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# **Channels of Foreign Remittances and their Relative Efficiency in Sylhet Region of Bangladesh**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author MRA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author MSA managed the literature searches and assisted in the analysis. Authors JKS and MSH managed the analyses and controlled the overall study. All authors read and approved the final manuscript.*

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## **ABSTRACT**

The study examines the different channels of receiving foreign remittances and measures their relative efficiency in selected areas of Sylhet region in Bangladesh. The study was carried out based on the primary data collected from eight villages of Sylhet and Moulvibazar districts under Sylhet division. The sample size was 104 considering 52 remittance receiving households from each district by applying random sampling technique. Descriptive statistics and econometric technique were used to analyze the collected data. The study found that about 40% households received foreign remittances through the money transfer agencies, about 35% directly through the bank account and about 19% households received foreign remittances through the mobile banking system. Western Union was the most common channel among money transfer agencies whereas bKash was the mostly used mode among mobile banking system. *Hundi* still exists but the households were reluctant to disclose the information. The study concluded that money transfer

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agencies are the most efficient channel of receiving foreign remittances and mobile banking as a channel of receiving foreign remittances is now getting popularity among the households for its easy, convenient and fastest transaction.

*Keywords: Remittances; channels of remittances; efficiency; Bangladesh; money transfer agencies; mobile banking.*

## 1. INTRODUCTION

The inflow of foreign remittances sent by Bangladeshi emigrants, living outside of the country, has been growing over time. In the last thirty one years, increased remittance flow has been contributing to the economic development of Bangladesh [1]. Remittance gets momentum in recent time in Bangladesh and is the second largest sector of foreign exchange earnings after the garments sector [2]. Out of the top ten remittance recipient countries of the world in 2015, India stood first with \$72.2bn, while Bangladesh achieved 10th position with \$15.8bn [3]. Gross domestic products of host country and domestic country, exchange rate, petroleum price and skill of labour significantly influence remittance inflow in Bangladesh [4]. The inflows of foreign remittances from emigrants working abroad get back its growth in fiscal year 2014-15. It played a significant contribution to increase the amount of foreign exchange reserves and strengthening the current account balance of Bangladesh. Receipts from this sector increased by 7.7% from US\$ 14228.31 million in FY14 to US\$ 15316.92 million in FY15 [5]. It is noticeable that with the passage of time, Bangladesh maintained a healthy growth in foreign remittances in recent years compared to earlier years.

A channel of foreign remittances means the mode that is used for sending and receiving remittance money. The Bangladeshi emigrant workers, who work in different countries of the world, use various channels for transferring foreign remittances to their home country. Mainly there are two types of channels namely formal and informal used by the emigrant workers for sending foreign remittances to Bangladesh. The remitted money transferred through formal channels includes direct transfer through bank account, money transfer agencies and post offices. Money transfer operators (MTOs) provide the fastest service in formal money transfer systems and they take minutes to transfer money from one part of the world to another [6]. Remittance transmission by means of mobile phone has been becoming popular at a fast pace [7].

Remittance money transfers via informal channels include *hundi* (illegal money transfer), friends, relatives, neighbours and acquaintances. In the *hundi* system, a migrant-remitter gives money to an intermediary abroad, who contacts an agent in Bangladesh, who is then responsible for paying the equivalent amount that the migrant has given to the intermediary for the intended recipient in Bangladesh [8]. Wage earners of Bangladesh often use informal channels to remit money to home country [9]. Key reasons not to use a formal transfer channel are a migrant's emphasis on low transfer cost (rather than speed, convenience or security), irregular legal status in the host country, and short migration spells [10]. The remittance transfer through formal channel is higher than that of informal channel in recent times [11]. Out of total remittance, 76.08% are remitted by formal channels, of which banks are the main channels accounting for about 67.32% of the total remittance, followed by Western Union with 6.87%, Money Gram with 1.65% and Post Office only 0.24%. Slightly less than one-fourth of total remittance (23.92%) finds their way to Bangladesh through informal channels *hundi* (10.04%), friends (8.50%), known persons (4.23%), and others (1.15%) [12].

