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Remittance and Its Utilization by Recipient Households in Bangladesh: A Case Study of Cumilla District

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Abstract

This study analyzes household remittance utilization and its socio-economic impact in Cumilla district, Bangladesh, focusing on factors affecting remittance inflows. Results indicate that migration increases household spending on food, education, and clothing, yet investment growth lags behind. Investment is found mainly in agriculture, livestock, and business, but limited knowledge (55.83%), lack of investment opportunities (22.5%), and low motivation (21.67%) hinder further investment. Only 24% of remittance-receiving households are attempting new businesses. Additionally, 65% of expatriates engage in informal remittance channels. Analysis shows positive influences on remittance inflows from household size (0.404), monthly income (0.558), and years abroad (0.191), while technical training (-0.321) does not enhance inflows. The study suggests government intervention to raise awareness of remittance spending and investing, and to encourage the use of legal remittance channels. Initiatives in agriculture, trade, and local industries, such as "khadi" textiles, as well as tax relief for new businesses, are recommended to boost effective utilization.

Keywords: *household remittance · financial success · migrants · socio-economic conditions*

1.1 Background of the Study

Bangladesh is a developing, stable market economy with a low- to middle-income level. This economy has characteristics such as low annual growth rates, income inequality, widespread poverty, high labor force unemployment, and reliance on imported fuel. Rapid economic expansion has been secured by resilient remittance inflows, sustained demographic dividends, and strong ready-made garment (RMG) exports during the last two centuries. The country aims to achieve the Sustainable Development Goals (SDGs) by 2030, to

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establish middle-income status by 2031, and to become a rich nation by 2041, driven by sustained economic growth. Remittances and financial success are key contributors to GDP and encourage economic growth (Sutradhar, 2020). Remittances are defined as the portion of migrant workers' income returned to their nation of origin from their country of employment. Remittance recipient families are households that receive remittances from a family member living and working in another nation or region. Remittances are often money transfers sent to migrants' home countries or communities to financially assist their families and improve their socio-economic conditions. These remittances are an important source of income for many families in under developed nations and regions, and they can significantly improve recipients' living standards and overall well-being. Families who receive remittances frequently use this money to meet vital needs such as food, healthcare, education, housing, and other necessities. People migrate from their own countries to other nations in search of better jobs, living conditions, and salaries. These expatriates contribute to a nation's economic growth by sending remittances. The country's per capita income and overall GDP both rise as remittances do. To strengthen the country's economic foundation, remittances should be used for productive rather than consumption purposes (Golder et al., 2022). Economic growth can be sustained by improving financial development and expanding private-sector investments, which ultimately benefit the public sector (Hasan et al., 2015). But in most developing countries, like Bangladesh, remittances are not used productively. Shrestha (2017) shows that raising remittances increases spending on food, education, and non-durables. Acharya (2017) found that households spend more remittances on health and education. Kumar et al (2018) show that Bangladesh migrants send money home for a variety of reasons, including altruism, loan payback, and exchange motives. Just 50.01 percent of remittances are used for food consumption, and only a small percentage of households use them for investment objectives such as businesses, real estate, savings, and other activities that could create more employment opportunities. Remittances also have a negative effect, as the transfer of remittances to the recipient countries entails repaying those countries for the brain drain caused by immigration (Odugbesan et al., 2021).

In 2020, Bangladesh had 7.40 million migrants living overseas (McAuliffe, 2022). Bangladesh has received the seventh-largest amount of remittances from migrants, and the sixth-largest in migrants' countries of origin, according to the World Bank (2022). The nation ranked eighth among the world's top remittance-receiving countries.

There are about 1 crore 25 lakh foreign workers worldwide, especially in the Middle East. These Bangladeshis are primarily in Saudi Arabia. There are around 1.2 million of them.

In addition, foreign nationals work in several nations, including South Africa, the United Arab Emirates, Kuwait, Qatar, Oman, and Jordan. In 2022, over 11.35 lakh Bangladeshis migrated to other countries, the biggest number in the country's history. The majority of the 11.35 lakh workers went to Saudi Arabia, accounting for 612,418 of the total outgoing migrants from Bangladesh.

According to the Bureau of Manpower, Employment and Training (BMET) data, a total of 5,280,960 workers have gone to Saudi Arabia since 1976. The second- and third-most-popular destinations were Oman and the United Arab Emirates, which attracted 179,612 and 101,775 Bangladeshi migrant workers, respectively. Last year, Singapore, Malaysia, Qatar, and Kuwait were among the top seven employers of Bangladeshi employees. According to BMET data, 64,383 workers went to Singapore, 50,090 to Malaysia, 24,447 to Qatar, and 20,422 to Kuwait. International migrants sent $548 billion in remittances to their home countries in 2019, far exceeding the overall government development assistance of $152 billion that year (World Bank, 2021). The amount of remittances sent by expatriates was 2.37 million dollars in the 1970s, and it climbed to 195 million dollars in 2000. At the moment, it has risen to $2478 million. Remittances contribute over 6% of GDP. Remittances have also greatly increased the nation's foreign exchange reserves.

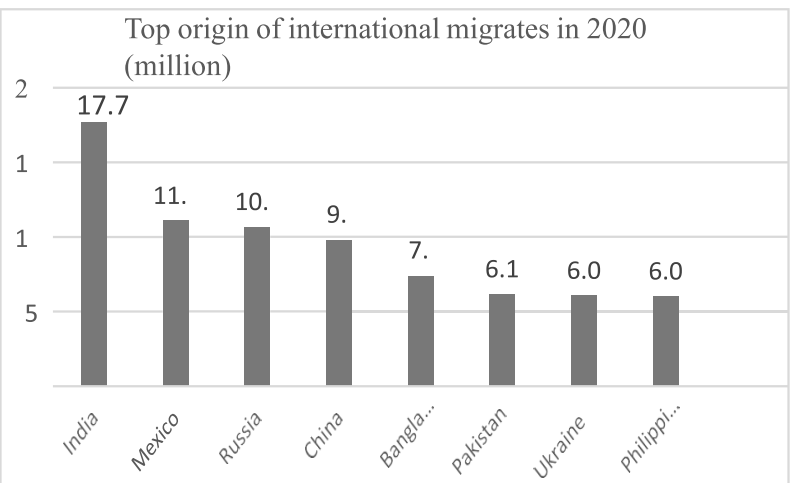

Figure 1.1 Number of Migrants in 2020
Source: IOM

Figure 1.1 shows Bangladesh ranked 5th in global labor supply in 2020. Almost 7.4 million labor supply from Bangladesh in 2020.

