

Determinates of Migration from and Within Bangladesh: A Household Level Analysis

Shaikh Shamim Islam¹, Mosammod Mahamuda Parvin², Anika Nawar Fagun³,
M. Mizanur Rahman Sarker⁴

¹International Mother Language Institute, Segunbagicha, Dhaka, Bangladesh

²Department of Management and Finance, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

³Department of Agribusiness and Marketing, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

⁴Department of Agricultural Statistics, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

Email address:

mrs_bd@yahoo.com (M. M. R. Sarker), sarker@sau.edu.bd (M. M. R. Sarker)

To cite this article:

Shaikh Shamim Islam, Mosammod Mahamuda Parvin, Anika Nawar Fagun, M. Mizanur Rahman Sarker. Determinates of Migration from and Within Bangladesh: A Household Level Analysis. *International Journal of Sustainable Development Research*. Vol. 7, No. 4, 2021, pp. 117-127. doi: 10.11648/j.ijdsr.20210704.15

Received: November 10, 2021; **Accepted:** November 29, 2021; **Published:** December 24, 2021

Abstract: The number of international migrants is continuously and rapidly growing worldwide. It increased to 244 million in 2015, up from 222 million in 2010 and 173 million in 2000. In Bangladesh, there is lack of sufficient resources and facilities to provide all its people with satisfactory working, earning, studying, health care, business and other opportunities, so, people migrate either simply from rural to urban, rural to rural and urban to urban destinations within the country or from the country to abroad either for short periods or for long duration. Lack of effective out migration policies, weak governance, and a hostile investment climate are all significant challenges to the sector's growth and attainment of the SDGs. The aim of this paper is to explore some 'household level determinants' for migration in Bangladesh when migration is internal and also external. Among the found determinants, researchers would like to know which determinants are more important and thus find the important reasons behind migration of the Bangladeshi people, thus enabling the proposing of policy recommendations. In the study the cross-section data of Bangladesh Household Income and Expenditure Survey (HIES) 2010 was used. In the survey data, 612 Primary Sampling Unit (PSU) were selected systematically from 16 Strata and a total of 12,240 households was present. Probit model was used to analyze the determinants of the household migration decision. The study found that age of household head, farm area, value of other assets, number of young dependents on family head, economically favored districts are significant determinants of migration. Regression results shows that increase in 'farm area' and 'value of other assets' increases the probability of both internal and external migration. Households having loans are more likely to take a decision for internal migration. The study found that external migration is more popular among Bangladeshi households than internal district to district migration. In case of both internal and external migration, probability of migration is greater from rural area than from urban area. Oil rich Middle East countries and OECD countries are the main destinations for external migrants and earnings not very attractive as most migrants work there as unskilled, semi-skilled or low-skilled workers. Government agencies should take steps to provide poor or insolvent households with appropriate information and guidance. Loan facilities for these people could be arranged so that for going to a job outside the country they need not sell their last assets.

Keywords: Migration, Household Level, Probit, Rural, Internal, External, Bangladesh

1. Introduction

Apart from the accepted definitions in chemistry or information technology, migration generally indicates 'movements to another place often of a large number

of people or animals' (Webster's dictionary). But human migration may not be a simple; rather it can be multidimensional. According to Bangladesh Bureau of Statistics (BBS) publication 'Sample Vital Registration System (SVRS) 2012' [3], except for the reason of marriage

(when the time period is not fixed), ‘movement of persons for changing his/her place of residence, for a period of six months or more’ is defined as migration.

There might be several reasons behind people’s migration from one place to another but it occurs mainly for three reasons: (i) for receiving higher income, (ii) for obtaining better career opportunities and (iii) for obtaining greater individual freedom [4].

“Brain Drain” as a result of migration may be defined as leaving one’s own country for the sake of getting better lives or better opportunity or simply to fulfill some ambitious expectations on the part of some extraordinary talented individuals like researchers or scientists or inventors. But departure of an unskilled laborer from their place of birth merely to get better income or a comparatively better living standard can only be considered as ‘simple migration’. Migration of talented people (brain drain) may cause huge losses to the sending country and at least some gain to the receiving country [6].

In case of the migration of ordinary people, rarely it was considered as a potential means of economic development in case of the receiving country or destination. Rather this migration was sometimes considered as means of dependency, rather than growth. However, since the “High-level Dialogue on Migration and Development” held in the UN General Assembly from 14 to 15 September 2006 and initiated by the then UN Secretary General Mr. Kofi Annan, enlightened governments, international organizations and researchers have regarded migration as having a potentiality to spur domestic development in case of both source and receiving countries [7].

With population density of 1,123.85 people per square kilometer area of land [13], Bangladesh still remains one of the most densely populated countries among the world. Although with per capita income of USD 1,968.8 [16], the country managed a promotion from the status of a ‘Low Income Country’ to a ‘Lower Middle-Income Country’, still 20.5% people fall below the national poverty line in 2019 as estimated by ADB [14]. The projected growth rate of GDP for financial year 2021-2022 will not be more than 6.4% [15]. Although nearly 65% people of the country are within working age limit [10], with lack of expected growth in the industrial and service sectors in the country and being still largely dependent upon the agricultural (20.24%) sector [1], many people still remain unemployed or underemployed.

Thus, with this situation in Bangladesh, of a lack of sufficient resources and facilities to provide all its people with satisfactory working, earning, studying, health care, business and other opportunities, people migrate either simply from rural to urban, rural to rural and urban to urban destinations within the country or from the country to abroad either for short periods or for long duration, and for some people it is even migration forever. From different research findings, we derive the information that migration in Bangladesh is influenced by factors such as poverty, inequality, food insecurity, income insecurity, religious suppression, fragmentation of agricultural landholdings,

environmental/climate related problems, higher income, better living standards in urban destinations, social and financial exclusion, better working/job opportunities in migration places, migration information and opportunities.