Foreign remittances are mainly earned by emigrant workers of Sylhet, Chittagong, Noakhali, Dhaka and Khulna of Bangladesh, where a great portion is earned by the emigrants from Sylhet region. Moreover, a large number of Bangladeshi emigrants are on foreign employment and a remarkable portion of them is from Sylhet region. Consequently, the Sylhet region plays an important role in national economy since it attracts a huge amount of remittances, keeping the nation's foreign exchange reserve healthy [13]. A few numbers of studies available on foreign remittances at micro level and there is a lack of empirical analysis about how foreign remittances are received at household level in Sylhet region of Bangladesh. Therefore, the aim of the study is to investigate the different channels through which households receive foreign remittances sent from abroad by the emigrant workers and to measure their

relative efficiency in selected areas of Sylhet Region in Bangladesh.

**2. METHODOLOGY**

The study was conducted at Osmani Nagar Upazila of Sylhet district and Sadar upazila of Moulvibazar district under Sylhet division of Bangladesh because of high concentration of emigrants in these areas. Four villages from each upazila were selected purposively for the study. A total of 104 households were selected from both the upazilas by applying random sampling technique. Sample of the present study were either the emigrant workers or the household heads of the remittance receiving households. The required data were collected through personal interview with the selected respondents using a structured questionnaire. Data were gathered during the month of January to March 2016 for the financial year July 2014 to June 2015. The remittance receiving households were categorized into three groups based on the household annual income i.e., (i) Low Income Group ( $\leq$  BDT 500000), (ii) Middle Income Group (above BDT 500000 and  $\leq$  BDT 1000000) and (iii) High Income Group ( $>$  BDT 1000000). The entire information was analyzed and discussed on the basis of these three income groups.

**2.1 Analytical Techniques**

Descriptive statistics and econometric techniques were used in this study to analyze the collected data through SPSS programs and MS Excel. Descriptive statistics such as percentage, ratio, mean or average and frequency were employed to analyze a substantial part of data analysis and to interpret the findings. The following econometric technique was used with a view to achieve the objective of the study.

**2.1.1 Efficiency formula**

For measuring efficiencies of different channels of remittances, preferences of remittance

receivers were taken into account on five attributes namely time, cost, formalities, security and reliability. These attributes (variables) used for measuring the efficiency were defined and discussed in Table 1.

Each of the attribute was divided into three preferences (efficiency criteria) and a score was assigned for each to measure the efficiency of a particular channel through which remittance money was received by the household. The assigned score for each efficiency criteria was based on the importance of preferences of household remittance receiver. Also the researchers made deep and effective consultation with his respective teachers, economists and some specialists in statistics in order to assign appropriate score for each preference of household remittance receiver. The details of each preference (efficiency criteria) and their assigned score were described in Table 2.

An efficiency index (weighted average) was used to measure the efficiency of different channels of receiving foreign remittances as follows:

$$E_i = \frac{\sum W_i P_i}{\sum W_i} \tag{1}$$

Where,

- $E_i$  = Efficiency
- $PS$  = Perceived score
- $W_i$  = Weight of the particular efficiency criteria
- $\sum$  = Summations
- $i$  = Channels of receiving foreign remittances i.e. Bank Account Transfer, Money Transfer Agencies, Mobile Banking Transfer and Others (e.g., *Hundi*, Post office, Friends, Relatives etc.)

A channel having more  $E_i$  value means more efficient as compared among different channels of receiving foreign remittances in the study area.

