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Exploring the Factors Influencing Rural-Urban Migration in Bangladesh- An Econometric Analysis

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Abstract

Rural-urban migration is one of the major factors contributing to urbanization and has serious implications for rural livelihoods and urban infrastructure in Bangladesh. This study attempts to analyze the determinants of migration in four sub-districts of Chapainawabganj-Shibganj, Gomostapur, Nachol, and Bholahat. A structured field survey of 400 rural households was carried out, with 100 households selected from each sub-district using a simple random sampling strategy. The data were analyzed in the logistic regression model with incorporation of 12 explanatory variables on household characteristics, economic factors, access to resources, and perceptions of urban amenities. The analysis showed that the perceived urban amenities were the most influential, with a coefficient of 3.1137 at $p < 0.001$, showing that better recreational facilities, healthcare, and education are important in attracting migrants. Social networks and financial credit also played major positive roles, as shown by the coefficients at 1.8709 and 1.6573, respectively. In contrast, households with better rural utilities, such as water and electricity, had less intention to migrate, while household income and formal employment status raised the chances of decreasing it: coefficient = -1.3453, $p = 0.002$; coefficient = -0.00003, $p = 0.006$; and coefficient = -1.2751, $p = 0.008$, respectively. The study emphasizes that targeted policy interventions have improved the living standards in the rural areas, including recommendations on rural health and sanitation, education, utilities, rural industrialization, and decentralized urbanization by strengthening the small towns in Chapainawabganj that could reduce migration pressure with a corresponding assurance of sustainability in development.

Keywords: Rural-Urban Migration, Socio-Economic Factors, Urban Amenities, Decentralized Urbanization, Logistic Regression, Bangladesh

Introduction

Rural-urban migration has also become an overall global feature in recent years and has deep influential power for economic development, urbanization, and social transformation (Chu, Z., & Chen X., 2024; Kumar, & Sati, 2023). Historically, this form of migration has become a fundamental reason for city growth, promoting economic diversification and structural changes in the developing economies (Pervez et al., 2024; Alam, & Mamun, 2022). It promotes labor allocation from agricultural sectors to industry and service-based sectors, leading to an increase in productivity and levels of income. However, if rural-urban migration is not checked, it generally causes urban congestion, unemployment, and environmental degradation, which again puts a challenge in the way of sustainable urban development (Biswas et al., 2019; Farhana, & Mannan, 2019). Globally, urbanization is contributed to by rural-urban migration at a rate of 55%, and it is expected to increase to 68% by 2050 (UN-Habitat,2020). Most developing countries, especially in Africa and Asia, are experiencing increased rural-urban migration influenced by poverty, inequality, and climate change impacts in rural areas (Ezeudu, & Tukur, 2024). Rural-urban migration in Bangladesh is one of the major contributors to the country's rapid urbanization process (Akhter, & Bauer, 2014). As the cities such as Chapainawabganj, Chittagong, and other large towns have experienced a rapid, almost exponential, growth due to inflows from the countryside that puts pressure on housing, infrastructure, and sometimes chaotic urban

governance. According to BBS statistics (2022), around 30% of the population live in urban areas, rural-urban migration in Bangladesh is driving that. The major causes for migration include economic opportunities, education, health, and urban facilities, as well as push factors such as rural poverty, unemployment, and environmental vulnerabilities. These are presented in the works of Hanif et al., (2020) and Hossain et al., (2016). Determinants of this migration need to be understood for formulating balanced development policies that reduce rural push factors and manage urban pull factors effectively.

Several researchers have tried to investigate the determinants of rural-urban migration around the world. Migration is affected by urban-rural income differentials and the probability of getting employment in the urban areas (Qi, W., Deng, Y., & Fu, B., 2022). The economic disparities are a critical determinant of migration, as various studies conducted in Sub-Saharan Africa demonstrate that urban migration is influenced by the search for better employment opportunities and wages (Girard P., 2023; Fikire, & Zegeye, 2022; Mthiyane et al., 2022). Social and demographic factors also come into play in equal measure. For instance, Karahan, H., & Hepaktan, C. E. (2024) emphasize highly the household strategies of migration, where, in order to diversify income sources or reduce risks, families send members to cities. The other significant driver is education, and studies in Latin America empirically indicate that better access to education in urban areas attracts rural migrants (Farhana, K. M., & Mannan, D. K. A. 2019). In recent years, environmental factors have gained increasing attention and climate change-droughts and floods-push rural households in countries like India and Nigeria to move to urban areas. Social networks also influence migration decisions as the costs and risks of migration are reduced while information is provided about urban opportunities (Okwuokenye, G. F., & Abdurrahman, A. 2022).

