters, 1(1): 26-41. https://doi.org/10.33182/ml.v1i1.24