Internal migration started in the area, now known as Bangladesh from very ancient times. A large scale of external migration started when British rulers started taking laborers from this country for ‘tea estates’ established in Assam in northeastern India in the early nineteenth century. Migration in Bangladesh has different directions. According to previous study by Akhter (2014), rural to urban migration is the dominant one (66%). But there is existence of rural to rural migration (10%) and migration to overseas destinations (24%). [1]

Migration from any place of own country to abroad is considered as ‘External Migration’. The number of international migrants is continuously and rapidly growing worldwide. It reached 244 million in 2015 which may be compared with 222 million in 2010 and 173 million in 2000 [5]. The annual number of international migrants worldwide is predicted to rise to 405 million by 2050 [9]. Most of the migrants are from middle income countries (157 mill in 2015). The number of international migrants of Bangladesh is continuously rising. Thus, Bangladesh is the sixth largest origin country for international migrants in the world, with 7.8 million Bangladeshi migrants living abroad as of 2019 [11].

Absence of adequate out migration policies, poor governance and investment environment are major obstruct for expansion of this rising sector and achievement of SDGs [12]. The aim of this paper is to explore some ‘household level determinants’ for migration in Bangladesh when migration is internal and also external. Among the found determinants, researchers would like to know which determinants are more important and thus find the important reasons behind migration of the Bangladeshi people, thus enabling the proposing of policy recommendations.

2. Methodology

2.1. Empirical Framework

Probit model was used to analyze the determinants of the household migration decision. For migration decision, three dependent variables were used. These are:

- i. Migration decision of households in favor of internal migration.
- ii. Migration decision of households in favor of external migration.
- iii. Migration decision of households in favor of both internal and external migration.

The above mentioned three variables are binary dummy variables with values of 1 and 0. For three migration decision variables, their values are 1 if households take a decision for migration (i.e. the household has at least one migrant member) and its value becomes 0 if households does not have any migrant member.

In the analysis, household migration decision variables are

latent variables i.e. they are the variables which cannot be measured directly. The latent variables can be expressed by the following equation.

$$M_D = \gamma Y + \varepsilon \quad (1)$$

Here, it is assumed, M_D are household migration decision (three types), Y is the vectors of explanatory variables and error terms ε is normally distributed with mean 0 and variance σ^2 .

The empirical model can also be written as follows:

$$M_D = \gamma_0 + \sum \gamma_k Y_k + \varepsilon \quad (2)$$

The constant term γ_0 and unknown parameters in $\sum \gamma_k Y_k$ have to be estimated.

From Equations (2) and (2), the binary nature of M_D is as follows:

$M_D = 1$, if household has a migrant member or migrants, and

$M_D = 0$ otherwise.

2.2. Data

In the study the cross-section data of Bangladesh Household Income and Expenditure Survey (HIES) 2010 was used [2]. This is a standard survey data which comes from the joint initiative of Bangladesh Bureau of Statistics and the World Bank. In Bangladesh, the first HIES was conducted in 1973-74. Now, the HIES is regularly conducted in Bangladesh every 5 years. The sample of total 12,240 households for three 'migration decision' as described in HIES-2010 data was used.

2.3. Data Description

In the survey data, 612 Primary Sampling Unit (PSU) were selected systematically from 16 Strata. The earlier four Divisions (Chittagong, Dhaka, Khulna and Rajshahi) were divided into three strata each according to metropolitan area, urban area and rural area for each of the four Divisions (total 12 strata). Two new Divisions Barisal and Sylhet were divided into two strata each according to rural and urban areas for each Division (total four strata for two new Divisions and a grand total of 16 strata for a total of six Divisions).

There were a total of 12,240 households among which 7,840 samples were from rural areas and 4,400 were from urban areas. This means that more than 64% households under survey were selected from rural households whereas less than 36% of the households were selected from urban households. In this sense, these household data are a good approximation of rural households which have either migrant members or not.

An improvement of HIES 2010 over the previous HIES, i.e. HIES 2005 was inclusion of a questionnaire related to (i) disabilities, (ii) microcredit, (iii) migration and remittances, (iv) crises and crisis management. Compared to the HIES data

2005, HIES 2010 shows increase of 21.43% in terms of PSUs and households [2].

3. Results and Discussions

3.1. Descriptive Statistics of Data

Chittagong Division constitutes most of the households which had both internal and external migrants. Chittagong Division has five economically favored districts with 22.4% of migrant households. A large proportion of those households stay outside their districts inside Bangladesh and also abroad. It is also known that Chittagong Division is the receiver of highest numbers and amounts of foreign remittances. All these are consistent with the study's information that 47% of 'internal migration and external migration' was from Chittagong Division.

Despite there being no rural work in Rangpur Division (especially in Monga areas) for 3 to 4 months a year, there is a tendency of people not to move from their own residential place [8]. People of Sylhet Division have a tendency to move abroad. Many people of Sylhet stay in Great Britain as family migrants. But it is difficult to find households in Sylhet having both internal and external migration. Households of several districts of Dhaka Division have migrant members both inside the country and abroad. Businessmen of Dhaka Division do business inside the country and send family members abroad.