**Table 1. Definition of different attributes (Variables)**

Sl. No.	Attributes (Variables)	Definition
1	Time	Minimal time required for receiving remittance money.
2	Cost	Cost included the fee that paid and also the transportation cost that incurred by the household member to receive remittance money.
3	Formalities	An initiated form, especially that one followed or harassed simply for the sake of procedure during the receiving remittance money.
4	Security	A printed or saved document or pledged as a guarantee of receiving remittance money provided by the respective service provider in case of default.
5	Reliability	The authenticity of remittance receiver to the respective service provider.

**Table 2. Scoring of preferences (Efficiency criteria) by attributes (Variables)**

Attributes (Variables)	Preferences (Efficiency criteria)	Score assigned
Time	Short time	A score of 5 was assigned for short time (considered when remittance received in a day), 3 for medium time (within 3 days) and 1 for more time required (considered up to 7 days).
	Medium time	
	More time	
Cost	Low cost	In case of cost, a score of 5 was given for low cost (BDT 0 to 50), 3 for moderate cost (BDT 51 to 150) and 1 for high cost (Above BDT 150).
	Moderate cost	
	High cost	
Formalities	Fare	A weight of 5 for fare, 3 for tolerable and 1 considered for excessive formalities.
	Tolerable	
	Excessive	
Security	Secured	A value of 5 for secured, 2 for moderate secured and 1 for less secured was taken into account.
	Moderate secured	
	Less secured	
Reliability	Reliable	In case of reliability, a score of 5 was given for reliable, 2 for mediocre reliable and 1 for less reliable.
	Mediocre reliable	
	Less reliable	

### 3. RESULTS AND DISCUSSION

#### 3.1 Channels Used by Households for Receiving Foreign Remittances

All the formal and informal channels used by households for receiving foreign remittances were classified into four heads, such as (i) Bank Account Transfer, (ii) Money Transfer Agencies, (iii) Mobile Banking Transfer and (iv) Others (*hundi*, friends, relatives, neighbours and acquaintances). In this study, bank account as a channel of receiving foreign remittances means transferring money directly to the bank account of remittance receiver by the emigrant worker. Bank account of remittance receiver in the study area was found to be opened mainly with the state owned banks i.e. Sonali Bank Limited, Rupali Bank Limited, Janata Bank Limited and Agrani Bank Limited. Some private commercial banks i.e., Dutch Bangla Bank Limited (DBBL), Pubali Bank Limited, One Bank Limited, United Commercial Bank (UCB) Limited, Prime Bank Limited, Trust Bank Limited, AB Bank Limited, Islami Bank Limited etc. were also observed to be used. Money transfer agencies means transferring money through various exchange houses. The most common money transfer agencies were found to be the Western Union, Money Gram and UAE Exchange in the study area. Money remitted through the mobile banking means transferring money directly to the

receiver's mobile banking account or to an agent account. Rocket and bKash mobile banking accounts introduced by DBBL and BRAC Bank Limited respectively were most common modes of receiving foreign remittances by the households. Other channels include *hundi*, money received through friends, relatives, neighbours and acquaintances. *Hundi* is an unofficial and illegal money transfer system that is not recognized by the government of the country. Table 3 shows different channels that are used by the households for receiving foreign remittances in the study area.

From the Table 3, it is examined that out of all remittance transferring channels, remittances received through the money transfer agencies were the highest (40.38%) compared with bank account, mobile banking and other channels. It is also notable that foreign remittances received through bank account were comparatively higher (47.37%) in high income group than the middle income (32.50%) and low income group (19.23%). The highest (50%) remittance money received through money transfer agencies was in middle income group as compared to high income (36.84%) and low income group (30.77%). In addition, remittance money received through mobile banking was remarkably higher (46.15%) in low income group than the middle income (12.50%) and high income group (7.89%).