With rapid economic growth and urbanization, South Asia, the habitat of more than 1.8 billion people, has faced overwhelming rural-urban migration (Li W., 2024; Vo D. H., 2024; Yao, & Song, 2023). Rural-urban migration forms a considerable share of urban population growth in the country of India (Amudhan et al., 2024; Batool et al., 2023). Studies have indicated that economic opportunities in cities are major pull factors, especially from the industrial and service sectors (Nguyen, & Do, 2022). Social elements, such as caste and gender dynamics, will also shape current trends in migration, with an increasing number of women migrating either for education or employment (Asiimwe, F. M., & Musinguzi, D. 2024). These different factors, like economic and ecological, are found to be linked with migration in Pakistan. Economic prospects of earning a higher income and access to amenities attract migrants from rural to urban areas in cities like Karachi. Climate change-induced challenges are forcing households to migrate due to water scarcity and land degradation (Akram, N. 2024; Beihai, & Akhtar2023). The migration from Terai and hill areas to cities like Kathmandu takes place due to a job, improved educational facilities, and healthcare in Nepal because rural areas do not have job opportunities and better education and healthcare facilities (Ban & Gangal, 2024; Bhattarai, S. 2023) and equally importantly, in South Asia, social networks form an essential platform. Like Bangladesh and Sri Lanka, migrants use networks for easy urban livelihoods or at least smoother transitions. In Sri Lanka, studies have pinpointed the very crucial role that remittances play in decisions to migrate, where families are seen to invest in urban migration as a way of ensuring a regular flow of income (Wijayarathne, et al., 2022).

Bangladesh has undergone major rural-urban migration in recent decades due to economic, social, and environmental issues. The key element driving this movement is the economic inequality between rural and urban communities. According to studies, metropolitan regions have more opportunity to earn greater salaries since the industrial and service sectors are the primary draw factors (Al-Maruf et al., 2022). Furthermore, rural poverty, being landless, and unemployment encourage individuals to relocate to cities (Salam et al., 2020). Access to higher education and medical care are important factors. Better educational and medical services are more accessible in cities than in rural areas (Farhana and Mannan, 2018). Migration preferences are also influenced by social considerations, especially for women, such as

getting married and family reunion (Akhter & Bauer, 2014). Environmental concerns including floods, salt intrusion, and eroded river banks have become important push forces. For protection and stability, individuals in disaster-prone areas frequently relocate to cities (Mianabadi et al., 2022). As migrants depend on friends and family for economic and logistical assistance, social networks help promote this mobility.

Existing studies on migration in Chapainawabganj are limited but provide valuable insights. Economic factors are significant, with rural households migrating to urban areas in search of higher wages and stable employment. A study by Guha et al., (2023) found that 70% of migrants from Chapainawabganj cited employment opportunities as the primary reason for migration. Access to education and healthcare is also a critical determinant, as urban centers in the region offer superior facilities compared to rural areas. Environmental factors, particularly droughts and water scarcity, are prominent push factors in Chapainawabganj. According to Hossain, M. S., & Tasnim, N. (2023), a drought-affected household is 2.5 times more likely to migrate compared to one which is not. Social networks further facilitate the process of migration since often migrants depend on friends and relatives for initial urban support. Farhana, & Mannan (2019) present such understanding as crucial to addressing the challenges associated with migration. The policymakers should, therefore, focus on improvement in rural livelihoods, accessibility to services, and infrastructure development to reduce migration pressures with sustainable urban development. The result of this study will add value to this effort through an evidence-based understanding of the determinants of migration in Chapainawabganj.

