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Factors affecting internal migration of the poor household of Bangladesh

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Abstract

Internal migration is one of the important livelihood strategies for poor community of Bangladesh. Numerous factors i.e. social, economic, demographic and geographic factors perpetuate poor households' decision of internal migration. Two-step Heckman selection model is used to analyze the factors that influence households' decision to send migrant. In addition, the paper also tries to shed light on the factors that mediate the migrant's destination preference. Multinomial logit model is used in this regard. The sample size is 26,720 households. The data manifests that age, dependency ratio, small land holding, seasonality, crop loss and house damage are preponderance factors for internal migration. Meanwhile, in the case of destination preference the data delineates that household sends migrant more towards Dhaka and Chittagong rather different districts or different villages of the same district. Dhaka and Chittagong are the most preferred destination for migration as these mega cities are endowed with employment opportunities. However, high concentration of migrant in Dhaka and Chittagong will yield unbalanced regional development in the long run. Therefore, it is crucial to search policy options i.e. decentralization of industrialization, creating scope of job in other parts of the country to ensure balanced economic growth of Bangladesh.

Keywords: Migration; Heckman Selection; Destination Preference; Bangladesh

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1. Introduction

In Bangladesh internal migrations has turned as a livelihood strategy for the poor people. They are migrating to different cities for better employment and earning (Alam and Islam, 2014). There are various factors,i.e., socio-economic, demographic and cultural which are causing internal migration in Bangladesh (Ishtiaque and Ullah, 2013). Ishtiaque and Mahmud (2011) state that economic crisis, food insecurity, unemployment, low-income, poverty, inequality, loss of land, demand for a new job, the expectation of better earning and previous migration pattern are several factors that affect the migration decision of the household in Bangladesh. Shonchoy (2010) identifies seasonality of income, natural disasters, and agricultural downturns as the common reasons behind migration decision. This study tries to trace out the factors that are responsible for the internal migration of poor households of Bangladesh. Therefore, the objective of the study is:

- to analyse the factors that are responsible for poor households' decision to migrate internally
- to trace out the factors that influence destination preference of the migrant

The paper tries to portray how migration decision varies by gender, age, and education and how different factors affect the destination preference of the migrant household through the application of Heckman selection model and multinomial logit model respectively.

2. Causes of internal migration

2.1. Social factor

Numerous exogenous social factors, such as landlessness, village politics, lack of social opportunities, i.e., education, health care, recreational facilities influence the individuals' decision to migrate from rural area to Dhaka in Bangladesh (Jahan, 2012). Practice of power exercise of village elites and exploitation of the poor compel them to leave rural area to city for better living (Akhter and Bauer, 2014; Haider, 2010). Other factors such as living with husband/wife and family feud also affect internal migration.

2.2. Geographical factor

Besides different social factors internal migration depends on some geography specific characteristics such as, natural disasters, i.e., cyclone, flood, droughts, or conflict. They act as an exogenous force for internal migration (Faini, 2002). Since Bangladesh is a disaster-prone country, it justifies poor peoples' higher propensity of internal migration.

2.3. Economic factor

An increasing number of people in Bangladesh have adopted internal migration as a livelihood strategy. Study of Ahmad (2004) reveals that poverty is a strong argument for internal migration in Bangladesh, where many people are poor and land less that force them to migrate. Some other economic factors such as loan burden,

and changing hereditarily profession also causes internal migration in Bangladesh. Hossain et al. (2003) state each year more than one million poor people of Bangladesh lose their land and homestead for river erosion. In this situation, internal migration has turned as a major coping strategy to earn livelihood. This empirical study bears the evidence in favour of household livelihood strategy commensurate with risk aversion for household income and NEML theory.

2.4. Demographic characteristics

The demographic characteristics, i.e., gender, age, and marital status are important for influencing migration decision of different group of people whether they migrate or not. Chant (1998) states that the households sometimes have gender selectivity for deciding which member migrate from rural to urban area. In many cases, age is also a crucial selection factor. Krishnan and Rowe (1978) find age selectivity, where the internal migrant receiving city or districts receive migrant within the age group of 20-49 years.