**Table 3. Different channels used by households for receiving foreign remittances**

Channel	Households by income groups							
	Low income		Middle income		High income		All	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Bank Account Transfer	5	19.23	13	32.50	18	47.37	36	34.62
Money Transfer Agencies	8	30.77	20	50.00	14	36.84	42	40.38
Mobile Banking Transfer	12	46.15	5	12.50	3	7.89	20	19.23
Others	1	3.85	2	5.00	3	7.89	6	5.77
<b>Total</b>	<b>26</b>	<b>100</b>	<b>40</b>	<b>100</b>	<b>38</b>	<b>100</b>	<b>104</b>	<b>100</b>

Source: Field survey, 2016 and Authors estimation

The study found that most of the households received foreign remittances through money transfer agencies and western union was the most common among all the agencies. Receiving remittance money through mobile banking is getting popularity in the study area for its easy, convenient and fastest transaction and bKash was the mostly used mode among the mobile banking system. The study also revealed that receiving foreign remittances through the *hundi* system is still exists but nobody wanted to disclose the information. This system is mainly practiced when large amount of remittance money is sent by the emigrant workers to their home country to hide illegal income for avoiding income tax.

### 3.2 Amount of Foreign Remittances Received by the Households through Different Channels

Households received foreign remittances mainly through bank account, money transfer agencies, mobile banking and other channels (*hundi*, post office, friends, relatives etc.). The amount of

foreign remittances received by the households through these channels as depicts in the following Table 4.

From the Table 4, the study found that the highest amount (50.20%) of the foreign remittances was received through the money transfer agencies in middle income group compared to high income (38.05%) and low income (29.63%) group. On the other hand, the highest portion (48.91%) of remittance money was received in high income group compared to middle income (30.25%) and low income (22.14%) group through the bank account. Besides, in low income group, the highest portion (44.95%) of remittance money was received through the mobile banking compared to middle income (15.22%) and high income (6.51%) group. Considering all groups, the study revealed that the highest amount of foreign remittances received by the remittance receiving households through the money transfer agencies compared with bank account, mobile banking and other channels.

**Table 4. Amount of annual foreign remittances received through different channels**

Channel	Households by income groups							
	Low income		Middle income		High income		All	
	BDT	%	BDT	%	BDT	%	BDT	%
Bank account Transfer	2,094,000	22.14	6,352,000	30.25	18,696,000	48.91	27,142,000	39.52
Money transfer Agencies	2,802,000	29.63	10,542,000	50.20	14,545,000	38.05	27,889,000	40.61
Mobile banking Transfer	4,251,000	44.95	3,195,000	15.22	2,490,000	6.51	9,936,000	14.47
Others	310,000	3.28	910,000	4.33	2,495,000	6.53	3,715,000	5.41
<b>Total</b>	<b>9,457,000</b>	<b>100</b>	<b>20,999,000</b>	<b>100</b>	<b>38,226,000</b>	<b>100</b>	<b>68,682,000</b>	<b>100</b>

Source: Field survey, 2016 and Authors estimation

### 3.3 Efficiency of Different Channels for Receiving Foreign Remittances

#### 3.3.1 Perceived score of preferences (Efficiency criteria) by attributes for receiving foreign remittances through different channels

The perceived score (PS) was calculated by multiplying the frequency counts of each preference (efficiency criteria) with its assigned score. By adding the PS of each efficiency criteria, the total PS for each attribute was calculated. Table 5 exhibits the frequency (F) and perceived score (PS) for receiving foreign remittances through different channels.

It is seen from the Table 5 that for time, total PS by its three efficiency criteria were calculated 7, 19, 22 and 48 in low, middle, high and in all income groups respectively. For cost, total PS were 17, 53, 58 and 128 in low, middle, high and in all income group respectively. Total PS for formalities in low, middle, high and in all income group were 17, 43, 54, and 114 respectively. In case of security total PS were 22, 56, 72 and 150 respectively in low, middle, high and in all income group. Another attribute was reliability and its total PS in low, middle, high and in all income groups were 22, 53, 69 and 144 respectively.