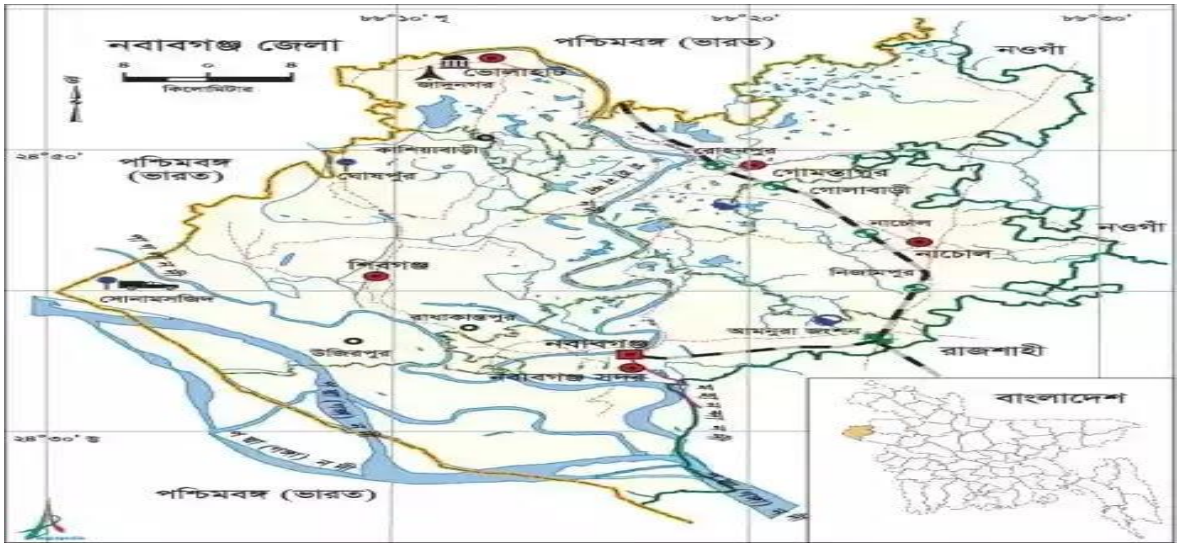
Chapainawabganj is located in northern Bangladesh and is mostly dominated by agriculture; rural-urban migration is also very high in this district. Small-scale farming, low levels of industrialization, and restricted service availability make the general socioeconomic environment in the region appropriate for study. Rural migration in the case of Chapainawabganj is usually based on poverty, a lack of employment opportunities, and a better quality of life. Chapainawabganj District is relatively proximate to other urban centers like Rangpur and Bogra, which enables migration more than in other districts. These towns offer better economic opportunities along with other amenities. Environmental factors such as floods and drought also influence migration by debilitating livelihoods. Though the district is important for agricultural production, the absence of value-added industries and job diversification compels residents to seek opportunities elsewhere. Despite the wide variety of research into rural-urban migration in Bangladesh, there is still a host of lacuna. Most studies fail to link economic, social, and political factors into a holistic framework but anchor on either one or more single categories. Most importantly, environmental changes, particularly climate change and natural disasters, have not been given much attention as an increasing causative agent. Most research is dominated by qualitative methods, whereas econometric modeling to quantify various determinants is scant. On the other hand, general studies on urban migration exist, although specific socio-political dynamics regarding government policies and regional disparities of Bangladesh have remained under researched in the migration literature. This research is, therefore, supposed to fill the knowledge gap regarding specific drivers of migration in Chapainawabganj, with the intention of informing policymakers on how to address rural-urban disparities.

2.1. Research Methodology

Study Area Selection

Chapainawabganj of the most reputed districts of Bangladesh was selected for this study. Recently, huge number of people living rural areas of the district have been shifting to the urban city for many reasons like for better standard of living, employment opportunities, quality education, getting better health service and so on. For this perspective, this district is selected as a study area to explore the causes of rural-urban migration in Bangladesh. This study is conducted in four Sub-districts of Chapainawabganj namely, Shibganj, Gomostapur, Nachol and Bholahat. A field survey is conducted in these areas to gather information for finding the determinants of rural-urban migration.

Figure 1: Location of Study Area



This study selected total 400 household where100 respondents from each Upazilla following a random sampling strategy. The survey also used structured questionnaire and face-to-face interview to collect data from the selected households.