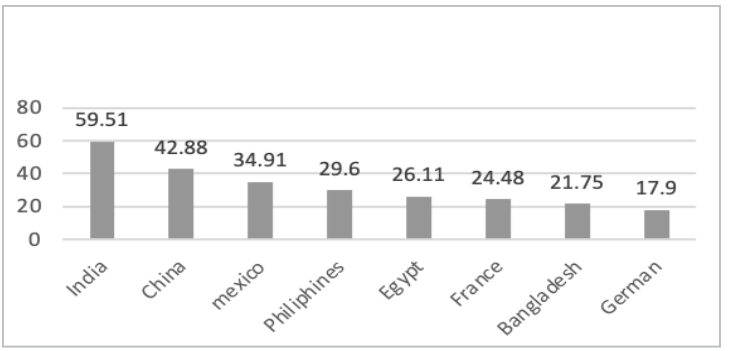

Figure 1.2 World's Top Remittance Recipients in 2020 (billion)
Source: World Bank

Figure 1. 2 shows that Bangladesh ranked 7th among the world's top remittance recipients in 2020. Bangladesh received 21.75 billion dollars in the year of 2020. This remittance accounted for 6.6% of the economy's GDP this year.

The contribution of expatriates to the economy is the second-highest after ready-made clothing, which is significantly improving the national economy. We can infer from the explanation above that remittances are the most important part of Bangladesh's economy. Additionally, based on the above information, we acknowledge that a large number of Bangladeshis leave the country each year in search of better living conditions and self-employment opportunities. The bulk of these migrants are unskilled laborers who send remittances, bolstering the nation's economy. If these foreign workers are relocated overseas with the necessary skills and abilities, they will have a better chance of finding higher-paying jobs, and the country's economy will be strong. Besides, every year, remittance recipient families receive a large amount of income from expatriates, but they have no money left at the end of the month for saving or investment because of unhealthily high expenditures. This is not a good practice for individual development or the nation's economy.

However, Comilla's economy, which is mostly based on agriculture, has thrived via commerce and cottage businesses, particularly the 'Khadi' cloth. In order to promote regional economic growth, the "Bangladesh Export Processing Zone Authority" developed the "Comilla Export Processing Zone" in the Comilla Airport area in 2000. It is a vital trading and commercial center, as well as a center for agricultural trade and commerce. The city's advantageous position, close to Chittagong Port and Dhaka, and also close to the east by the Indian state of Tripura, contributes to its economic importance. Because of this regional advantage, they have many opportunities to invest their remittances. For this reason, in Comilla, there is great potential for the recipient family to utilize those sectors by investing through remittances.

At last, the study aims to find out how recipients' family utilize their money. The study also aims to determine how remittances contribute to changing households' socio-economic status. Additionally, this study aims to investigate how remittances affect various aspects of well-being, including income, access to healthcare, education, and housing. Further, this study examines the factors that influence migrants to send more remittances to their home country. Furthermore, this study shall investigate how remittances contribute to the establishment of small enterprises, job creation, and local economic growth.

1. 2 Objective of the Study

The main objective of the study is to investigate how the recipient family utilizes their remittances. Other objectives are:

a) to analyze the changes in the socio-economic conditions of the household;
b) to identify factors that influence remittance inflow;
c) to find out the relationship between Remittances and Entrepreneurship.

2. 1 Literature Review of International Aspects

Abdullah et al. (2021) discovered that remittances greatly improved households' socioeconomic status. Households primarily use remittances to start new enterprises or expand current ones. Similarly, remittances are spent on debt repayment, house development, and maintenance. Similarly, remittances were used to improve family livelihood, health, and children's education. Furthermore, financial standing increased social status by enabling the ownership of vehicles and participation in social activities.

Ajide and Osinubi (2022) showed that foreign aid and remittances play a beneficial role in boosting entrepreneurial growth in Africa. A solid institutional environment is critical for fostering entrepreneurial success. These conclusions are not affected by other estimations.

Murakami (2020) found that, over one year, remittance inflows decreased by 14-20%, while household spending per capita decreased by 1-2%, including food expenditure, which decreased by 2-3%.

John (2020) finds that total remittance distribution should always be supported by a predictable, sound, and proportionate regulatory framework to encourage the participation of reputable international financial organizations through risk management practices and good governance.

Perera and Wijeratne (2017) found that remittances have no appreciable effect on the productivity of rural primary education, using a two-sample t-test to compare primary education levels between migrant and non-migrant families.

Javaid (2017) showed a favorable link among remittances, consumption, and

investment. The study also revealed that household consumer and investment behavior was beneficial.

Latif and Ashfaq (2013) showed that the households of the migrants who had left behind used the majority of the remittance on household consumption, home construction or improvement, the purchase of luxuries, etc., while only a small amount of the remittances was used in productive investments (like agricultural land, livestock, etc.

Dahal (2014) found that increasing remittance inflows in Nepal are positively associated with financial development and human capital accumulation, but negatively associated with international trade. In terms of two productivity characteristics - entrepreneurship and manufacturing - that are possibly connected with remittance inflows, it finds a positive correlation with entrepreneurship, but a negative association with manufacturing.

2.2 Literature Review of Bangladesh Aspects

Akhter et al. (2022) find that a household's income before migration, expatriates' education, household head non-land asset value, and age of the migrant member are significant factors of internal migration remittances. Additionally, these members' education programs for migrants encourage them to wire money to family members they have left behind. The study found that domestic remittances have a favorable effect on the welfare of Bangladeshi farm households. Ahmed et al. (2023) show an increase in remittance inflows into Bangladesh; the probability of children aged 6 to 18 dropping out of school is projected to decrease. Aside from the positive impacts.