The study found that total PS of five attributes for receiving remittance money through the bank account was higher in high income group compared to middle and low income group. Most of the household remittance receivers think that bank account required more time for receiving remittances. Household remittance receiver had not to pay any fee for receiving remittance money through the bank account. But most of the household remittance receivers had to use transportation to go from where they received remittance money and had to cost moderately. For receiving remittance money through the bank account, most of the households reported that they had to maintain tolerable formalities but it was secured and reliable channel among the remittance receivers in the study area.

Besides this, the total PS of five attributes for receiving remittance money through money transfer agencies were higher in middle income group in comparison to high and low income

group. Majority of the household's remittance receivers said that money transfer agencies required medium time for receiving foreign remittances. Household remittance receiver did not pay any fee for receiving remittance money through this channel though they had to cost moderately for using transportation to go from where they received remittance money. Most of the households reported that they had to maintain tolerable formalities for receiving remittance money through money transfer agencies. This channel was medium secured and mediocre reliable to the remittance receivers in the study area.

Moreover, total PS of selected attributes for receiving remittance money through the mobile banking were relatively higher in low income group than the middle and high income group. A significant number of the remittance receiving households put their opinion that mobile banking required short time for receiving foreign remittances. Likewise the bank account and money transfer agencies, household remittance receivers had not to pay any fee for receiving remittance money through the mobile banking account since the fees paid by the emigrant workers during the sending remittances from abroad. But they had to bear low cost for using transportation while they received remittance money from nearby agent or service centre. Fare formality had to maintain for receiving remittance money through the mobile banking account though it was medium secured and mediocre reliable channel to the remittance receivers in the study area. Now, it is getting competitive with different channels for its easiest and speedy transaction.

In addition, total PS of the same attributes for receiving remittance money through other channels were slightly higher in high income group than the middle and low income group. Among the other channels (post office, *hundi*, friends and relatives), a small number of remittance receiving households were received remittance money through *hundi* system. The *hundi* system required medium time but had to pay more for receiving remittance money. Fare formality had to maintain by households for receiving remittance money through this illegal system but it was less secured and reliable channel for transferring money as mentioned by the receiver households in the study area.

Table 5. Frequency (F) and perceived score (PS) for receiving foreign remittances through different channels