All 11 economically favored districts belong to Dhaka and Chittagong Division. Dhaka Division include Dhaka metropolitan city which is the capital city of Bangladesh. Chittagong Division includes Chittagong metropolitan city which is second largest city and a port city in Bangladesh. These two Divisions are more advanced than other Divisions of Bangladesh not only in terms of economic conditions rather in all aspects. Chittagong and Dhaka Divisions together are the receiver of 77.34% of the volume of total foreign remittances. Also 11 economically favored districts which are within these two Divisions constitute 35.25% of migrant households. All these supports the study information in that most of the households (75%) with 'external migration' were from these two Divisions.

Economically favored districts and coastal districts are the sources of nearly two-fifths of internal migration in the country. Coastal district people, being sufferers of natural calamities and sometimes even losing their arable and homestead land, have a high incentive to migrate from their original birth place. Monga district people have a tendency of seasonal migration following no work in the winter season. But some of these households also have a tendency of not moving from their home-stead land whatever difficult situation might prevail for them [8]. Haor district (and Sylhet Division) people have historically sent many foreign migrants, they also have some internal district-to-district migrants. In economically favored districts already settled people sometimes move due to marriage, job search, job transfer, education, business or some other purposes. Vulnerable

floating people move frequently.

Table 1. Summary Statistics and *t* Statistic of Variables for 'Internal Migration'.

Variable	Mean		T Statistic
	Not Internally Migrated	Internally Migrated	
Household Head Age	45.71	52.58	-11.2894***
Household Loan	0.33	0.338	-0.2866
Farm Area	62.12	79.43	-3.0467***
Value of Other Assets	19579.45	23165.71	-1.0935
Number of Higher Educated	0.54	0.498	1.0475
Number of Young Dependents	1.59	1.23	6.3861***
Number of Economically Active Males	1.28	0.851	11.4061***
Number of Economically Active Females	1.36	1.38	-0.7012
Religious Majority	0.876	0.918	-2.8837***
Rural	0.63	0.78	-6.8490***
Municipality	0.27	0.21	2.9048***
Statistical Metropolitan Area	0.095	0.007	6.9298***
Barisal Division	0.07	0.22	-12.5773***
Chittagong Division	0.179	0.191	-0.7235
Dhaka Division	0.289	0.294	-0.2336
Khulna Division	0.149	0.104	2.8789***
Rajshahi Division	0.131	0.074	3.8746***
Rangpur Division	0.106	0.084	1.6227
Sylhet Division	0.072	0.030	3.7628***
Economically Favored Districts	0.22	0.169	2.8580***
Coastal District	0.127	0.214	-5.8511***
Haor Districts	0.072	0.030	3.7628***
Monga District	0.14	0.078	4.1747***

Source: Author's Own Calculation Using HIES Data

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

The average household head age of internally migrated households and the households which did not migrate significantly differ from each other because the *t* statistic shows considerable evidence and the test result is highly statistically significant so that the null hypothesis is rejected at a 1% level of significance. Moreover, it can be said that households with comparatively older household heads take decisions for internal migration as these experienced heads are aware of better living standards and better income earning opportunities in the destination places. Similarly, it can be explained by the *t* statistic that the average value of a few other determinants of 'Internal migration' significantly differ between households which migrated internally and which did not.

Households having internal migrant members had on average a bigger farm area indicating their relatively better economic conditions. These households are now relatively less engaged in agricultural farming by themselves and increasingly interested in the non-farming sector and take the initiative to send their members to urban destinations inside the country for better income earning, study or for other opportunities.

With a fewer number of 'young dependents' in the household, active pro-migration people feel less compelled to stay home as they do not need to take care of young dependents. Now, they can easily migrate. Males between age 15 and 59 are energetic, hardworking and ready to work anywhere. For fulfilling the family obligation to earn more, they migrate inside the country from their place of birth.

91.8% of internal migrated households belongs to the

Muslim religion. This percentage is higher than those without internal migration. That means proportionally more 'majority religion' households participate in internal migration.

If the initial place of living is in a rural area, the probability of migration to an urban destination increases and most of the migration generated within country is from rural areas. With a lack of infrastructure and even with a lack of utilities like electricity along with a lack of proper schooling, medical care, shopping etc., rural people in developing countries always have an attraction for urban facilities. Still the rural economy of the country is largely dependent on agriculture where earning opportunities are less. As a result, if not migrating to foreign countries, at least urban migration is preferable to them. As most of the facilities are concentrated in the big cities like Dhaka and Chittagong, people continue to migrate to these cities from rural areas.

Municipalities and 'Statistical Metropolitan Areas' are the urban areas. When people stay in urban centers, they have less tendency to move. From municipal cities, people try to move to metropolitan cities or some municipalities nearer to their home. Sometimes this kind of movement can happen due to reasons such as job transfers, education and marriage.

More than one fifth of internal migration occurs from Barisal Division. Four among the nine vulnerable coastal districts are from Barisal Division. It is a riverine Division with a coastal border on the south. People not only suffer from flooding, waterlogging and salinization but sometimes from river erosion, and thus losing their habitual places. As a result, people migrate to different parts of the country including Dhaka and Khulna Division. Comparing the censuses of 2001

and 2011, it was found that population in Barisal Division was reduced by 26,718 which indicates huge migration from this Division (The Financial Express, Dhaka, May 17, 2013).

Khulna Division with three coastal districts is also a big source of internal migration with a proportion of migrant peoples of 10%, although this is lower than in Barisal Division (22%). Having Sundarbans and the Bay of Bengal in the south, districts of these Division have a salinization problem. As a result, in some southern parts, agricultural production is limited. People either move to Divisional headquarters and even to other districts outside their division. Rajshahi Division's districts are characterized by very hot temperatures during summer and very low during winter. After the construction of the Jamuna Bridge and several other bridges, road and rail communication from and to this Division became easier. So, for different reasons like jobs, marriage, trade and education, many people regularly move from different parts of

this Division. Although the people of Sylhet Division are famous for foreign migration, some people (3%) migrate to different districts inside or outside the Division.