Golder et al. (2022) find both positive and negative trends in financial development and that remittances enhance Bangladesh's economic development. Furthermore, to build the country's economic base, remittances should be used for productive purposes rather than solely for consumption.

Kumar (2019) reveals that the incidence, depth, and severity of poverty among remittance-receiving households are significantly lower than among remittance-non-receiving households. According to the study's empirical findings, around 6% of remittance recipient families are poor, compared to 48% of non-receiver households.

Kumar et al. (2018) find that household size, education, skills, years spent abroad, and income significantly affect Bangladesh's overseas remittances. This shows that migrants send money home for a variety of reasons, including altruism, loan payback, and exchange motives. The survey also reveals that just 50.01 percent of remittances are used for food consumption.

Kohinoor Aktar (2021). Remittances significantly improved the social and

economic conditions of expatriate households. The majority of expatriates are low-skilled or semi-skilled, and this survey also found that selling or mortgaging land, obtaining loans from NGOs, banks, relatives, or the informal sector are the main sources of funding for migration expenses.

Ahmed et al. (2018) found that the entry of overseas remittances had a favorable and significant impact on housing conditions, the availability of drinking water and sanitary facilities, household accessories, household education and health status, household financial status, and household spending. According to the findings, international remittances have a significant and beneficial impact on household well-being.

Kumar et al. (2020) show that foreign remittances improve household welfare but have no effect on women's empowerment in the studied area. This chapter also discovers that receiving international remittances can boost a household's welfare by Tk. 3167.49. As a result, this chapter advocates measures to encourage higher remittance inflows and their proper use for economic purposes.

Islam et al. (2021) show that migrants have contributed millions of dollars to improve household status, including housing, education, and healthcare facilities and services. Eliminating poverty has already benefited their families and society.

Wadood et al. (2016) discovered that while women's empowerment in the study area is unaffected by overseas remittances, household welfare does improve. The study also finds that a household's welfare may increase by Tk. 3167.49 if it receives international remittances. Therefore, this chapter calls for policies that will encourage greater remittance inflows and ensure their productive use.

2. 3 Research Gap

There are many studies demonstrating that remittances raise household welfare and examining the reasons for migration in the Comilla region, but little is known about how households use their remittances and the relationship between remittances and entrepreneurship. Besides, it is not clear what factor affects remittance inflow.

3. 1 Study Area and Procedure to Select Sampling

The Comilla district of Bangladesh has been chosen as the research area. The majority of residents leave the Comilla district each year in search of better economic opportunities than they can find elsewhere. Due to most residents leaving the Comilla district. So, Comilla is considered the research area.

This study has used a multi-stage random sampling technique to choose sample households. There are 16 police stations in the Comilla district, and

three upazilas (Chaddogram, Sadar Dakkhin, and Burichang) were selected from the district using a simple random sampling method. Then, two unions are randomly chosen from each police station. One village from each union is then randomly selected for the next step. Finally, 20 houses are randomly selected from each community using a random sampling method. So, the study's sample size is 120.

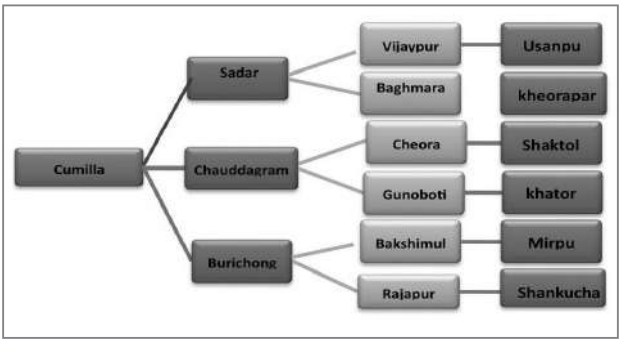

Figure 3.1 Way of selecting data by location name

This study collected data through face-to-face interviews using a structured questionnaire from 120 respondents from August to September 2023. Furthermore, this study uses SPSS-21 and Excel to analyze data using descriptive statistics, the Wilcoxon signed-rank test, and OLS regression.

3. 2 Model Specification

As remittances affect the Bangladesh economy in many ways, it is necessary to identify the significant factors influencing international remittances. In doing so, the study secondly applies a multiple regression model. Because the dependent variable is continuous, the study employs OLS to determine the causal relationship between the total amount of remittances transmitted each year and the set of explanatory variables, following Goschin and Roman (2012), Havolli (2009), Unan (2009), and Kumar (2018). Equation 1 states the relationship as follows:

$$\text{Remittance Inflow} = ax_2 + u_i \cdots\cdots\cdots\cdots (1)$$

Where Remittance Inflow represents the total amount of remittance transmitted per year, and x is a collection of explanatory factors that influence the total amount of remittance transferred per year. As a result, the following model is specified for multiple regression:

$$\text{Remittance inflow} = a_0 + a_1 \text{ age} + a_2 \text{ household size} + a_3 \text{ education qualities} + a_4 \text{ training} + a_5 \text{ earnings} + a_6 \text{ years of abroad} + u_i \cdots\cdots\cdots\cdots (2)$$

Where, Remit inflow is the total amount of remittance transmitted each year,

a1....a7 are estimated parameters, and 'ui' is the stochastic disturbance term. The following table explains the explanatory variables used in the preceding model:

Table 3. 1 Hypothesized Explanatory Variables and Expected Outcomes

Variables	Description	Expected sign	Reasons
X1	Age (years)	+	A higher age level tends to send more money.
X2	Household Size	+	A large household needsmore money, which induce send more money
X3	Education qualities	+	More education helps them earn more money and induces them to send more remittances.
X4	Training (1 = get training, 2 = do not gettraining)	+	Training helps them earn more money and induces them to send more remittances.
X5	Earnings (money)	+	More earnings help to Send more money.
X6	years of abroad(years)	+	More experience helps earn more money, which in turn induces more remittances.

4.1 Descriptive Analysis

The socio-economic conditions and demographic profile have been analyzed in this chapter, which provides an overall picture of the respondent. The demographic profile includes age, gender, educational qualifications, marital status, etc., and is analyzed using bar graphs and pie charts.