Econometric Analysis (Logit Model)

To deal with the dichotomous variable, a binary Logistic regression is employed to determine the causes of rural-urban migration in the study area. In this case, the researcher has considered a cause-and-effect relationship between respondent's decision about migration and socioeconomic variables as follows:

$$Y_i = f(X_i) \quad \dots (1)$$

Where, the dependent variable Y_i takes two values, 1 and 0. Code 1 means selected event occurs, and 0 means an opposite event occurs. The analytical form of the logistic function used in logistic regression is defined by Equation (2) :

$$P_i = E\left(Y = \frac{1}{X_i}\right) = \beta_1 + \beta_2 X_i \quad \dots (2)$$

Where, P_i resembles the conditional probability of the dependent variable of adopting the specified value subject to X_i and X_i is a set of explanatory variables. Equation (2) can be written as:

$$P_i = E\left(Y = \frac{1}{X_i}\right) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}} = \frac{1}{1 + e^{-Z_i}} \dots (3)$$

Where, $Z_i = \beta_1 + \beta_2 X_i$ is known as a logistic distribution function. In this case, Z ranges from -∞ to +∞; and P_i is non-linearly related to Z_i. In this case, an estimation problem may be arisen due to non-linearity in X_i and β_i with P_i. For this reason, the OLS method cannot be applied to estimate the parameters. Taking a natural log, the logistic function (3) can be written as:

$$L_i = \ln\left[{}^{P_i}/_{1 - P_i}\right] = \beta_1 + \beta_2 X_i \quad \dots (4)$$

Where, $\frac{P_i}{1-P_i}$ represents the odds ratio of the dependent variable. The log of the odds ratio is not only linear in independent variables but also in parameters. In this case, L_i is called logit.

This study focuses on exploring factors influencing the decision to migrate to other areas of the country from Chapainawabganj district by the households. The decision to migrate to urban areas is estimated by the binary logistic regression model. In this context, the household decision to migrate or not migrate is represented using dichotomous response, i.e., 1 and 0, respectively. In this case, the decision to migrate equals 1, where the opposite answer is equal to 0. Parameters in the logit regression model are estimated by the maximum likelihood estimation (MLE) approach. The logistic regression model (Equation 4) can be expressed as follows.

$$L_i = \text{Ln}\left[\frac{P_i}{1-P_i}\right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + u_i \ldots (5)$$

Here, P_i refers to the probability of migrating to cities, specifically if P_i=1 indicates the decision to migrate, and P_i=0 means staying in the current location. There are twelve explanatory variables such as Household Head's Age expressed in years (X_1), Education (X_2) in terms of years of schooling, Occupational Status (X_3) expressed in dummy (Employed=1, Otherwise=0), Marital Status (X_4) expressed in dummy (Married=1, Otherwise=0), Family Size (X_5), Earning Member (X_6), Land Size (X_7) in decimal, Access to Credit (X_8) expressed in dummy (Yes=1, Otherwise=0), Access to Utilities (X_9) expressed in dummy (Yes=1, Otherwise=0), Access to Social Networks (X_{10}) expressed in dummy (Yes=1, Otherwise=0), Employment Opportunities (X_{11}) expressed in dummy (Yes=1, Otherwise=0), Perception about Urban Amenities (X_{12}) expressed in dummy (Yes=1, Otherwise=0) have been used to explain the dependent variables. In addition, β_0 is the intercept and β_1 to β_{12} are coefficients, and u_i is the error term. The study analyzed key variables with suitable scales to understand their impact on migration decisions. It estimated the probability of migration by logit analysis both using continuous and dummy variables, the last for categorical factors such as employment status, with continuous ones like age and land size providing detailed numerical factors necessary for an exhaustive analysis of migration determinants. A careful methodological approach has been employed in this study to delve into the determinants of rural-urban migration-specific in Chapainawabganj. Description and inference complemented by econometric modeling help in understanding better the reasons behind migration.

Table 1: Variable Definition and Measurement

Variable Name	Description	Measurement Scale
Migration Decisions	0= Decision to no migration, 1= Decision to no migration	Dummy
Household Head's Age	Age of the household head (years)	Continuous
Education	Years of schooling completed	Continuous
Occupational Status	Employment status (employed=1, otherwise=0)	Dummy
Marital Status	Marital status (married=1, otherwise=0)	Dummy
Family Size	Number of family members	Continuous
Earning Members	Number of income-earning members	Continuous
Land Size	Land owned (in decimals)	Continuous
Monthly Income	BDT (Bangladeshi Taka)	Continuous
Access to Credit	Access to financial credit (yes=1, no=0)	Dummy
Healthcare	(1= Very Dissatisfied, 2= Dissatisfied, 3=Neutral, 4=Satisfied, 5= Very Satisfied)	5-point Scale
Child Education	(1= Very Dissatisfied, 2= Dissatisfied, 3=Neutral, 4=Satisfied, 5= Very Satisfied)	5-point Scale
Transportation	(1= Very Dissatisfied, 2= Dissatisfied, 3=Neutral, 4=Satisfied, 5= Very Satisfied)	5-point Scale
Access to Utilities	Availability of utilities (yes=1, no=0)	Dummy