2.5. Other factors

Different empirical studies manifest that the propensity of migration varies due to the variation in the socio-economic, demographic and cultural ground. Low income, limited natural resource endowment, lack of employment opportunity, unequal factor endowment, uneven land distribution, cultural and societal deviation, demand for better schooling of kid, and lack of basic regional advantageare identified as influential factors of internal migration (Kadioglu, 1994; Mehta and Kohli, 1993). Schoorl et al. (2000) state that social, economic, and political hardship influence the decision of individual of a household to migrate to avoid income risk. Therefore, the nexus of different factors forces people to migrate to minimize the household's income risk.

3. Methodology and data

3.1. Methodological detail to address research question

The decision of any of the household members to migrate depends on the vector of household's characteristics. The paper applies Heckman selection method to trace out the factors that cause internal migration. This approach follows three steps: firstly, estimation of household's income equation to observe values. Secondly, the income equation is used to simulate the earning for the non-migrant household. Finally, the study compares the simulated income distribution with the observed income (a total of income and remittance) of the migrant household. Following Chakraborty and Kuri (2017) and Heckman (1979) the model is developed. Hence, the first equation is as follows:

$$I_{it}^{*} = \alpha Z_{it} + \varphi_{it} \dots\dots\dots\dots\dots\dots\dots\dots (i)$$

Equation (i) exhibits the migration decision of the household. Here, I_i^* stands as an unobserved variable. However, I is a dichotomous variable takes value one when the household has migrant members, and zero if the household does not have a migrant member. That is, I = 1, if I_{it}* > 0, and I = 0 otherwise. Based on the

pattern of observed dichotomous variable I, it is possible to apply probit model. For normalizing, unity restriction is imposed on the variance of φ_{it} (Lee et al., 1980). Here, (i) and (ii) Z_{it} and X_{0it} are vector of participation and income equation, φ_{it} and ε_{0it} are unobservable terms that follow bivariate normal distribution.

$$logy_{0it} = \beta_o X_{0it} + \varepsilon_{0it} \dots\dots\dots\dots\dots (ii)$$

The distributional term of the unobservable term conditioned upon migrant household group participation indicates

$$E(logy_{0it}|Z_{it}) = \beta_o X_{0it} + \gamma_0 \lambda_{it} \dots\dots\dots\dots\dots\dots (iii)$$

In equation (iii), λ_{it} indicates inverse Mill's ratio. It measures the expected value of the unobserved characteristics of migration decision. It is conditioned on the pattern of observed participation in the migration process (Heckman, 1979). The model will be estimated by applying two-step Heckman procedure. Equation (i), i.e., the probit equation is used for the calculation of $\hat{\lambda}_{it}$ for λ_{it} and then, replaced by α with $\hat{\alpha}$ and the newly formed equation is as follows:

$$logy_{0it} = \beta_o X_{0it} + \gamma_0 \hat{\lambda}_{it} + \varepsilon_{0it} \dots\dots\dots\dots\dots (iv) for I_{it} = o$$

With mean, $E(\varepsilon_{0it}|I_{it}) = 0$ and variance $(\varepsilon_{0it}|I_{it}) = \sigma_0^2$. Here, the sub-sample of the observation y_{0it} is the income of the household, where y_{it} is the observed income. Equation (iv) is the combination of two term. First one is conditional expected value, $E\, logy_{0it} = \beta_o X_{0it} + \gamma_0 \hat{\lambda}_{it}$, it is based on the observable household characteristics. The second part is ε_{0it} that is an unobservable term. The predicted conditional expected value of non-migrant household is given by the equation (v).

$$\hat{E} logy_{0it} = \hat{\beta}_o X_{0it} + \gamma_0 \hat{\lambda}_{it} \dots\dots\dots\dots\dots (v)$$