4. 1. 1 Age of the Respondent

Age is a fundamental demographic characteristic that is important in many disciplines of study.

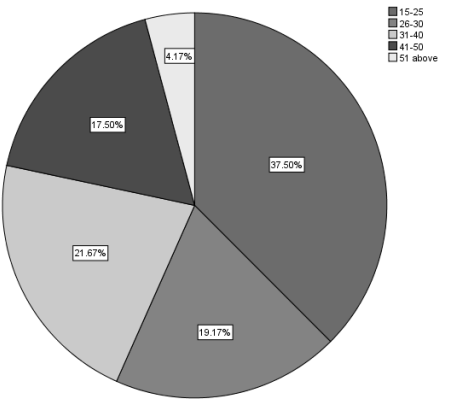

Figure 4. 1 Age of the Respondent

This study shows that among 120 respondents, the majority of workers are aged 15-25, accounting for 37.50 percent. The second-highest worker's age range is 31-40

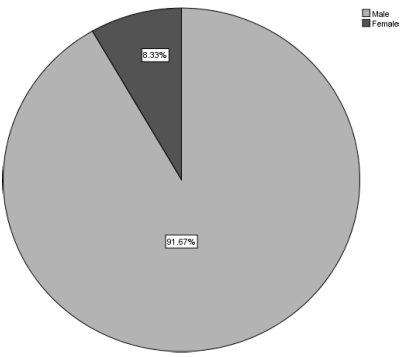

Figure 4. 2 Gender of the Respondent

which is 21.6 percent. Further, 19.1 percent were in the 25-30 age group, 1.50 percent in the 41-50 age group, and 4.17 percent in the 51+ age group. 4.1.2 Gender of the respondent: In the case of the foreign worker workforce, it may vary by gender because of social and safety problems.

The study shows that the majority of workers are male (91.67% of the 120 respondents), whereas female workers constitute only 8.33%. This shows that female workers do not feel safe working abroad or feel better in their home country.

4. 1. 2 Education Qualities of the Respondent

A literate worker can be more productive, helping them earn more income than an illiterate worker.

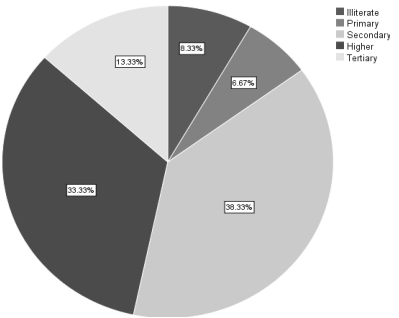

Figure 4.3 Education Qualities of the Respondent

Figure 4.3 *shows* that the majority of migrants have completed secondary education, with 38.33 percent of 120 respondents having completed secondary education. It also shows that 33.33 percent of expatriates completed higher education, 13.33 percent completed tertiary education, 6.67 percent completed primary education, and only 8.33 percent were illiterate. The study found that after completing their studies, they face job crises in their home country, which is why they prefer to work abroad.4.1.4 Technical training from the institution of migrant:

Training is the most important factor for migrant workers, as it helps them find jobs more easily and earn higher incomes. The lack of skills among migrant workers means they do not survive as well as they expected before migration.

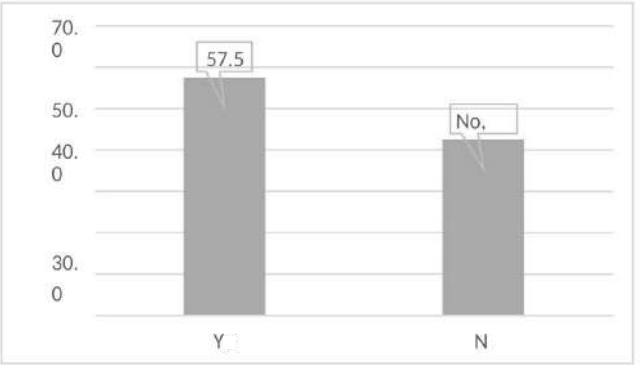

Figure 4.4 Technical Training From The Institution of Migrant

The bar graph shows the percentage of trained and untrained migrants. From this chart, we see that most of them are untrained. About 57.50 percent is

untrained, whereas 42.50 percent is untrained. It reveals that migrants were not interested in preparing for work abroad before migration.

4. 1. 3 Migrate Country of the Respondent

Most people choose a country to migrate to based on their neighbors' previous migration experiences.

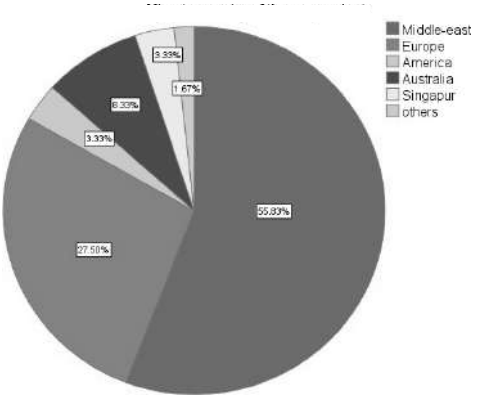

FIgure 4.5 Migrate Country of the Respondent

The study finds that most people migrate to the Middle Eastern country. Around 67.5 percent migrate to Middle Eastern countries, where 15.8 percent migrate to Europe, 8.3 percent to Australia, 3.3 percent to America and Singapore, and only 2 percent to other countries. The table shows that most people tend to migrate to Middle Eastern countries.