'Economically favored districts' and 'coastal districts' shows two fifths of the total household internal migration among all districts. The people in 'economically favored districts' choose internal migration due to business or job requirements. Coastal area people choose internal migration for the same reasons as discussed in the case of Barisal and Khulna Divisions. People's movements from monga districts are mainly temporary or seasonal. They usually go back to their original place when agricultural work resumes again in their place of residence. Four haor districts, although constituting 8% of total household migration, have very low (3%) internal migration. Their internal movements usually are restricted within the Division.

Table 2. Summary Statistics and t Statistic of Variables for 'External Migration'.

Variable	Mean		T Statistic
	Not Externally Migrated	Externally Migrated	
Household Head Age	45.85	47.64	-4.0944***
Household Loan	0.346	0.193	10.3889***
Farm Area	62.12	79.43	-1.4662
Value of Other Assets	17514.85	42130.31	-10.5395***
Number of Higher Educated	0.537	0.594	-1.7582*
Number of Young Dependents	1.57	1.73	-4.2353***
Number of Economically Active Males	1.30	0.945	12.9894***
Number of Economically Active Females	1.33	1.65	-13.8745***
Religious Majority	0.87	0.95	-7.9600***
Rural	0.63	0.70	-4.0923***
Municipality	0.269	0.248	1.5746
Statistical Metropolitan Area	0.095	0.055	4.3909***
Barisal Division	0.08	0.05	4.0085***
Chittagong Division	0.16	0.39	-19.5500***
Dhaka Division	0.286	0.32	-2.3945**
Khulna Division	0.15	0.07	7.6317***
Rajshahi Division	0.14	0.06	7.2240***
Rangpur Division	0.11	0.01	10.6182***
Sylhet Division	0.07	0.10	-3.7485***
Economically Favored Districts	0.197	0.437	-18.6428***
Coastal Districts	0.136	0.077	5.5685***
Haor Districts	0.067	0.097	-3.7485***
Monga Districts	0.149	0.029	11.0409***

Source: Author's Own Calculation Using HIES Data

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

The average household head ages of 'external migration' households and households which did not migrate significantly differ from each other because the t statistic shows considerable evidence and the test result is highly statistically significant so that the null hypothesis is rejected at a 1% level of significance. Moreover, it can be said that households with comparatively older household heads took decisions for 'external migration' as experienced heads are aware of better living standards and better income earning opportunities in destinations. Similarly, we can explain with the t statistic value that the average value of some other determinants of 'external migration' significantly differ between households which migrated abroad and those which did not.

Among households who went for external migration, one fifth took loans during the last one year. Migration to foreign countries with prospects for earning foreign currency can give the opportunity to repay the loan. Households with foreign migrants have on average larger farm areas than those who did not have foreign migrants. Households with foreign migrants on average have higher values of assets. This indicates that the value of other assets may secure a household's expenditure and potential migrants from that family can go abroad without worries.

Higher educated people do not want to work for farming and other traditional work. Their eagerness to go abroad is greater. Households with external migrants shows on average a greater number of higher educated members than household without external migrants. Better earnings are necessary if

many young dependents remain in a household. Working abroad can assure more income than working in country. It can be seen that on average, more young dependents (1.73) remaining in households having external migrant members.

An average number of economically active males of less than one indicates that the household has some migrants who were either young or old dependent people in the household and can give support in migration. But obviously an increase in the number of economically active males and females increase the migration likelihood of the household as they are the most active part of household and most of the migrant people are within age range of 15-54 years. It is easy for economically active females to give support to male counterparts if they take on household responsibilities.

Among foreign migrated households, most are Muslims. This shows less evidence of 'compelled' migration of religious minority households. The proportion of 'external migration' is also higher from rural areas than from urban centers. Rural areas are the main source of semi-skilled and unskilled workers who work in the Middle East, ASEAN and some OECD countries [9]. Settled urban people do not want to

go abroad for work. Only 5.5% of foreign migrants were from statistical metropolitan areas.

Although Barisal Division is in the lead with internal migration (22%), external migration from this Division is very low (5%). Chittagong and Dhaka Divisions' huge proportion of migration (71%) can be justified by the remittance occurrences and remittance volumes of Dhaka and Chittagong Divisions. The migration percentages of Sylhet and Rangpur Divisions were also consistent with their remittance figures.

Eleven economically advanced districts from Dhaka and Chittagong Divisions constitute 44% of 'external migration' in the country. Most of the households of these districts have migrant members abroad. Foreign remittances are one of the major sources of the development of these districts. Although the Haor districts (9.7%) included in Sylhet Division, have less internal migration, historically they are famous for foreign migration which started from early in the nineteenth century. Along with the internal 'climate migration' from coastal districts, some external migration (7.7%) is also seen. Monga districts also account for 3% of external migration households.

Table 3. Summary Statistics and t Statistic of Variables for 'Both Internal Migration and External Migration'.