The conditional expected value of the predicted income underestimates the income variance. It may lead to an artificial low-income inequality between the observed income and predicted income. Therefore, it is important to formulate a full income distribution by considering the unobserved term of the household that have migrant members. So, construction of random value is required as $\hat{\varepsilon}_{0it} = \hat{\sigma}_{0it} \phi^{-1}(r)$. Here, $\hat{\sigma}_{0it}$ reperesents the estimated standard error for the non-migrant household, r depicts the random number between 1 and 0, and ϕ^{-1} stands for the cumulative cumulative function for the standard normal distribution. Combination of both of the two parts predicts log income of all household in regime 0.

$$\hat{logy}_{0it} = \begin{cases} logy_{it} = \hat{\beta}_o X_{0it} + \hat{\gamma}_0 \hat{\lambda}_{it} + \varepsilon_{0it} P_{it} = 0 \\ \hat{E} logy_{0it} + \hat{\varepsilon}_{0it} = \hat{\beta}_o X_{0it} + \hat{\gamma}_0 \hat{\lambda}_{it} + \hat{\varepsilon}_{0it} P_{it} = 1 \end{cases} \dots\dots\dots\dots\dots (vi)$$

After simulation, it is possible to find out the factors that are responsible for migration decision of the household.

The study also tries to address the factors that affect the destination preference of the migrant household. The data collected on destination preference of the migrant is classified as 1= different villages of the same district, 2=Different Districts, and 3= Dhaka and Chittagong. Since the dependent variable is a response variable, the study applies multinomial logit model. The model considers random intercepts to tackle the unobserved heterogeneity or spurious dependence between individuals. Hence, following Greene (2003) the multinomial model is expressed as:

$$\Pr(Y_i = j|X_i) = \frac{e^{X_i\beta_i}}{\sum_{k=1}^{J} e^{X_i\beta_k}} \dots\dots\dots\dots\dots\dots (vii)$$

In equation (vii),"i" is the number of individual household with categorical observation. If there are *J* possible response, then $\Pr(Y_i = j \mid X_i)$, *j = 1,..., J*, is the probability that individual *i* has response *j* and X_i, a column vector of explanatory variables for that observation.

3.2. About the data

The data is collected by BRAC, who conducted the survey on poor communities comprising 13 districts and 90 BRAC branch offices of Bangladesh. The data is collected on the same household over three times. The first survey was undertaken in 2007, the second survey was conducted in 2009, and the final survey was conducted in 2011 on the same household. The total number of surveyed household is 31477. In the first stage, geographical targeting method was considered. Based on the poverty status of the household and the vulnerability mapping of the World Food Program, the poor districts and sub-districts were identified. Then a 'mini census' was conducted on those households. The total size of the census was 160,000 households. The mini-census covered information on HH roster, housing conditions, and asset holdings,i.e., land, livestock, and household assets. Then from this mini-census, total 32000 households were randomly selected. During the time of data collection, unavailable households were simply dropped from the list, and the total sample size turns into 31477. Throughout the study period in total 26,720 households were found in the spot. Therefore, present analysis has been accomplished based on data of 2011 of these 26,720 households.

3.3. Limitations

During the data analysis different statistical tests are conducted for the regression analysis and the data confirms presence of heteroscedasticity in the models. Hence, authors tried to minimize the error by estimating robust standard error. Meanwhile, different literature postulates religious belief, ethnic conflict (Boudreaux, 2009), cultural diversity, and political confrontation (Schoorl et al., 2000) can compel people to migrate. These aspects are not covered in this paper since the analysis is conducted solely on secondary data. Therefore, it can be a further research option for the researchers who are interested to work in the field of migration.