4. 1. 4 Monthly Income of the Respondent

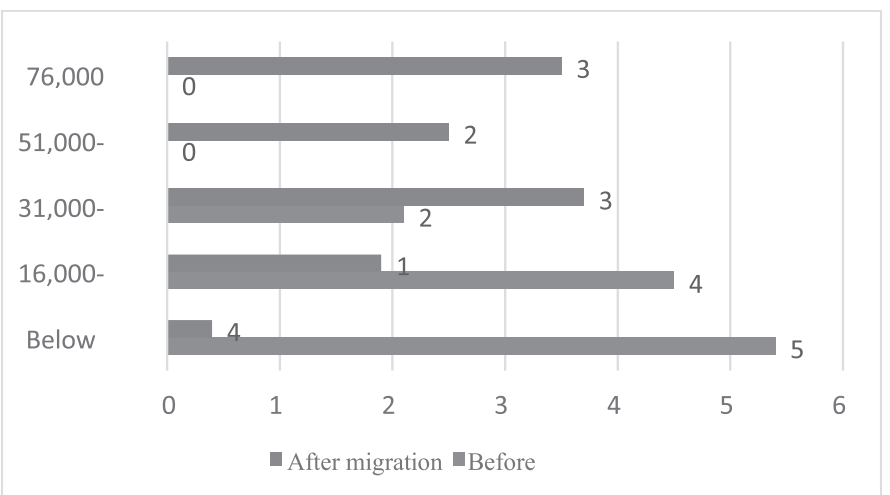

Figure 4.6 Range of Monthly Income by Migrants Before nd After Migration

Figure 4. 6 shows the range of monthly income by migrant's household before migration and after migration. From the figure, we can say that after migration, the income has significantly increased. Before migration, 54 migrants had an income below 15,000; after migration, only 4 had an income below 10,000. Again, before migration, 45 migrants had incomes between 16,000 and 30,000, whereas after migration, 19 migrants had incomes in this range. Before migration, 21 migrants had incomes between 31,000 and 50,000; after migration, 37 migrants had incomes in this range. Again, before migration, none of the migrants had an income between 51,000 and 75,000, and after migration, 25 migrants had an income in this range. The figure shows that before migration, none of the migrants had an income above 76,000; after migration, 35 did.

The table below shows the changing pattern of monthly income before and after migration by the migrant households. From the table, it is seen that after migration, the incomes of 4 migrant households are ranked negatively. That suggests that income was higher before migration than after. Again, the income of 104 migrant households increases after migration, and only 12 households' income remains the same as before migration.

Table 4.1 Changing pattern of Monthly Income

Income before and after migration	Rank	N	p-value
Monthly income of the respondent after migration- Monthly income of the respondent before migration	Negative	4	.000
	Positive Ranks	104	
	Ties	12	
	Total	120	

Data source: Author's calculation using 'IBM SPSS Statistics 21.
Note: *shows a significant level.

4. 1. 5 Money Sending Method of the Respondent

The method of money transfer is important for the national economy. If remittance inflows occur legally, they might expand the economy; otherwise, they might harm it, as with Hundi, which encourages money laundering.

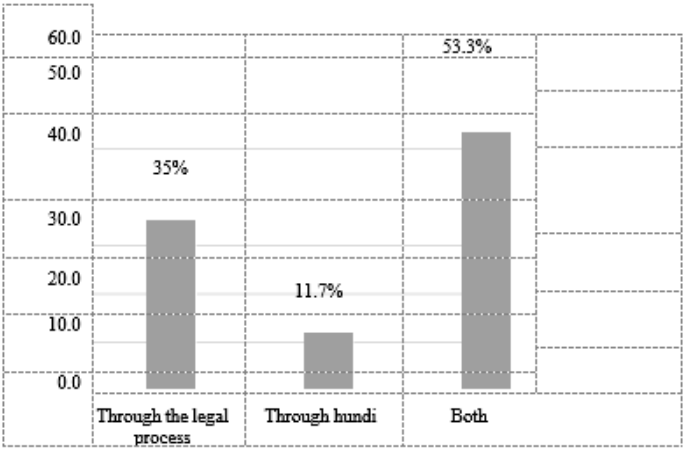

Figure 4.7 Money Sending Method Of The Respondent

This figure shows that 53.33 percent of migrant people choose both legal and illegal processes to send their remittance in Bangladesh, where only 35 percent choose the legal process and 11.67 percent choose hundi. It shows that most migrants are indifferent to the method of remittance sending. They choose methods based on their needs, without considering other factors.

4. 1. 6 Saving Tendency of the Respondent

Migrant households try to save some money for uncertain future conditions and a better life. Sometimes they are not interested in investing this money due to a lack of knowledge or a reluctance to take risks.

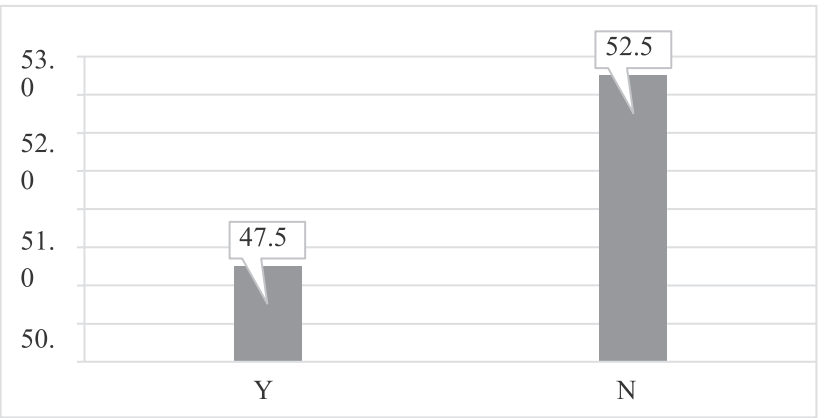

Figure 4.8 Saving Tendency Of The Respondent.

Figure 4.8 shows that 52.50 percent of migrants tend to save remittances, whereas 47.50 percent do not, which is lower. It shows people spend more money than they save for future needs.

4. 1. 7 Increase Entrepreneurship

Entrepreneurship is essential for economic growth and innovation, as it creates jobs, fosters competition, and drives productivity. Ultimately, it contributes to a thriving and dynamic economy. Recipient households receive a large sum of money at the beginning of the month, which they can use to start a new business.