Access to Social Networks	Social connectivity (yes=1, no=0)	Dummy
Employment Opportunities	Perception of job availability (yes=1, no=0)	Dummy
Frequency of Natural Disasters	Annually (Flood, Draught): (0= no happens, 1= one time, 2= twice, 3= More than Twice)	3-point Scale
Urban Amenities	Perception of urban living benefits (yes=1, no=0)	Dummy

Table 1 presents the definition and measurement scale of the variables used to analyze the decision to migrate. The dependent variable is the Migration Decision, which is a dummy variable 1 if the household decides to migrate and 0 otherwise. Independent variables are demographic factors Gender, Age, and Education, which are measured on a continuous or categorical scale. Independent variables also include socioeconomic variables, namely Occupational Status, Monthly Income, and Access to Credit. While the items measuring the Perceptions of Healthcare, Child Education, and Transportation are 5-point Likert items, the environmental ones represent a 3-point scale of the Frequency of Natural Disasters.

3.1. Results and Discussion

Table 2: Summary Statistics Affecting Rural to Urban Migration in Chapainawabganj, Bangladesh.

Variable	Obs	Mean	Std. Dev.	Min	Max
Migration Decision (0=No, 1=Yes)	400	0.5025	0.5006	0	1
Gender (1=Male, 2=Female)	400	1.2775	0.4483	1	2
Age (Years)	400	36.2325	13.9447	15	79
Education (Years of Schooling)	400	9.9125	4.2278	0	17
Occupational Status (0=Informal, 1=Formal)	400	0.24	0.4276	0	1
Marital Status (0=Unmarried, 1=Married)	400	0.625	0.4847	0	1
Family Size	400	5.155	1.5089	2	11
Earning Member (No. of Earning Members)	400	1.3625	0.5718	0	3
Land Size (Decimal)	400	70.1425	139.4014	1	635
Monthly Income (BDT)	400	20,976.25	14,168.25	5,000	100,000
Access to Credit (0=No, 1=Yes)	400	0.6475	0.4783	0	1
Healthcare Satisfaction (1=Very Dissatisfied, 5=Very Satisfied)	400	3.03	1.0497	1	5
Education Satisfaction (1=Very Dissatisfied, 5=Very Satisfied)	400	3.19	0.8722	1	5
Transportation Satisfaction (1=Very Dissatisfied, 5=Very Satisfied)	400	3.06	0.8563	1	5
Access to Utilities (0=No, 1=Yes)	400	0.6675	0.4717	0	1
Access to Social Networks (0=No, 1=Yes)	400	0.6825	0.4661	0	1
Employment Opportunities (0=No, 1=Yes)	400	0.3975	0.49	0	1

Frequency of Natural Disasters (0=None, 1=Once, 2=Twice, etc.)	400	1.1175	0.6927	0	2
Perception of Urban Amenities (0=No, 1=Yes)	400	0.675	0.469	0	1

Source: Authors Own Calculation Based on Survey Data, 2024

The descriptive statistics provide useful data on the variables influencing rural-urban migration in Chapainawabganj, Bangladesh. The migration decision variable, calculated on the basis of the percentage of the respondents migrated, is approximately 50%, indicating an equal inclination for both the sampled population of the survey. The gendered aspect of migration decisions may possibly be reflected in the gender distribution; which male dominance illustrates with the mean value of 1.28. One can conclude that economically active people are more likely to make migration decisions since the average age of all respondents is around 36.23 years old. People with a low level of education prevail in this flow since levels of education also averaged 9.91 years of schooling. The family size was, on average, 5.16 members, typical of rural households, and more than half (62.5 percent) of all respondents reported that they were married. The average household has 1.36 earners, which may indicate pressure to migrate financially. The role of income inequality is indicated in the low level of formal employment (24%), as well as in the relatively low average monthly wage of BDT 20,976.25. Though landholdings are highly variable and average 70.14 decimals, they reflect a range of economic statuses. Migration seems to require access to social networks 68.25%, utilities 66.75%, and credit 64.75%. There is room for improvement since customer satisfaction with healthcare, education, and transportation services has ranged around moderate levels on average. Lastly, but not least significantly, migration is spurred by perceived superior amenities and the prevalence of natural disasters.