Attributes	Preferences (Efficiency criteria)	Different channels by income groups																															
		Bank account transfer								Money transfer agencies								Mobile banking transfer								Others							
		Low income		Middle income		High income		All		Low income		Middle income		High income		All		Low income		Middle income		High income		All		Low income		Middle income		High income		All	
		F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS	F	PS
Time	Short Time	-	-	-	-	-	-	-	-	1	5	4	20	5	25	10	50	12	60	5	25	3	15	20	100	1	5	-	-	-	-	1	5
	Medium Time	1	3	3	9	2	6	6	18	7	21	13	39	9	27	29	87	-	-	-	-	-	-	-	-	-	-	2	6	3	9	5	15
	More Time	4	4	10	10	16	16	30	30	-	-	3	3	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Total</b>	<b>5</b>	<b>7</b>	<b>13</b>	<b>19</b>	<b>18</b>	<b>22</b>	<b>36</b>	<b>48</b>	<b>8</b>	<b>26</b>	<b>20</b>	<b>62</b>	<b>14</b>	<b>52</b>	<b>42</b>	<b>140</b>	<b>12</b>	<b>60</b>	<b>5</b>	<b>25</b>	<b>3</b>	<b>15</b>	<b>20</b>	<b>100</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>9</b>	<b>6</b>	<b>20</b>
Cost	Low cost	2	10	7	35	4	20	13	65	1	5	7	35	2	10	10	50	8	40	3	15	1	5	12	60	-	-	2	10	3	15	5	25
	Moderate cost	2	6	6	18	12	36	20	60	6	18	10	30	9	27	25	75	4	12	2	6	2	6	8	24	1	3	-	-	-	-	1	3
	High cost	1	1	-	-	2	2	3	3	1	1	3	3	3	3	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Total</b>	<b>5</b>	<b>17</b>	<b>13</b>	<b>53</b>	<b>18</b>	<b>58</b>	<b>36</b>	<b>128</b>	<b>8</b>	<b>24</b>	<b>20</b>	<b>68</b>	<b>14</b>	<b>40</b>	<b>42</b>	<b>132</b>	<b>12</b>	<b>52</b>	<b>5</b>	<b>21</b>	<b>3</b>	<b>11</b>	<b>20</b>	<b>84</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>15</b>	<b>6</b>	<b>28</b>
Formalities	Fare	2	10	3	15	4	20	9	45	-	-	3	15	2	10	5	25	7	35	3	15	2	10	12	60	1	5	2	10	3	15	6	30
	Tolerable	2	6	9	27	10	30	21	63	6	18	12	36	8	24	26	78	5	15	2	6	1	3	8	24	-	-	-	-	-	-	-	-
	Excessive	1	1	1	1	4	4	6	6	2	2	5	5	4	4	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Total</b>	<b>5</b>	<b>17</b>	<b>13</b>	<b>43</b>	<b>18</b>	<b>54</b>	<b>36</b>	<b>114</b>	<b>8</b>	<b>20</b>	<b>20</b>	<b>56</b>	<b>14</b>	<b>38</b>	<b>42</b>	<b>114</b>	<b>12</b>	<b>50</b>	<b>5</b>	<b>21</b>	<b>3</b>	<b>13</b>	<b>20</b>	<b>84</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>15</b>	<b>6</b>	<b>30</b>
Security	Secured	4	20	10	50	12	60	26	130	4	20	5	25	2	10	11	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Moderate secured	1	2	3	6	6	12	10	20	3	6	13	26	10	20	26	52	5	10	4	8	2	4	11	22	-	-	1	2	1	2	2	4
	Less secured	-	-	-	-	-	-	-	-	1	1	2	2	2	2	5	5	7	7	1	1	1	1	9	9	1	1	1	1	2	2	4	4
	<b>Total</b>	<b>5</b>	<b>22</b>	<b>13</b>	<b>56</b>	<b>18</b>	<b>72</b>	<b>36</b>	<b>150</b>	<b>8</b>	<b>27</b>	<b>20</b>	<b>53</b>	<b>14</b>	<b>32</b>	<b>42</b>	<b>112</b>	<b>12</b>	<b>17</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>5</b>	<b>20</b>	<b>31</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>8</b>
Reliability	Reliable	4	20	9	45	11	55	24	120	2	10	4	20	3	15	9	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mediocre reliable	1	2	4	8	7	14	12	24	6	12	14	28	11	22	31	62	6	12	4	8	2	4	12	24	-	-	-	-	2	4	2	4
	Less reliable	-	-	-	-	-	-	-	-	-	-	2	2	-	-	2	2	6	6	1	1	1	1	8	8	1	1	2	2	1	1	4	4
	<b>Total</b>	<b>5</b>	<b>22</b>	<b>13</b>	<b>53</b>	<b>18</b>	<b>69</b>	<b>36</b>	<b>144</b>	<b>8</b>	<b>22</b>	<b>20</b>	<b>50</b>	<b>14</b>	<b>37</b>	<b>42</b>	<b>109</b>	<b>12</b>	<b>18</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>5</b>	<b>20</b>	<b>32</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>8</b>

Source: Field survey, 2016 and Authors estimation; Note: '-' indicates not applicable