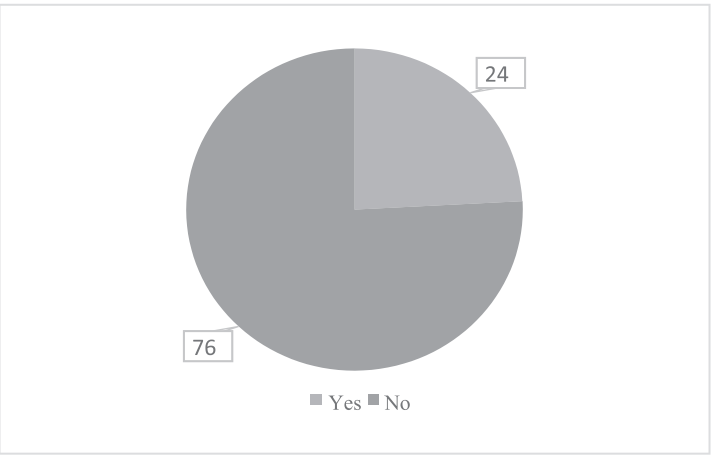

Figure 4.9 Entrepreneurship Tendency of The Recipient Family

The study shows that 76 percent of recipient households are not interested in engaging them to create a new business, whereas only 24 percent engage them to run the new business. It reveals that a few recipient households are interested in starting a new business.

4. 1. 8 Problem of Proper Utilization of Remittance

Proper utilization of remittances is significant for both the migrant household and the home country. However, it is still difficult for developing countries like Bangladesh to ensure proper utilization.

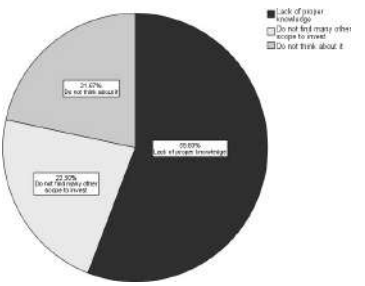

Figure 4.10 Problem of Proper Utilization of Remittance

Figure 4.10 shows different types of remittance-related migration gaps for the proper utilization of remittances. Among 120 respondents, 55.83 percent

lack proper knowledge, 22.50 percent do not find many other investment opportunities, and 21.67 percent do not consider proper utilization of remittances. It shows that migrant people lack knowledge about utilization and investment.

4. 1. 9 Satisfaction with the living status of the respondent family

Remittance improves the household's well-being. It helps alleviate poverty and improves the socio-economic conditions of the recipient family. So, they might be satisfied with their livelihood. satisfaction with the living status of the respondent's family:

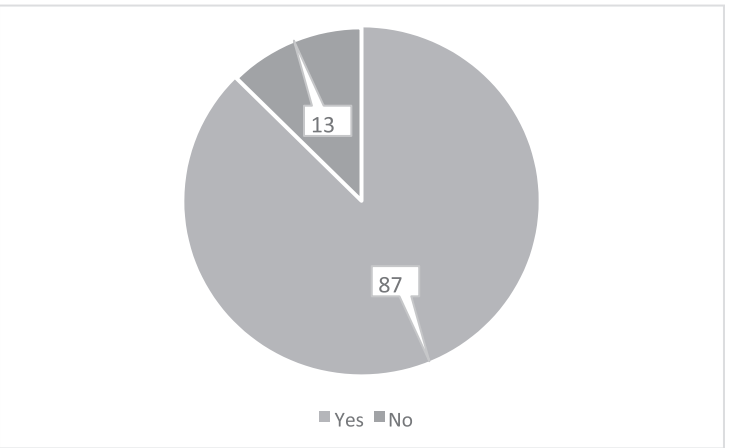

Figure 4.11 Satisfaction with The Living Status of The Respondent Family

Figure 4.11 shows that about 87.50 percent of migrants are satisfied with their living conditions, with 120 respondents, whereas only 12.50 percent are not satisfied. A study reveals that remittances significantly improve the satisfaction with living conditions for migrant people.

The household accessories are improved

Remittances may help the household improve its standard of living and access other facilities. Table 5 shows that 80.8% of recipient households improved their water facilities, whereas only 5.8% were unable to do so, and 13.3% were neutral, with their facilities remaining the same before and after migration. Electricity facilities are also increasing rapidly. From Table 5, we see that electricity facilities improved in about 78.7 percent of households, whereas they did not improve in 11.3 percent, and 10 percent remained the same before and after migration. Further, we see that gas facilities also improved significantly. About 66.7 percent of households improved their Gas facilities, 18.3 percent were unable to do so, and 15 percent were indifferent before and after migration. We also see that after migration, 80.8 percent of people improved furniture facilities, 86.7 percent of households improved their mobile phone

facilities, 55 percent of households improved computer facilities, 8.7 percent of households improved air condition facilities, 32.5 percent of households improved Motorcycle facilities, and only 3 percent of households improved car facilities. Besides it also seen that after migration 9.2 percent of households were not able to improve furniture facilities, 5.8 percent of households were not able to improve mobile phone facilities, 35.8 percent of households were not able to improve computer facilities, 89 percent of households did not able to improve air condition facilities, 55 percent households did not able to improve Motorcycle facilities and 97 percent households improved car facilities. Furthermore, the data table shows that 10 percent of the households became indifferent to furniture facilities, 7.5 percent of households became indifferent to mobile phone facilities, 9.2 percent of households became indifferent to computer facilities, 3.3 percent of households became indifferent to air conditioning facilities, 12.5 percent of households became indifferent to motorcycle facilities, and no household became indifferent to car facilities. It shows that, in the case of necessity, facilities remittance can help improve rapidly.

Table 4.2 Access to Household Accessories has Improved

Household accessories	Agree (percentage)	Disagree (percentage)	Neutral (percentage)
Water facilities	80.8%	5.8%	13.3%
Electricity facilities	78.7%	11.3%	10%
Gas facilities	66.7%	18.3%	15%
Furniture facilities	80.8%	9.2%	10%
Mobile phone facilities	86.7%	5.8%	7.5%
Computer facilities	55%	35.8%	9.2%
Air-condition facilities	8.7%	89%	3.3%
Motorcycle facilities	32.5%	55%	12.5%
Car facilities	3%	97%	-

Data Source: Author's calculation using 'IBM SPSS Statistics-21.

4.2 Empirical Analysis

4. 2. 1 Monthly Expenditure of the Household

Monthly expenditure may change after migration. Households increase expenditure according to their needs through remittance.