Variable	Mean		T Statistic
	Not Both Internally & Externally Migrated	Both Internally & Externally Migrated	
Household Head Age	45.96	60.15	-6.8631***
Household Loan	0.33	0.24	1.2574
Farm Area	62.88	61.09	0.0933
Value of Other Assets	19600	56882	-3.3576***
Number of Higher Educated	0.54	0.71	-1.1207
Number of Young Dependents	1.57	1.49	0.4429
Number of Economically Active Males	1.27	0.84	3.2686***
Number of Economically Active Females	1.36	1.73	-3.4473***
Religious Majority	0.88	0.96	-1.5849
Rural	0.64	0.67	-0.3661
Municipality	0.27	0.29	-0.3173
Statistical Metropolitan Area	0.092	0.044	1.0969
Barisal Division	0.079	0.13	-1.3191
Chittagong Division	0.18	0.47	-5.0268***
Dhaka Division	0.289	0.31	-0.3245
Khulna Division	0.147	0.02	2.3692**
Rajshahi Division	0.129	0.067	1.2511
Rangpur Division	0.105	0	2.2970**
Sylhet Division	0.071	0	1.8476*
Economically Favored Districts	0.22	0.47	-4.0280***
Coastal Districts	0.13	0.11	0.3909
Haor Districts	0.071	0	1.8476
Monga Districts	0.139	0	2.6996***

Source: Author's Own Calculation Using HIES Data 2010

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

The average household head age in case of households with both types of migration and without migration also significantly differ as per the t test results. Here also the household heads' average age of 'migrated households' is higher. This shows that household heads' experience works in favor of migration, be it internal or external. A few other variables also show significant differences when undertaking migration and when not undertaking it, based on t test results.

Economically active working age males and females are the most vital part of a household. An average number of

economically active males of less than one, indicates in case of both types of migration that some young and old dependent people also migrated. When a household has a greater number of active females and they fulfil their responsibilities properly, active male persons can migrate freely. In case of active female migration also these women can do a good job. The background study also supports this as most migrants are between the ages of 15 and 54 years, i.e. most migrants are young.

Chittagong Division constitutes the largest share of 'both

migration' (47%) among all Divisions. With economically favored districts and highest number and amount of remittances, Chittagong Division contains the highest number of 'external migrants'. Here it shows its substantial share also in the case of internal migration. From the hilly part of Chittagong and the Chittagong Hill Tracts, many people migrate to nearby plain land districts. This movement also became intense when there was insecurity in the Chittagong Hill Tracts due to political crises few years ago. Khulna

Division also shows two types of migration together.

3.2. Determinants of Migration

To show the effects of different determinants on i) internal migration ii) external migration and iii) both types of (internal and external) migration, we used a probit regression. For three different types of "source area variables", we run three probit regressions for each of the three types of migration.

Table 4. Coefficient of Probit Regression of internal, external and both.

Variable	Internal	External	Both
Household Head Age	0.011*** (0.001)	0.003** (0.001)	0.021*** (0.004)
Household Loan	0.118*** (0.046)	-0.352*** (0.040)	-0.083 (0.129)
Ln of Farm Area	0.056*** (0.014)	0.040*** (0.011)	0.046 (0.037)
Ln of Value of Other Assets	0.019*** (0.005)	0.045*** (0.004)	0.034 (0.012)
Number of Higher Educated Members	0.007 (0.026)	-0.009 (0.019)	-0.016 (0.057)
Number of Young Dependents	-0.092*** (0.019)	0.033** (0.014)	0.023 (0.043)
Number of Economically Active Males	-0.346*** (0.030)	-0.362*** (0.023)	-0.256*** (0.073)
Number of Economically Active Females	0.099*** (0.030)	0.353*** (0.023)	0.184*** (0.064)
Religious Majority	0.244*** (0.074)	0.522*** (0.068)	0.370 (0.240)
Rural	0.986*** (0.174)	0.381*** (0.074)	0.110 (0.254)
Municipality	0.835*** (0.176)	0.278*** (0.075)	0.173 (0.255)
Constant	-3.286*** (0.206)	-2.648*** (0.117)	-4.556*** (0.424)
	Pseudo R2=0.0949	Pseudo R2=0.1188	Pseudo R2=0.1343

Source: Author's Own Calculation by Stata

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

Household head age shows significance for all regression results, except two external migration. It is consistent with previous studies [1]. But our best result (marginal effect) is 0.001. Although it is statistically significant, its economic significance is unimportant as it has very less impact on migration probability. But its direction gives us support in favor of hypothesis that experienced age people are in favor of migration.

The probability of internal migration is 1 percentage point more for households with a loan than households which have no loans during the last one year. A loan burden inspires people to migrate for higher income opportunities which is consistent with the study's hypothesis. But very astonishingly, in case of external migration, a household with any loan will be less likely to migrate comparing with a household with no loan by 4-5 percentage point.

Table 5. Marginal Effect of Probit Regression (1).

Variable	Internal	External	Both
Household Head Age	0.001*** (0.0001)	0.0004** (0.0002)	0.0002*** (0.0001)
Household Loan	0.010*** (0.004)	-0.051*** (0.006)	-0.001 (0.001)
Ln of Farm Area	0.005** (0.001)	0.006*** (0.002)	0.001 (0.0003)
Ln of Value of Other Assets	0.002*** (0.0003)	0.006*** (0.001)	0.0003*** (0.0001)
Number of Higher Educated Members	0.001 (0.002)	-0.001 (0.003)	0.0002 (0.001)
Number of Young Dependents	-0.008*** (0.002)	0.01** (0.002)	0.0002 (0.0004)
Number of Economically Active Males	-0.029*** (0.003)	-0.052*** (0.003)	-0.003*** (0.001)
Number of Economically Active Females	0.01*** (0.003)	0.051*** (0.003)	0.002*** (0.001)
Religious Majority	0.021*** (0.006)	0.076*** (0.010)	0.004 (0.002)
Rural	0.084*** (0.015)	0.055*** (0.011)	0.001 (0.003)
Municipality	0.071*** (0.015)	0.040*** (0.011)	0.002 (0.003)

Source: Author's Own Calculation by Stata

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

Increase in the farm area will increase the probability of both internal and external migration. If the farm area increases by 1%, this probability will raise by 0.01. This is opposite findings of previous study by Akhter and also contradictory to the study's hypothesis. If the value of other assets increases by 1%, the probability of internal migration increases with probability 0.001 to 0.002. The probability of external

migration increases by 0.004 to 0.01 if the value of other assets of the household increases by 1%. These probabilities are very less. It is opposite of the study's hypothesis of more poor, more migration. But it says one thing that is true, for any kind of migration, there is some cost. And it's easy for families with more farm area or other assets can tackle that situation.