**Table 6. Efficiency of different channels for receiving foreign remittances**

Income group	Channels	Perceived score (PS) by different attributes						$\sum W_i PS_i$	$\sum W_i$	Efficiency $= \sum W_i PS_i / \sum W_i$
		Frequency (Wi)	Time	Cost	Formalities	Security	Reliability			
Low income	Bank Account Transfer	5	7	17	17	22	22	425	25	17.00
	Money Transfer Agencies	8	26	24	20	27	22	952	40	23.80
	Mobile Banking Transfer	12	60	52	50	17	18	2364	60	39.40
	Others	1	5	3	5	1	1	15	5	3.00
	<b>Total</b>	<b>26</b>	<b>98</b>	<b>96</b>	<b>92</b>	<b>67</b>	<b>63</b>	<b>10816</b>	<b>130</b>	<b>83.20</b>
Middle income	Bank Account Transfer	13	19	53	43	56	53	2912	65	44.80
	Money Transfer Agencies	20	62	68	56	53	50	5780	100	57.80
	Mobile Banking Transfer	5	25	21	21	9	9	425	25	17.00
	Others	2	6	10	10	4	4	68	10	6.80
	<b>Total</b>	<b>40</b>	<b>112</b>	<b>152</b>	<b>130</b>	<b>122</b>	<b>116</b>	<b>25280</b>	<b>200</b>	<b>126.40</b>
High income	Bank Account Transfer	18	22	58	54	72	69	4950	90	55.00
	Money Transfer Agencies	14	52	40	38	32	37	2786	70	39.80
	Mobile Banking Transfer	3	15	11	13	5	5	147	15	9.80
	Others	3	9	15	15	4	5	144	15	9.60
	<b>Total</b>	<b>38</b>	<b>98</b>	<b>124</b>	<b>120</b>	<b>113</b>	<b>116</b>	<b>21698</b>	<b>190</b>	<b>114.20</b>
All	Bank Account Transfer	36	48	128	114	150	144	21024	180	116.80
	Money Transfer Agencies	42	140	132	114	112	109	25494	210	121.40
	Mobile Banking Transfer	20	100	84	84	31	32	6620	100	66.20
	Others	6	20	28	30	8	8	564	30	18.80
	<b>Total</b>	<b>104</b>	<b>308</b>	<b>372</b>	<b>342</b>	<b>301</b>	<b>293</b>	<b>168064</b>	<b>520</b>	<b>323.20</b>

Source: Field survey, 2016 and Authors estimation



### **3.3.2 Efficiency of different channels used by the households for receiving foreign remittances**

This section aims to measure the efficiency of different channels used by the households for receiving foreign remittances. For this purpose, the total perceived score (PS) of five categories of attributes based on their particular three preferences (efficiency criteria) was determined at first. The total PS and frequency (F) attained of different attributes (time, cost, formalities, security and reliability) for judging the efficiency of different channels were taken into account.

The total frequency was counted by summing up the frequency of each three efficiency criteria of a particular attribute. By adding the PS of each cell together the total PS for each channel was calculated. The total frequency was considered as weight ( $W_i$ ) for each attribute and then weighted PS ( $W_iPS_i$ ) was calculated. The efficiency of a channel was measured by dividing the total weighted PS ( $\sum W_iPS_i$ ) by the total weight ( $\sum W_i$ ) of the different attributes. Table 6 exhibits the efficiency of different channels used by the households for receiving foreign remittances in the study area.

From the Table 6 it is obtained that efficiencies of bank account transfer, money transfer agencies and mobile banking transfer were found 17, 23, 39.40 and 3 respectively in low income group. It is manifested that the channel of mobile banking was used by the households in low income group for receiving foreign remittances secured the highest efficiency. Similarly, in middle income group, the obtained efficiencies were 44.80, 57.80, 17 and 6.80 for the bank account, money transfer agencies, mobile banking and other channels respectively. The highest efficiency was obtained by the money transfer agencies in this group. On the other hand, the efficiency was 39.80 of the money transfer agencies, 9.80 obtained by the mobile banking, the efficiency of other channels were 9.60 while the bank account secured the highest efficiency (55) in high income group.