Table 4. 3 Test of Significance In Expenditure Portfolio by the Migrant Household Before and After Migration using the Wilcoxon Signed-Rank Test

Monthly Expenditure Before and After Migration	Rank	N	P-valume
Monthly expenditure on food after migration–Monthly expenditure on food before migration	Negative Ranks	9	.000*
	Positive Ranks	77	
	Ties	40	
	Total	120	
Monthly expenditure on education after migration–Monthly expenditure on education before migration	Negative Ranks	19	.011*
	Positive Ranks	53	
	Ties	48	
	Total	120	
Monthly expenditure on cloth after migration–Monthly expenditure on cloth before migration	Negative Ranks	25	.016*
	Positive Ranks	50	
	Ties	45	
	Total	120	
Monthly expenditure on housing after migration-Monthly expenditure on housing before migration	Negative Ranks	21	.000*
	Positive Ranks	59	
	Ties	40	
	Total	120	
Monthly expenditure on Donation after migration -Monthly expenditure on Donation before migration	Negative Ranks	4	.000*
	Positive Ranks	49	
	Ties	67	
	Total	120	
Monthly expenditure on loan payment after migration–Monthly expenditure on loan payment before migration	Negative Ranks	10	.000*
	Positive Ranks	46	
	Ties	94	
	Total	120	

Data Source: Author's calculation using 'IBM SPSS Statistics 21.
Note: * shows a significant level.

Table 6 depicts the changing pattern of expenditure before and after migration. It also shows whether this change is significant using the Wilcoxon signed-rank test. The data table shows that, after migration, 9 migrant households' food expenditure decreased, whereas 71 households' food expenditure increased, which is 64.17%, and the rest of the 40 migrant households' food expenditure remained the same as before migration, and this change is significant at 1% significance level, as the p-value is 0.000*. After migration, 19 migrant households' expenditure on education is negatively ranked, and 53 households' expenditure is positively ranked, accounting for 44.17%, whereas 48 households remain the same as before migration; this change is statistically significant, with a p-value of 0.011*. Again, expenditure on cloth has increased after the migration, as the table shows. After migration, 25 households' expenditure is reduced, but 50 households' expenditure is increased by 41.17%, whereas 45 households' expenditure amounts remain the same as before. This changing pattern of business investment is statistically significant, with a p-value of 0.016*. Housing is the most common expenditure sector for migrant households. The data table shows that 21 households are negatively ranked in housing expenditure, 59 migrant households are positively ranked, and 40 households' expenditure remains the same as before migration. This change is significant at the 1% significance level, with a p-value of 0.000*. The number of households whose expenditure on donations has also increased after migration. Only 4 households' bank deposits are decreased after migration, whereas 49 households' expenditure is increased, and 67 households' expenditure remains the same as before migration, and this change is significant at 1% significant level, 0.000*. It is seen that after migration, 16 migrant households' expenditure on loan payments increased, 10 households' expenditure decreased, and 96 households' housing expenditure remained the same as before migration.

4. 2. 2 Monthly Investment of Household

Investment may rise after a household's migration. It may or may not invest properly. Investment patterns are important for households and countries alike.

Table 4.4 Test of significance in investment portfolio by the migrant household before and after migration using the Wilcoxon signed-rank test.

Investment before and after migration	Rank	N	p-value
Monthly investment on agriculture land after migration- Monthly investment on agriculture land before migration	Negative Ranks	14	.000*
	Positive Ranks	41	
	Ties	65	
	Total	120	
Monthly investment on livestock after migration-Monthly investment on livestock before migration	Negative Ranks	7	.000*
	Positive Ranks	36	
	Ties	77	
	Total	120	
Monthly investment on business after migration-Monthly investment on business before migration	Negative Ranks	15	.000*
	Positive Ranks	31	
	Ties	74	
	Total	120	
Monthly investment in goldafter migration- Monthly investment in gold before migration	Negative Ranks	17	.000*
	Positive Ranks	46	
	Ties	57	
	Total	120	
Monthly investment on bank deposit after migration- Monthly investment on bank deposit before migration	Negative Ranks	14	.000*
	Positive Ranks	55	
	Ties	54	
	Total	120	
Monthly investment on housing after migration-Monthly investment on housing before migration	Negative Ranks	10	.000*
	Positive Ranks	52	
	Ties	58	
	Total	120	
Monthly investment in the market after migration- Monthly investment in the capital market before migration	Negative Ranks	0	.180
	Positive Ranks	2	
	Ties	118	
	Total	120	

Data source: Author's calculation using 'IBM SPSS Statistics 21.
Note: * shows a significant level.

Table 4.3 depicts the changing pattern of investment before and after migration. It also shows whether this change is significant using the Wilcoxon signed-rank test. The data table shows that, after migration, 14 migrant households' agricultural land investment decreased, whereas 41 households' investment increased, which is 34.17%, and the rest of the 65 migrant households' investment remained the same as before migration, and this change is significant at 1% significance level, as the p-value is 0.000*. After migration, 7 migrant households' livestock investment is negatively ranked, and 36 households' investment is positively ranked, representing 30%; 77 households remain the same as before migration, and this change is statistically significant (p-value = 0.000*). Again, investment in business is increased after the migration, as the table shows. After the migration, 31 households' business investment is reduced, whereas 15 households' investment increases by 12.5%. The investment amounts for 74 households remain the same as before, and this changing pattern of business investment is statistically significant (p-value = 0.000*). Jewelry is the most common investment sector for migrant households. The data table shows that 17 households are negatively ranked in jewelry investment, 46 migrant households are positively ranked, and 57 households' investment remains the same as before migration. This change is significant at the 1% significance level. The number of households holding bank deposits has also increased after migration. Only 14 households' bank deposits decreased after migration, whereas 55 households' bank deposits increased, and 51 households' bank deposits remained the same as before migration. This change is significant at the 1% level (0.000*). It is seen that after migration, 52 migrant households' investment in housing (flat or plot) increased, 10 households' investment decreased, and 58 households' housing (flat or plot) remained the same as before migration. Almost all migrant households are not interested in capital market investments; only 2 households invest in this sector after migration, and this change is not significant, as the p-value is 180.