4. Data Analysis

4.1. Mean difference t-test

An overview of the characteristics of the migrant and non-migrant households has been provided in Table 1. The data shows that the age of the migrant household head is lower compared to the non-migrant household. The migrant households are more male-dominated than the non-migrant households. This implies that the environment of internal migration from the context of Bangladesh is more favourable to male headed household. The average size of the migrant household is significantly larger than that of the non-migrant

household. Table 1 also depicts that the mean dependency ratio of the non-migrant household is greater than that of migrant household, and it is statistically significant at 1% level of significance. This high dependency is the reason for non-migrant households to avoid internal migration as an income risk avoiding strategy. The mean ownership of land asset is larger for the non-migrant households compared to the migrant households. Therefore, in the case of internal migration, poor households migrate more to minimize income risk as a livelihood strategy. The mean expenditure on food, non-food purpose, and total expenses are higher for migrant households than that of non-migrant households. It implies that when the migrant became stable and earned more can bring change in the consumption behaviour of the migrant-sending households. The mean difference t-test also reveals that, the migrant households have a higher burden of loan compared to the non-migrant households. Sometimes, the migrant household lends money for their migration as an initial startup cost, and in some cases, the households sent migrants to earn money to repay the loan that they have already taken from different formal and informal lending sources. The mean participation of NGOs is larger for the non-migrant household than that of the migrant household. The non-migrant households get some support from the NGOs and run different economic activities under funding and co-ordination of the NGOs. It helps the non-migrant household to become financially sound, which may be a key reason for the non-migrant household not to choose migration as an income risk aversive strategy.

Table 1. Mean Difference t-test of Migrant and Non-Migrant Household

	Non-migrant	Migrant	Diff.
Age of HH head	48.28	45.66	2.62***
Sex of HH head	0.74	0.86	-0.12***
HH size	4.36	5.10	-0.74***
Last class passed	2.12	1.72	0.4***
Can read and write	0.24	0.21	0.03***
Can keep account	0.98	0.987	-0.007***
Dependency ratio	0.26	0.24	0.02***
Food consumption	44390	45812	-1422***
Non-food consumption	23861	23708	153
Total consumption expenditure	65076	66252	-1176
House ownership	0.72	0.72	0
Land asset	47.86	23.23	24.63***
Food security	0.63	0.77	-0.14***
Loan taken by household	0.39	0.45	-0.06***
House damage	0.0337	0.0382	-0.0045*
Ngo participation	0.11	0.07	0.04***

Authors' compilation (BRAC Household Survey 2011)
*Note: ***P<0.01, **P<0.05 and *<0.1*

4.2. Migrant household and number of migrant member

Figure 1 depicts the number of migrant members of the migrant-sending households. Around 70.11% migrant households send single migrant. Sending two migrant members is 22.43% in percentage. However, practice of sending three or more migrant members per household is very negligible in percentage. It indicates that the migrant households prefer to send one or two household member(s) for internal migration.

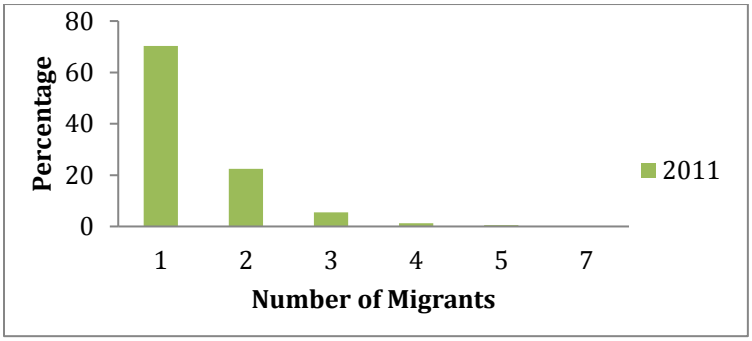

Figure 1. Number of Migrant Members in the Migrant Household; Authors' compilation (BRAC Household Survey-2011)

4.3. Destination preference of the migrant of different occupation

This section analyzed the pattern of the destination preference of the migrants of different occupation group. Table 2 depicts that irrespective of migrant's occupation, they choose to move more towards Dhaka and Chittagong as their preferred migration destination than migrating to other districts or migrating to different villages within the same district. Moreover, it is seen that labour, skilled workers, small business holder and large business holder tend to move more towards Dhaka and Chittagong than moving towards different villages of the same district or different district. Here, Dhaka and Chittagong are two mega cities which have higher employment scope for the migrant. These two cities have a large number of export-oriented industries, which can absorb more labour force from different parts of the country. The small and large businessmen also migrate to these mega-cities as they find it lucrative to sell their product to the large market in the big metropolitan cities.