It is appeared that money transfer agencies used by the households for receiving foreign remittances secured the highest efficiency in all income groups. The study reveals that the bank account was the most efficient channel in high income group since its efficiency was highest compared with money transfer agencies, mobile banking and other channels. Most of the

household remittance receivers used this channel for receiving foreign remittances in this group. Similarly in middle income group, money transfer agencies were the most efficient channel and the mobile banking was the most efficient channel in low income group. The study found that most of the household remittance receivers in the study area received foreign remittances through money transfer agencies and its efficiency was relatively higher than the bank account, mobile banking and other channels. Therefore, it is clear that money transfer agencies were the most efficient channel of receiving foreign remittances.

## **4. CONCLUSION**

The present study identifies different channels of transferring and receiving foreign remittances and their relative efficiencies. Bank account transfer, money transfer agencies and mobile banking transfer are found to be the most commonly used formal channels of receiving foreign remittances in Bangladesh. Out of all popular formal and informal channels, money transfer agencies were preferred almost majority of the respondents as an efficient channel. A large volume of foreign remittances is currently received through the money transfer agencies safely and conveniently which made it most efficient channel among the senders and remittances receivers. However, mobile banking, a latest and easy mode of transferring remittance money within minute, is getting popularity day by day. The *hundi* system of sending and receiving remittances is still in practice but not to a greater extent. In this circumstance, the public and private commercial banks may speed up their services through adopting simple and easy formalities of transferring and receiving foreign remittances.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

## **REFERENCES**

1. Arifeen A. Understanding the contribution of remittances at the macroeconomic and household levels and exploring how these transfers could be better leveraged for development in Bangladesh. International Organization for Migration (IOM), Dhaka, Bangladesh; 2013.

2. Chowdhury KR, Hamid F, Chatterjee DD. Remittance as a tool of economic development: Bangladesh perspective. Bangladesh Research Publications Journal. 2010;4(3):286-296.
3. World Bank. Migration and remittances: Recent developments and outlook. Migration and Development Brief 26. Washington, D. C., USA; 2016.
4. Islam MS, Nasrin S. Driving forces of remittance inflow in Bangladesh: An empirical study. International Journal of Economics and Finance. 2015;7(6):126-138.
5. Bangladesh Bank. Annual report. Dhaka, Bangladesh. 2014-15;103.
6. Rahman MM, Brenda SAY. The social organization of remittances: Channelling remittances from East and Southeast Asia to Bangladesh. Asian Meta Centre Ressearch Paper Series No. 20, Singapore; 2006.
7. Barkat A, Osman A, Gupta SKS. In the corridors of remittance: Cost and use of remittances in Bangladesh. International Labour Organization (ILO), Dhaka, Bangladesh; 2014.
8. Ullah AA, Panday PK. Remitting money to Bangladesh: What do migrants prefer? Asia and Pacific Migration Journal. 2007; 16(1):121-137.
9. Mahmud ASMS. Determinants behind the use of informal channels for remitting money from overseas by the wage earners of Bangladesh. Unpublished master thesis, Asian Institute of Technology, School of Management, Thailand; 2012.
10. Siegel M, Lücke M. Migrant transnationalism and the choice of transfer channels for remittances: The case of Moldova. Global Networks. 2013;13(1): 120–141.
11. Begum MN, Sutradhar RN. Behavior of remittance inflows and its determinants in Bangladesh. Working paper series: WP1202, research department, Bangladesh Bank, Head Office, Dhaka, Bangladesh; 2012.
12. BBS (Bangladesh Bureau of Statistics). Survey on the Use of Remittance (SUR) 2013. Statistics and informatics division. Ministry of planning. Government of the People's Republic of Bangladesh, Dhaka; 2013.
13. Hossain MZ, Kazal MMH, Faisal FEM. Lack of utilization of local funds and productive investment climate in the Sylhet Region: A perception analysis. Economic Research Group (ERG) Working Paper, Dhaka, Bangladesh; 2010.

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