4. 2. 3 Determination of Remittance Inflow

Remittance inflow might be influenced by many other factors that induce migrant workers to send remittances to their home country. The OLS regression is used to analyze those factors influencing migrants' decision to send remittances to their home country. The model can be written.

$$\begin{aligned} &Remittance\ inflow \\ &\quad = 0.802 + 0.057\ age + 0.404^{*}\ household\ size \\ &\quad - 0.051\ education\ qualities - 0.321^{**}\ technical\ training \\ &\quad + 0.558^{*}\ monthly\ income + 0.191^{***}\ years\ in\ abroad \end{aligned}$$

Here, $R^2 = 0.517$

Note that *, **, and *** indicate the 1%, 5%, and 10% levels of significance, respectively.

There may be heteroscedasticity in the data because the study is based on primary data. The study also computes VIFs to test for multicollinearity, and the VIF scores suggest no multicollinearity among the explanatory variables. The Durbin-Watson test demonstrates that there is no autocorrelation in the model. According to the study, age, household size, training, years spent abroad, and income have a role. Although all variables reflect the predicted sign. In this model, the dependent variable is remittance inflow. An interpretation of this given model is given below.

Age: this variable had a positive effect on remittance inflow. A 1-year increase in age is associated with a 0.057 increase in remittance inflows. This shows that if workers' ages rise, remittance inflows can increase. But it has no significant impact.

Household size: this variable had a positive, significant impact on remittance inflows. For each additional household, remittance inflows increase by 0.404 units.

Education quality negatively affected remittance inflows. A 1-unit increase in education quality reduces remittance inflows by 0.051 units. But it has no significant impact on remittance inflow.

Technical training: this variable also had a negative effect and was significant on remittance inflow. If technical training rises by 1 unit, remittance inflows decline by 0.321 units.

Monthly income: this variable had a positive and significant impact on remittance inflow. If one unit of Monthly income increases, then the remittance inflow increases by 0.558 units.

Years abroad: This variable had a positive and significant impact on remittance inflow. If one unit of years abroad increases, then the remittance inflow increases by 0.191 units.

In summary, the study found that household size, monthly income, and years abroad increase migrants' remittance flows to their home country. Technical training does not increase migrants' remittance sending. However, it tends to decrease remittance inflow.

Conclusion

The study investigates remittances and their utilization in three Upazilas in Comilla district. The study has especially focused on the socio-economic condition of households in this area. Comilla district ranks 1st in Bangladesh for the highest number of expatriates, with more migrants than from any other district. Most migrants are male, and expatriates are mostly young people. It is

also seen that almost 38.33% of expatriates complete secondary education, and 33.33% complete higher education. So, most of the expatriates are educated. But they are unskilled. 58.50% of migrants do not receive any training before migration, which makes it difficult for them to get better jobs. They migrate to other countries because they face job crises or believe they can earn more in a higher-income country. For migration, most expatriates choose the Middle East, specifically countries in the Comilla district. From this district, 67.50% of expertise migrated to Middle Eastern countries. The government should train and encourage people to choose countries for migration based on their expectations and migrate to higher-income countries. It has been seen that almost 86.67% can able to raise their income level after migration, which is the most important reason for migration. The most important thing is that people earn higher incomes after migration, but they do not use them properly. The main reasons for this problem are that 55.83% lack adequate knowledge, 22.50% do not find many other investment options for their remittances, and 21.67% do not think about it. This problem is not beneficial to households or the country's economy. But it is a great opportunity to boost the economy. It is seen that households use most of their remittance for expenditure purposes. After migration, food expenditure increased by 64.17%, education expenditure by 44.17%, clothing expenditure by 41.17%, and so on, but investment did not rise proportionately with expenditure. This study shows that agricultural investment increased by 34.17%, Livestock investment by 30%, and business investment by only 25%. It reveals that only 24% of recipient households engage them to run the new business.

The study finds that this remittance inflow is influenced by many other factors, like family size, age, income level, and years abroad, which have positive and significant effects. These factors led expatriates to send more money back to their home countries. However, this study shows that most households can improve their socio-economic conditions. Necessary utilities that are essential for the livelihood improvement of the recipient family. It is seen that water facilities increased by 80.8%, electricity facilities by 78.7%, gas facilities by 66.67%, furniture facilities by 80.8%, and mobile phone facilities by 86.7%. The study shows that remittances help recipient households improve their family's well-being. These remittances are influenced by many other factors. The study shows that household size, monthly income, and years abroad have a positive and significant impact on remittance inflows. Lastly, the study shows that remittances reach Bangladesh both legally and illegally, which harms the economy. 65% expertise in the illegal remittance process. It also encourages money laundering, which directly affects the national economy. The government should focus on this and make the process of sending money to the home country easier, so that experts can send money legally without hassle. It also encourages experts to send money legally and makes it more beneficial for experts.

Overall, we see that remittances benefit individual households and the home country. It may be more beneficial for both if the government and local authority take some initiative, especially regarding utilization, investment patterns, and remittance-sending methods. If an effective policy can be put in place in this case, migrants will benefit, as the country's economy will also benefit from this sector.

Recommendation

- Government should ensure practical-based education, so that they can do a better job in their home country as well as foreign countries.
- The government should encourage people and make the process easier so that they choose a higher-income country and do not choose a Middle Eastern country exclusively.
- The government should be concerned about people so that the recipient family does not make unnecessary expenditure of remittances, and help them to find a way so that they can invest remittances in a good way.
- The government should focus on methods of remittance and make the process of sending money to their home country easier so that experts can send money easily in a legal way and do not face any hassle when sending money to their home country. Also, encourage expatriates to send money legally and make it more beneficial for them.

Limitation

- The time is too limited to conduct the whole population. So, it is not possible to show the overall scenario of Comilla district.
- The study was conducted based on primary data, which requires more budget. The research was constrained by limited funding, which affected the scope of data collection and access to certain resources.
- The sample size in this study was relatively small, which may limit the generalizability of the findings to a broader population.

Suggestions for Future Research

Future studies on remittances in Bangladesh should examine longitudinal changes in remittance utilization, the impact of government policies, and the role of technology in enhancing remittances' impact on recipient households. This multidimensional approach will provide an extensive overview of how remittances might be used to promote long-term development.

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