Table 2. Destinations Preference of the Migrant of Different Occupation (in Percentage)

Occupation of the Migrant	Different villages Same District	Different Districts	Dhaka and Chittagong
Labour	9.64	44.94	45.43
Farmer	13.38	48.57	38.05
Small Business	6.72	30.01	63.27
Service	19.43	27.80	52.93
Large Business	8.70	34.78	56.52
Skilled Labour	11.95	17.98	70.07
Others	15.90	33.23	50. 87

Authors' compilation (BRAC Household Survey- 2011)

5. Causes of internal migration in bangladesh

5.1. Factors determining internal migration

Generally, it is perceived that economic motivation is the major factor behind migration (Mamun, 2013). However, besides the economic factors, some other socio-demographic characteristics also influence migration of households (Cebula, 2005). By applying Heckman two-step technique Chakraborty and Kuri (2017) find income gap between post- and pre-migration, experience of the household head, education of the household, income of the household and network are the key factors for migration decision. This section also applies Heckman selection (maximum likelihood and two-step) model to determine factors affecting migration decision. Further analysis is developed stage by stage commencing with log of income and expenditure as the dependent variables for both models.

Table 3. Factors Affecting Migration Decision of the Household

	Heckman selection (ML)				Heckman selection (two-step)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	lnincome	Mig. HH	ln total HH exp.	Mig. HH	lnincome	Mig. HH	ln total HH exp.	Mig. HH
Age of HH head	0.00538***	-0.00487***	-0.000607	-0.00462***	0.00480***	-0.00481***	-0.00488***	-0.00481***
	(0.000455)	(0.000496)	(0.000488)	(0.000500)	(0.000468)	(0.000501)	(0.000721)	(0.000501)
Sex of HH head	0.0174	0.223***	0.278***	0.290***	0.0472**	0.222***	0.490***	0.223***
	(0.0201)	(0.0418)	(0.0220)	(0.0488)	(0.0197)	(0.0418)	(0.0301)	(0.0418)
Can read or write	0.0422	0.0261	0.0278	0.0197	0.0433**	0.0261	0.0336	0.0260
	(0.0269)	(0.0234)	(0.0181)	(0.0231)	(0.0199)	(0.0222)	(0.0314)	(0.0222)
Can keep account	0.0336	0.0967**	0.0752**	0.109**	0.0425	0.0959**	0.143**	0.0959**
	(0.0348)	(0.0429)	(0.0308)	(0.0429)	(0.0389)	(0.0423)	(0.0609)	(0.0423)
Last class pas	0.0226***	-0.00925***	0.0130***	-0.00807***	0.0211***	-0.0101***	0.00212	-0.0101***
	(0.00409)	(0.00312)	(0.00227)	(0.00305)	(0.00263)	(0.00285)	(0.00407)	(0.00285)
HH size	0.181***	0.128***	0.219***	0.106***	0.193***	0.127***	0.305***	0.127***
	(0.00390)	(0.00371)	(0.00405)	(0.00397)	(0.00447)	(0.00373)	(0.00715)	(0.00373)
House ownership	0.0551***	-0.0197	0.0484***	-0.0161	0.0530***	-0.0219*	0.0298	-0.0219*
	(0.0105)	(0.0128)	(0.0117)	(0.0128)	(0.0112)	(0.0129)	(0.0181)	(0.0129)
ln land asset	0.0643***	-0.0667***	0.0198***	-0.0620***	0.0547***	-0.0655***	-0.0494***	-0.0655***
	(0.00441)	(0.00382)	(0.00418)	(0.00375)	(0.00413)	(0.00386)	(0.00643)	(0.00386)
Dependency ratio	-0.950***	-0.717***	-0.719***	-0.807***	-0.997***	-0.711***	-1.067***	-0.711***
	(0.0280)	(0.0285)	(0.0293)	(0.0299)	(0.0299)	(0.0295)	(0.0465)	(0.0295)
Per capita calorie intake		-0.000215***		-0.00040***		-0.000217***		0.000212***
		(9.63e-06)		(1.70e-05)		(8.19e-06)		(8.19e-06)
NGO participation	0.000714	-0.00162*	0.00169**	-0.00151	0.000552	-0.00162*	0.000548	-0.00162*
	(0.000761)	(0.000963)	(0.000716)	(0.000940)	(0.000899)	(0.000973)	(0.00140)	(0.000973)
Loan taken by HH	0.0311***	0.121***	0.0568***	0.126***	0.0403***	0.121***	0.124***	0.121***
	(0.0102)	(0.0116)	(0.0106)	(0.0116)	(0.0102)	(0.0116)	(0.0165)	(0.0116)
Farmer		-0.443***		-0.356***		-0.445***		-0.344***
		(0.0176)		(0.0208)		(0.0176)		(0.0176)
Small Business		-0.248***		-0.197***		-0.231***		-0.231***
		(0.0168)		(0.0166)		(0.0167)		(0.0167)
Service		-0.390***		-0.347***		-0.360***		-0.360***
		(0.0269)		(0.0259)		(0.0270)		(0.0270)
Large business		-0.818***		-0.786***		-0.791***		-0.791***
		(0.0775)		(0.0678)		(0.0765)		(0.0765)
Skilled labour		-0.314***		-0.280***		-0.285***		-0.285***
		(0.0340)		(0.0300)		(0.0341)		(0.0341)