Table 6. Marginal Effect of Probit Regression (2).

Variable	Internal	External	Both
Household Head Age	0.001*** (0.0001)	0.0001 (0.0001)	0.0002*** (0.00004)
Household Loan	0.010** (0.004)	-0.04*** (0.006)	-0.0003 (0.001)
Ln of Farm Area	0.007*** (0.001)	0.012*** (0.002)	0.001 (0.0003)
Ln of Value of Other Assets	0.001*** (0.0004)	0.01*** (0.001)	0.0003*** (0.0001)
Number of Higher Educated Members	-0.003 (0.002)	-0.002 (0.003)	-0.0001 (0.001)
Number of Young Dependents	-0.01*** (0.002)	-0.002 (0.002)	-0.00004 (0.0004)
Number of Economically Active Males	-0.03*** (0.003)	-0.051*** (0.003)	-0.002*** (0.001)
Number of Economically Active Females	0.01*** (0.003)	0.044*** (0.003)	0.002** (0.001)
Religious Majority	0.02*** (0.006)	0.084*** (0.01)	0.004 (0.002)
Barisal Division	0.046*** (0.006)	-0.03*** (0.01)	0.003* (0.002)
Chittagong Division	0.006*** (0.005)	0.07*** (0.006)	0.01*** (0.001)
Khulna Division	-0.014** (0.006)	-0.06*** (0.01)	-0.004 (0.003)
Rajshahi Division	-0.02*** (0.007)	-0.05*** (0.01)	0.00003 (0.002)
Rangpur Division	-0.006 (0.006)	-0.126*** (0.02)	----
Sylhet Division	-0.026*** (0.010)	0.03*** (0.01)	----

Source: Author's Own Calculation by Stata

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

For increase in number of higher educated members previous study got lower probability of migration. Single significant value for number of higher educated members in the family was not found so that can be related with the study's hypothesis. If the number of young dependents in the household increases by one person, the probability of internal migration by that household's members decreases by 0.01. The probability of external migration will increase by 1 percentage point if the number of young dependents increases by one person in the household. This fulfills researchers expectation that active members may migrate to earn more for young dependents and also may not migrate to fulfil responsibilities for young dependents.

A household having one more economically active male member has less probability of internal migration by 0.03. On the other hand, a household with one more economically active male member has a less probability of external migration by 0.05. If the household has one more economically active female member, the household is more likely to take a decision in favor of internal migration by 0.01. One more female within the age range 15-59 will raise the household's external migration probability by 0.044 to 0.051. The study's hypothesis works here for number of

economically active female members which did not work for previous study [1].

If the household belongs to a Muslim family, the possibility of its member's internal migration is 0.02 higher than that of a Hindu, Buddhist or Christian or any other minority religion-based household. In case of external migration, Muslim households have a probability to migrate which is higher than a minority household group by 8 percentage point. Thus, hypothesis about more migration from religious minority people is not fulfilled.

If the household is from the rural part of the country, in the case of internal migration, its members are more likely to go for internal migration than a household from an SMA by 0.084. If the household is from rural area, its members are more likely to go for external migration than a household from an SMA by 0.055. On the other hand, if the household is from a municipality, its members are more likely to go for an internal migration by 0.071 than those from an SMA. If the household is from a municipality, its members are more likely to go for an external migration by 0.040 than those from an SMA. It indicates more migration from rural area whether it is internal or external migration than from urban area (municipality+SMA). It fulfils the hypothesis.

Table 7. Marginal Effect of Probit Regression (3).

Variable	Internal	External	Both
Household Head Age	0.001*** (0.0001)	0.0003 (0.0002)	0.0002*** (0.00005)
Household Loan	0.01* (0.004)	-0.04*** (0.006)	-0.001 (0.001)
Ln of Farm Area	0.007*** (0.001)	0.014*** (0.002)	0.001* (0.0004)
Ln of Value of Other Assets	0.001*** (0.0004)	0.004*** (0.001)	0.0003** (0.0001)
Number of Higher Educated Members	-0.002 (0.002)	-0.003 (0.003)	-0.0001 (0.0005)
Number of Young Dependents	-0.01*** (0.002)	0.003 (0.002)	0.0001 (0.0004)
Number of Economically Active Males	-0.03*** (0.003)	-0.05*** (0.003)	-0.003*** (0.001)
Number of Economically Active Females	0.01*** (0.003)	0.044*** (0.003)	0.002** (0.001)
Religious Majority	0.02*** (0.01)	0.077*** (0.01)	0.004 (0.002)
Economically Favored Districts	-0.014*** (0.005)	0.076*** (0.01)	0.004*** (0.001)
Coastal Districts	0.021*** (0.01)	-0.041*** (0.01)	-0.0004 (0.002)
Haor Districts	-0.03*** (0.010)	0.04*** (0.01)	----
Monga Districts	-0.03*** (0.006)	-0.08*** (0.011)	----

Source: Author's Own Calculation by Stata

Note: *, **, *** show level of significance at 10%, 5% and 1% respectively.