Table 3: Logistic Regression Results for Determinants of Rural-to-Urban Migration in Chapainawabganj, Bangladesh.

Migration Decisions (Binary-Dependent variable)	**Coef.**	**Robust S. E.**	**P>|z|**
Explanatory Variables			
Age (year)	-0.0138	0.0198	0.484
Education (Years of Schooling)	0.0979	0.0564	0.083
Occupational Status (0=Informal, 1=Formal)	-1.2751	0.4839	0.008
Marital Status (0=Unmarried, 1=Married or others)	-0.3275	0.3655	0.370
Family Size	0.1600	0.1223	0.191
Earning Member	-0.9093	0.3443	0.008
Land Size (Decimal)	0.0043	0.0015	0.005
Monthly Income (BDT)	-0.00003	.00001	0.006
Access to credit (0=No, 1=Yes)	1.6573	0.3255	0.000
Healthcare (1= Very Dissatisfied, 5= Very Satisfied)	-0.3803	0.2179	0.081
Education	0.1498	0.2815	0.594

(1= Very Dissatisfied, 5= Very Satisfied)			
Transportation (1= Very Dissatisfied, 5= Very Satisfied)	0.6349	0.2192	0.004
Access to utilities (Electricity, Drinking water, Sanitation, Drainage system) (0= No, 1=Yes)	-1.3453	0.4388	0.002
Access to Social Networks (0= No, 1=Yes)	1.8709	0.4305	0.000
Employment Opportunities (0= No, 1=Yes)	-0.1727	0.3602	0.631
Frequency of Natural Disasters Annually (Flood, Draught) (0= no happens, 1= one time, 2= twice and so on)	0.2345	0.2050	0.253
Perception about urban amenities (Park, lake, garden, River view) (0=No, 1=Yes)	3.1137	0.4168	0.000
constant	-6.0468	1.3585	0.000
Logistic regression			
Number of Obs = 400, Wald chi2(18) = 158.86, Prob > chi2 = 0.0000, Log pseudo likelihood = -162.2144, Pseudo R2 = 0.8149			
Source: Authors Own Calculation Based on Survey Data, 2024			

Migration choices are driven by a set of socioeconomic, demographic, and environmental factors, as the logistic regression analysis unveils. The dependent variable, migration choices, is dichotomous, where it signifies whether or not the households choose to migrate (1) or not (0). The survey data gathered from 400 Chapainawabganj, Bangladesh, households are used in the analysis, which offers some light on the important drivers of rural-to-urban migration in the area.

Gender has a significant role in migration, as indicated by the positive coefficient of 1.3333 ($p < 0.001$). It implies that women and those who consider themselves others are more likely to migrate than men. It may be explained by evolving gender roles and the increase in the participation of females in migration, possibly because of employment or family reunions in urban areas. The age of the household head is not significant ($p = 0.484$), which suggests that age alone does not play a decisive role in migration decisions. Marital status also has no significant influence on migration ($p = 0.370$), meaning that being married or unmarried does not greatly influence the decision to migrate. Family size, usually a suspected determinant, has no significant effect as well ($p = 0.191$).

Education has a positive yet insignificant impact on migration, as can be revealed from the coefficient 0.0979 and the p-value 0.083. This shows that higher years of education have the impact of moderately increasing the likelihood of migration due to the influence of education in raising aspirations and availability of opportunities in urban areas. The influence, however, is not significant to a large extent. Occupational status significantly impacts migration, with a negative coefficient of -1.2751 ($p = 0.008$). Households with formal employment are less likely to migrate. This can be attributed to the fact that formal employment comes with stability and benefits, which render it less essential to migrate in pursuit of greener pastures. Those households that rely on informal employment would, nevertheless, find the urban regions more appealing due to the possibilities of better income and job security.