	Heckman selection (ML)				Heckman selection (two-step)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	lnincome	Mig. HH	ln total HH exp.	Mig. HH	lnincome	Mig. HH	ln total HH exp.	Mig. HH
Other occupation		-0.275***		-0.263***		-0.277***		-0.277***
		(0.0207)		(0.0207)		(0.0218)		(0.0218)
Divorced		-0.191*		-0.149		-0.227**		-0.227**
		(0.107)		(0.103)		(0.106)		(0.106)
Married		0.0353		-0.0236		0.0159		0.0159
		(0.0582)		(0.0527)		(0.0581)		(0.0581)
Separated		-0.202**		-0.167*		-0.240***		-0.240***
		(0.0835)		(0.0863)		(0.0830)		(0.0830)
Widowed		0.0438		0.0133		0.00618		0.00618
		(0.0718)		(0.0716)		(0.0714)		(0.0714)
Seasonality		0.0536***		0.0674***		0.0277**		0.0277**
		(0.0134)		(0.0118)		(0.0122)		(0.0119)
House damage by natural disaster		0.0724***		0.0741***		0.0673**		0.0674**
		(0.0276)		(0.0276)		(0.0276)		(0.0276)
Crop loss by natural disaster		0.0451**		0.0321*		0.0378*		0.0378*
		(0.0194)		(0.0173)		(0.0195)		(0.0193)
Constant	9.503***	-0.525***	8.851***	-0.132	9.318***	-0.491***	7.489***	-0.491***
	(0.0554)	(0.0851)	(0.0585)	(0.0875)	(0.0671)	(0.0841)	(0.106)	(0.0841)
athrho	0.262***			0.847***				
	(0.0371)			(0.0777)				
lnsigma	-0.489***			-0.329***				
	(0.0190)			(0.0151)				
Mill's ratio						0.274***		1.356***
						(0.0298)		(0.0468)
Observations	65,190	65,190	65,190	65,190	65,190	65,190	65,190	65,190

Authors' compilation (BRAC Household Survey 2011)
Robust standard errors in parentheses
**** p<0.01, ** p<0.05, * p<0.1*

Table 3 depicts that there is a negative relation between age of the household head and migration decision. The coefficient is significantly different from zero at 1% level. The result indicates increase of age of the household head by one year decreases the probability of a household to send migrant. The coefficient of the sex of household head is also significant at 1% level. The positive sign of the coefficient indicates that the male headed households have higher probability of choosing migration decision than the female headed households. The result is consistent with Chant (1998). Moreover, the household heads having greater number of years of schooling are more reluctant to send household members away from home. It implies, household heads with higher education have a better-earning source at their locality influences the household decision not to migrate. The first stage regression bears strong evidence of the statement. In first stage regression, an increase in years of schooling enhances the income of the households.