If the household is in Barisal Division, then the probability of it taking a decision in favor of internal migration is 0.046 higher than that of a household in Dhaka Division. For an external migration decision, its probability of migration is 0.03 less than that of a household in Dhaka Division. If the household is from Chittagong Division, internal migration of a member has a probability which is higher than that of Dhaka Division by 0.006. For an external migration decision, the probability of a Chittagong Division household is higher than that of a Dhaka Division household by 0.07.

A household of Khulna Division has lower probability to migrate internally than Dhaka Division by 1.4 percentage point and has 6 percentage point lower probability in case of external migration. Rajshahi Division household has 0.02 lower probability than Dhaka Division household for internal migration. In case of external migration this figure stands at 6 percentage point although the results from the divisional and regional specific models in table suggest that the Another study found that the spatial effects on district households' knowledge are more or less homogeneous across divisions and regions for health related issue [17].

If the household is from Rangpur Division, the possibility of its member's external migration is 0.126 lower than that of a household from Dhaka Division. If the household is from Sylhet Division, the probability of internal migration of a member is 0.026 less than that of a household from Dhaka Division. In case of external migration this case is reversed, and Sylhet Division is 3 percentage point higher than Dhaka Division.

Internal migration from economically favored districts is less likely to occur compared with other areas of the country although the fertility rate of Bangladesh is decreasing every year [18]. In case of external migration, households from economically favored districts shows a 0.076 higher probability than other areas of the country. Coastal districts show a 0.021 higher internal migration probability than other areas of the country. On the other hand, coastal districts show 0.041 less probability of external migration than other areas.

Haor district's households shows more interest for external migration than merely internal district to district migration. On the other hand, internal migration is more preferable to Monga district's household than external migration.

4. Conclusions and Policy Implications

4.1. Conclusions

The study endeavored to find important determinant factors that work behind internal and external migration in Bangladesh by using probit regression and utilizing the household income and expenditure survey data.

Both internal and external migrant households occupy a larger operating land area and have more other assets than households without migrants on average. Regression results shows that increase in 'farm area' and 'value of other assets' increases the probability of both internal and external migration (although by very small percentage point). This

indicates an increasing interest of households in non-formal, non-farming sector employment rather than traditional farming activities. As there are some outliers in the data of both farm area and value of other assets, it can be said most of the households having smaller farm area and other assets, choose to undertake migration. With this, we may come to a conclusion that relatively poor or insolvent households choose to undertake migration.

Loan repayments or taking proper care of young dependents or old dependents (i.e., family obligations) are still a big issue for the migration decisions of active young people. This indicates a great family bondage in most families in the country. Households having loans are more likely to take a decision for internal migration. And in case of a loan, households are less likely to take decision in favor of external migration. A family already burdened with loan cannot afford external migration as foreign migration involves huge costs.

An increase in the number of young dependents reduces the probability of internal migration. On the other hand, an increase in the number of young dependents increases the probability of external migration. This indicates that external migration is more popular among Bangladeshi households than internal district to district migration. The study found such evidence (9%=external migration and 4.4%=internal migration) and also from the regression results that when the number of economically active females increases, the probability of external migration increase (0.044 to 0.051) is higher than probability of internal migration increase (0.01). When households have a greater number of economically active males, the migration probability of households is reduced. More male members in the household increase the household's costs. The household thus cannot incur the costs of migration of these young active members. If the number of economically active female member increases (suppose by marriage) and they can tackle household work, childcare and the like efficiently, and that gives the opportunity for active male or other active female members to migrate without anxiety. The last few lines convey the concept that migrant people are mainly young people.

Religious minority households are better than religious majority households on average length of education, assets, and number of economically active people. Regression results tells that religious majority households' probability for both internal migration and external migration are more than that of religious minority households. So, there is less evidence of compelled migration of minority people. Also, more evidence for preference of external migration.

As per the summary statistics, rural areas were the main source for internal and external migration. The regression result supports this. In case of both internal and external migration, probability of migration is greater from rural area than from urban area i.e. from municipality and statistical metropolitan area. Internal migration may sometimes occur because of job opportunities, job searching, business, study or marriage. External migration was higher for Sylhet Division, economically favored districts, Haor districts, Dhaka Division

and Chittagong Division. This is consistent with our analysis in the summary statistics part.

Internal movements of people from Barisal Division, Khulna Division, coastal districts and movements of people from Rangpur Division and munga districts are mainly due to natural and economic hardship. Internal migration movement is also common from other Divisions like Dhaka and Chittagong Divisions, but again Dhaka and Chittagong Divisions and specially Dhaka and Chittagong metropolitan cities are the main destinations for most of the internal migrant people. That creates another problem of deteriorating the daily life in these big cities as there is no scope for these big cities to provide all their inhabitants with enough scope for jobs, education, medical care, recreation and all other benefits. Although the dream of gaining a better life through migration to the large cities in cases of rural vulnerable people cannot come true with huge unemployment in urban places, people continue to seek to move to the cities. Therefore poverty, inequality and social and financial exclusion have become common part of the lives of many of these internal migrants.

Oil rich Middle East countries like Saudi Arabia, UAE and Kuwait, and ASEAN countries like Malaysia and Singapore, and OECD countries like Italy and the United States are the main destinations for external migrants. Most migrants work there as unskilled, semi-skilled or low-skilled workers [9]. As a result, earnings are not very attractive. Sometimes, for some workers it is even difficult to pay back to their family, the expenses they incurred for migration including the plane fare and brokerage costs.

Another matter of concern is that the current global oil price reduction may compel many oil rich Middle East countries to reduce their expenditures and lay off many foreign workers. Many student migrants go to OECD countries aiming not to return to their country, but rather stay in those destinations after completing or not completing their studies.