Economic factors such as land ownership and household income are very important in decisions regarding migration. Land size increases the probability of migration, with a positive coefficient

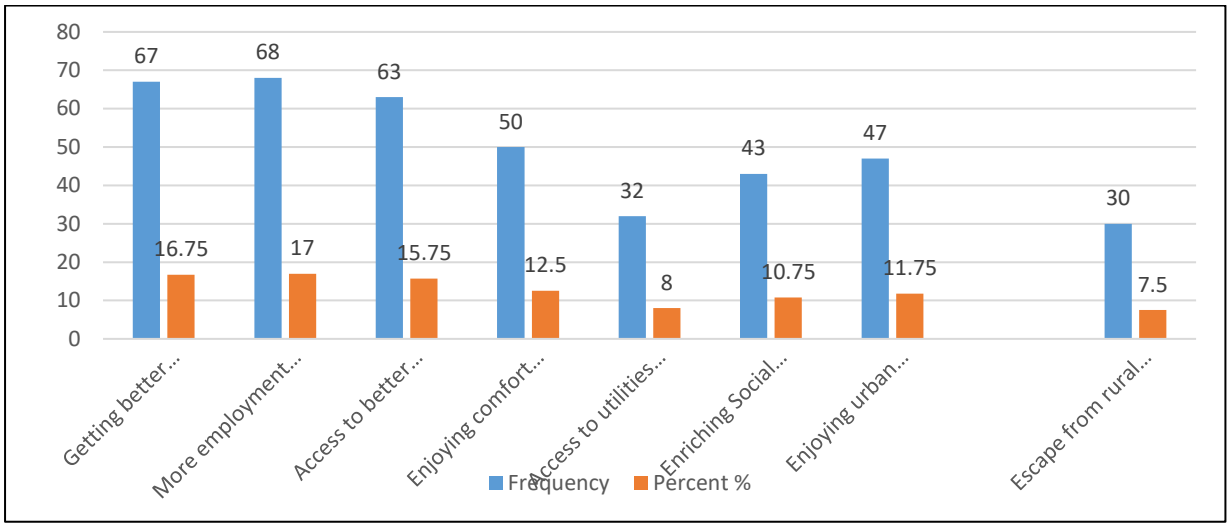
estimated at 0.0043 (p = 0.005). Larger landowners may therefore have a little more probability of migrating than smaller landowners because land ownership becomes a resource for financing migration. In contrast, the variable monthly income has a negative coefficient of -0.00003 (p = 0.006) and is considered significant. This shows that better-off households with higher incomes have lesser propensities to migrate, probably due to the reason that their economic needs are being satisfied, and they have no motivation to search for further opportunities in urban areas. Credit accessibility is another major determinant, with a positive coefficient estimate of 1.6573 (p < 0.001). A household with access to financial credits for its members will be more likely to migrate due to the fact that credit provides assistance in financing the expenses associated with relocation, including transportation and settling in.

Migration is driven by the social interconnectedness of people. It is with a positive coefficient of 1.8709 that social networks have significant access (p < 0.001) for stronger households to migrate in. This proves that social networks are very important in supplementing the following forms of aid: the support, information, and resources available during migration to greatly augment one's prospect of successful urban integration. Perceptions regarding urban amenities significantly influence decisions about migration. The coefficient of 3.1137 (p < 0.001) attaches to urban amenities as the highest among the positive determinants. Households that find urban areas with better amenities such as parks, recreational facilities, and scenic environments are more likely to migrate due to the attractiveness of urban life. Healthcare and transportation influence migration choices. Dissatisfaction with health services negatively affects the coefficient at -0.3803 with a p-value of 0.081; it is, however, only marginally significant. Better transportation options can increase travel and connectivity challenges, causing a positive effect on migration through mobility connected to a coefficient of 0.6349 (p=0.004).

The frequency of natural disasters measured as annual occurrences of flood and drought events do not significantly affect decisions to migrate (p = 0.253). This suggests that while natural disasters may cause temporary displacement, they are not the principal determinant for permanent migration in the study area. On the other hand, accessibility to utilities such as electricity, clean drinking water, sanitation, and drainage systems exerts a strong negative effect on migration with a coefficient of -1.3453 (p = 0.002): the better access to these facilities that rural households have, the lesser their chances of migrating, as their basic needs are already met in their area. While employment opportunity is an important issue for any migration study, it has shown no significance in this study (p = 0.631), which may mean employment is not seen as a decisive reason for migration in this case but could have other overriding reasons, such as social networks and urban amenities.