Occupation and marital status of the household head are also important determinants of migration decision. Compared to the farm and non-farm labours household head's associated with other occupations (for example, farmer, small business owner) are less likely to migrate. Similarly, compared to never-married household head a family with divorced or separated household head has a lower probability to migrate.

The households having more family members have a high probability to migrate. A household with income generating land asset except their homestead chooses to migrate less. It indicates that household with sound income has a lower probability of choosing internal migration as a livelihood strategy. It is also significant at

1% level of significance. The households with high dependency ratio have lower chance to send any household member for internal migration. Still, households with high dependency ratio have low income, but they cannot send migrant since it is important for the household members to look after the dependent members of the household.

Household size is another important factor that encourages migration decision among the households. The households having more members have a high probability to migrate. But the households with higher dependency ratio have lower chance to relocate household members. Though households with high dependency ratio have low income they cannot send migrants since it is important look after the dependent members of the family.

Migration decision also relies on the ownership of land assets in the locality. If a household owned a greater amount of land assets the household members prefer to remain at home than migrating. It indicates that household with sound income has a lower probability of choosing internal migration as a livelihood strategy. It is also significant at 1% level of significance. These findings are resemblance to Akhter and Bauer (2014). They also find that age of household head, number of economically active household members, dependency ratio, and land holdings are the key factors behind migration decision.

Table 3 also depicts households with seasonal variation in food supply, vulnerable to a natural disaster that causes house damage, and crop-loss force them to choose internal migration as a livelihood strategy. Here, the probability values are statistically significant. This result is consistent with Black et al. (2008). The study of Black et al. depict that climate vulnerability causes thousands of people to leave their residences and heading to Dhaka, the capital of Bangladesh. Shonchoy (2010) observes seasonality of income, natural disasters and agricultural downturns as the common reasons behind migration decision.

5.2. Factors determining destination preference of the migrant household

This segment analyzes how several factors influence the destination preference of the migrant household. Multinomial logit model is used to identify the factors affecting destination preference of the migrant household. In Table 4, one year increase of age of the household head the odd to choose different districts compared to same district exp (β) increases by 2.73% $[\{\exp(0.027) - 1\} * 100]$ and the odds to choose Dhaka and Chittagong compared to same district decreases by 1.71%, ceteris paribus. Male headed household head compared to the female-headed household head has higher probability to choose different districts than the same district, and the result is also same for choosing Dhaka and Chittagong. The social mobility is an important issue here. The female headed household prefers to send migrants more in a different village of the same district than different districts or Dhaka and Chittagong as they can easily communicate with one another in the case of the family emergency.

If the household head knows only to read and write then the household prefers to send migrant less in the different district compared to the same district, however, for Dhaka and Chittagong the percentage of sending migrant increases by 52.8% than choosing the same district. Here, the concept of social mobility is an important issue. When the head of the household has meager educational qualifications, then it is quite natural that other members of the household, in most cases, are less educated. It forces the uneducated people either

migrating to different villages of the same district as a day labour or to move towards Dhaka and Chittagong as garments worker or dockyard worker. On the other hand, an increase of year 'last class' passed by one year, increases the odd to choose Dhaka and Chittagong than the same district by 3.25%, holding other things constant.

In Table 4, holding other things constant, the marital status of the household head indicates that the migrant family with married household head has a higher tendency (126%) to choose different districts for migration than different villages of the same district. The increase in dependency ratio increases the odds to choose different districts by 177.32% than different villages of the same district. Households took loan from NGOs send migrants to different districts or Dhaka and Chittagong where they have better employment opportunities.