4.2. Policy Implications

The following are the primary policy implications based on conclusions from the empirical experiment:

Poor or insolvent households can be targeted and encouraged to undertake both internal and external migration. Poor households are more interested in migration. In that case, government agencies can take steps to provide them with appropriate information and guidance. Loan facilities for these people could be arranged so that for going to a job outside the country they need not sell their last assets. Linkages can be established under government rules between loan providers and migration facilitation. Facilitation should be improved for external migration. Publicity can be given to the idea that extra young persons in a family should consider earning money abroad. Young talented persons can also be encouraged to study quality education abroad. They should be encouraged to return and get high paid jobs after returning back successfully. Standards should be applied to control expenses such as air fares and brokerage costs. Government agencies should regulate brokers so that they cannot charge excess amounts

from potential poor migrants. The causes of economic disadvantage whether it is in case of religious majority households or in case of religious minority households should be examined, and appropriate remedies sought. Migration, if for economic necessity, is acceptable. Migration which is due to suppression by religious majority people is not acceptable at all and government should take proper remedial measures. Religious minority groups of people should be protected with due care in all aspects. Rural areas provide a fertile ground for sourcing internal migrants. For increasing external migration movements from less advanced areas such as coastal districts, munga districts, Rangpur, Rajshahi, Khulna or Barisal Division initiatives should be taken by government for encouragement, training and advertising for the people of those areas. The conclusions suggest the need for the development of national policy on large cities. Attention needs to be given to city planning to assume sufficient living conditions for city dwellers of existing cities.

References

- [1] Akhter, Shamima; Bauer, Siegfried (2014): *Household Level Determinants of Rural-Urban Migration in Bangladesh*, International Journal of Social, Behavioral, Educational, Economic and Management Engineering Vol: 8, No: 1, 2014, World Academy of Science, Engineering and Technology, <http://waset.org/publications/9997037/household-level-determinants-of-rural-urban-migration-in-bangladesh>.
- [2] Bangladesh Bureau of Statistics *Report of the Household Income and Expenditure Survey 2010*.
- [3] Bangladesh Bureau of Statistics *Report on Sample Vital Registration System 2012*.
- [4] Grubel, Herbert G. and Anthony Scott. (1977): *The brain drain: determinants, measurements and welfare effects*, Wilfrid Laurier University Press, Ontario, Canada.
- [5] *International Migration Report 2015 (Highlights)*, Department of Economic and Social Affairs, United Nations, New York, 2016.
- [6] Johnson, Nadja (2009): *Analysis and Assessment of the "Brain Drain" Phenomenon and its Effects on Caribbean Countries*, Florida Atlantic Comparative Studies Journal, Vol. 11, 2008-2009, Florida Atlantic University, Department of Comparative Studies. <http://home.fau.edu/peralta/web/FACS/braindrain.pdf>.
- [7] Kaufmann, Florian (2007): *Emigrant or Sojourner? Migration Intensity and Its Determinants*, working paper series no. 154, Political Economy Research Institute, University of Massachusetts Amherst, http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1125&context=peri_workingpapers.
- [8] Malek, M. A.; Usami, Koichi (2010): *Do non-farm incomes really matter for poverty among small households in rural Bangladesh? A case of advanced villages*, Journal of Development and Agricultural Economics Vol. 2 (7), pp. 250-267, July 2010 <http://www.academicjournals.org/journal/JDAE/article-full-text-pdf/0DD026E1760>.

- [9] Ullah, Muhammad Shariat (2012): *Determinants of International Labour Migration from Bangladesh: A Gravity Model of Panel Data*, Graduate School of Economics, Ritsumeikan University, <http://www.ritsumeikai.ac.jp/acd/re/ssrc/result/memoirs/kiyou25/25-06.pdf>.
- [10] *World Bank Global Economic Prospects*, January 2016, <https://www.worldbank.org/content/dam/Worldbank/GEP/GE2016a/Global-Economic-Prospects-January-2016-Spillovers-amid-weak-growth.pdf>.
- [11] United Nations Department of Economic and Social Affairs (UNDESA). (2019). International migrant stock 2019. <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.as>.
- [12] Sarker, M. M. R., 2017. Migration Flows in South Asia. In S. Bandyopadhyay, A. Torre, P. Casaca and T. Ponce Dentinho, eds. *Regional Cooperation in South Asia: Socio-economic, Spatial, Ecological and Institutional Aspects*. pp. 47-68. Berlin: Springer.
- [13] Macrotrends, 2021; Bangladesh Population Density 1950-2021; Available: <https://www.macrotrends.net/countries/BGD/bangladesh/population-density>.
- [14] Asian Development Bank, 2019; Bangladesh and ADB; Available: <https://www.adb.org/countries/bangladesh/poverty>.
- [15] World Bank, 2021; "The World Bank in Bangladesh Country Results"; Available: <https://www.worldbank.org/en/country/bangladesh>.
- [16] The World Bank Group, 2021; World Bank national accounts data, and OECD National Accounts data files; "Economic Policy & Debt: National accounts: US\$ at current prices: Aggregate indicators"; Available: <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=BD>.
- [17] Sarker, M. M. R. 2012. Spatial modeling of households' knowledge about arsenic pollution in Bangladesh. *Social Science & Medicine*, 74 (8) pp 1232-1239.
- [18] Sarker, M. M. R., Nishat, N. I., Parvin, M. M., & Fagun, A. N. 2021. Determinants of Fertility Trend at District, Divisional and Regional Levels and Policy Implication for Poverty Alleviation, *International Journal of Health Economics and Policy*. Vol. 6, No. 3, 2021, pp. 92-99.