The power of explanation is high for this logistic regression model with a Pseudo R^2 value of 0.8149 and a highly significant Wald chi-square statistic (p < 0.0000); it indicates that this model is a reasonably good fit to the data and that the variables together explain a substantial portion of the variance in migration decisions. Through its logistic regression analysis, one can get to know the complex present- day determinant of rural-urban migration in Chapainawabganj, Bangladesh. The main positive determinants of rural-urban migration are social connectivity, access to credit, and what people think of urban amenities, whereas higher income, formal employment, and access to rural utilities deter people from migrating. Gender differences and land ownership also cause some differentiation, much related to the interplay of demographic and economic variables. These finding are very useful for policy development pertaining to possible solutions to migration-related issues; improving rural living conditions and developing sustainable urban settlements.

Figure 1: Purpose of Migration According to Respondents' Opinion in Chapainawabganj, Bangladesh



The

survey in Chapainawabganj, Bangladesh, has been able to find out various reasons which compel people to migrate from rural to urban areas. The highest scored reason was due to employment opportunities (17%) as people search for better jobs and economic conditions. The second reason for the trend is due to education for children followed by improved health care facilities (15.75%) because urban areas have better medical services. Urban infrastructure including transport (12.5%), utilities such as electricity and water (8%), and the presence of social networks (10.75%) lure migrants into the city promising improved living standards. There are parks, gardens, lakes, and other urban amenities (11.75%) which further motivate people to emigrate to cities, indicating their need for recreational facilities. Some people (7.5%) also mention escaping rural conflicts as the reason to migrate, choosing security and stability from an urban area.

It becomes critical to notice, therefore, that both pull factors-employment, education, health care, and urban amenities- and push factors-political conflicts and lack of utilities in rural areas-are factors which influence migration decisions. Economic and social aspirations lead the way, whereby migrants see the creation of wealth, improvements in the good life, and eventual good lives for their families as factors in consideration. The above observations truly justify this multidimensionality of migration in which the interplay between personal aspirations versus structural constraints in rural areas becomes prominent.

4.1. Conclusion

This research attempts to understand the factors that affect a migration decision in four sub-districts in Chapainawabganj. The analysis, grounded in data from 400 households, identifies a series of demographic, economic, social, and environmental factors that present a series of possible combinations that induce migration. Demographic factors; the most pertinent is gender. Women, including others, migrate more frequently than men, which indicates changing social roles and motivations. Age, marital status, and family size, however, did not show a significant relationship with migration, thus indicating that they were not primary deciding factors motivating migration. In human capital and work, education has a little positive influence, which implies that individuals with moderate education show a higher tendency in migrating due to a feeling of aspiring for better opportunities. Households relying on informal employment have shown greater probabilities of migrating, whereas at the same time, a formal employment structure serves as a stabilizing factor in their lives, thereby providing the least amount of motivation for these people to migrate. At the economic level, further discussion is made concerning land ownership and income level. Large landholdings induce migration since they provide a financial base, while a high income restrains

migration as it reduces the need for alternative livelihood opportunities.

Access to credit comes out as a critical enabler that alleviates the financial burden of relocation. Social connectivity and perceptions about urban amenities are very strong motivators. Households having strong social networks and favorable perceptions about urban amenities like parks and recreational facilities are significantly more likely to migrate. Dissatisfaction with rural healthcare and lack of utilities also push households towards the urban areas, albeit natural disasters hardly affect even. Enhancement of rural livelihoods through investment in agriculture, agribusiness, and non-farm enterprises is one policy proposal to contain rural-urban migration in different sub-districts of Chapainawabganj. Local employment opportunities can be created through rural industrial zones, thereby eliminating some impetus for migration. There will be good living conditions for the rural population because of good rural education and health services, which will enhance the quality of life. Infrastructure creation involving roads and digital connectivity will ease marketing avenues for rural products. Affordable housing and financial incentives to promote rural youth entrepreneurs are elementary. Finally, the study area should promote decentralized urbanization through the strengthening of small towns to take the pressure of migration away from larger cities.

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