Table 4. Destination Preference of the Migrant Household (Multinomial logit model)

VARIABLES	Different District	Dhaka and Chittagong
Age of the HH head	0.027***	-0.017***
	(0.003)	(0.002)
Sex of the HH head	1.555***	0.233***
	(0.145)	(0.089)
HH head can read and write	-0.535***	0.424***
	(0.133)	(0.100)
HH head can keep account	0.163	0.173
	(0.293)	(0.213)
HH head last class passed	0.006	0.032**
	(0.019)	(0.015)
HH size	-0.140	0.006
	(0.231)	(0.016)
Marital Status of HH Head		
Divorced	-0.636	-0.252
	(0.697)	(0.412)
Married	0.818**	0.391
	(0.372)	(0.239)
Separated	0.414	0.281
	(0.526)	(0.346)
Widowed	0.475	0.372
	(0.402)	(0.261)
Occupation of the HH head		
Farmer	-0.393***	0.144
	(0.117)	(0.088)
Small Business	-0.713***	0.900***
	(0.120)	(0.090)
Service	-1.043***	-0.156
	(0.183)	(0.125)
Large business	-0.912	0.129
	(0.575)	(0.413)
Skilled labour	-1.965***	-0.204
	(0.213)	(0.131)
Other occupation	-0.686***	0.237**
	(0.142)	(0.102)
Dependency Ratio	1.020***	0.103
	(0.207)	(0.152)

VARIABLES	Different District	Dhaka and Chittagong
NGO participation (Dummy)	0.001	-0.005
	(0.009)	(0.006)
Log of land asset	-0.030	-0.014
	(0.027)	(0.019)
Loan taken by HH (Dummy)	0.156**	0.146***
	(0.073)	(0.056)
Seasonality (Dummy)	0.161**	-0.113*
	(0.075)	(0.060)
House Damage (Dummy)	-0.343**	-0.327***
	(0.159)	(0.120)
Crop loss (Dummy)	-0.205*	-0.175**
	(0.117)	(0.089)
Constant	-1.090**	1.039***
	(0.498)	(0.333)
Observations	19,198	19,198

Authors' compilation (BRAC Household Survey- 2011) Robust standard errors in parentheses
**** p<0.01, ** p<0.05, * p<0.1*

Seasonality dummy depicts that households facing seasonal variation in food supply prefers to send migrants more toward different districts and less towards Dhaka and Chittagong compared to the different village of the same district. It implies that, within the same district migrants have less scope of job and moving towards Dhaka and Chittagong requires high installation cost which is difficult to bear. Therefore, finding no alternative, the migrant households send migrants towards different districts than other two destinations category. A migrant household that experiences damage of house or crop loss by natural calamity prefers to migrate less in different districts or Dhaka and Chittagong. Those households send migrants only to the different village of the same district as a livelihood strategy.

6. Concluding remarks

This study explores how different factors influence household's decision of sending migrants. A household with a male head, large household size, and low dependency ratio tend to send more migrants. The results also confirm that household members having larger land assets migrate less as they are financially sound. The overall analysis claims that households exposed to natural calamity, seasonal variation in food supply, house damage, and crop loss have the higher probability to send migrants. It implies that poor, landless, food insecure and natural calamity affected households choose internal migration in Bangladesh. Hence, the result is consistent from Bangladesh context.

The study also looks into how different factors affect the migration destination preference. Male headed households send their migrants more towards different districts and Dhaka and Chittagong. However, the female headed households prefer to send migrants different villages of the same district. Here, social security is an important issue. Female headed households feel less secured to send their migrant far, because if there is an emergency, they can easily get support from the migrant member. Migrants of households with high

dependency ratio move less towards Dhaka and Chittagong. The study also reveals that the migrants have higher tendency to move towards Dhaka and Chittagong irrespective of their occupation. This happens because Dhaka and Chittagong are the two largest cities of Bangladesh where people find larger employment opportunity in the expanding garments and dockyard industries. However, other districts have limited employment opportunity. Therefore, this study recommends that, to maximize the benefits of internal migration, the government of Bangladesh needs to put in place a decentralization policy that supports industrial growth of other districts and thereby creates new avenues of employment opportunity. This will decrease the internal migration pressure towards Dhaka and Chittagong, and in turn, economic activities in the entire country will be more active and vibrant.

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