

# Microeconomic Impact of Remittance on Household Welfare: Evidence from Bangladesh

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# Background

- Overseas remittance earnings have become a major source of financial inflow for Bangladesh economy in recent years.
- Remittance earnings, as equivalent to share of Bangladesh's Gross Domestic Product (GDP), have been consistently on the increase and by 2012 this has reached an equivalent of 12 percent (Bangladesh Bank, 2014).
- It has been argued that this has helped employment generation, reduction of unemployment, increases in the foreign exchange reserves and also immensely contributed to an acceleration of overall national economic development (Ministry of Finance, 2014).
- World Bank (2012) argues that remittances contribute to growth of output in the economy by augmenting consumption and investment demand as well as savings.

# Background

- Consequently, the economic impact of migration and remittances has received an increasing interest from both researchers and policy makers
- Some interesting empirical queries that merit investigations are ,
  - ✓ *whether remittance earnings enhance household well-being.*
  - ✓ Whether the impact of Internal and external remittance are different

# Background

- A challenge when estimating the causal impact of migration and remittances on household welfare is self-selection.
- In this study, a matching approach will be applied in order to address the possible self-selection issue. Treatment will in this case be whether the household receives remittances, in order to measure the average treatment effect of the treated.
- The advantage with this approach is that it allows us to compare households that receive remittances with otherwise similar households that do not receive remittances in order to mitigate the self-selection bias.

# Evidence from Micro Data:

*Low or medium skill service sector jobs dominate while only a few professionals are observed*

- a total of five job classifications comprise of more than 41 percent observations, and a total of some other 57 job classifications comprise the remaining 59 percent observations (out of a total of 1,337 observations)
- The five job classifications include firstly, chef, cook, hotel boy and other related categories, secondly, unclassified sales worker, thirdly, unclassified service worker categories, fourthly, house caretaker, cleaner and related categories and fifthly, car driver & conductor, auto and manual works.
- Only a few professionals are present within the list of remittance-sending migrant workers whereas mostly service worker, commonly unskilled or semi-skilled and rarely skilled, are present within the list of remittance-senders.

# Evidence from Micro Data:

*Average remittances from major host countries lower compared to other, non-major host countries*

Country	Number of Observations	Average Remittance Sent (TK.)	Standard Error (TK.)
<b><i>Major Four Country Group (964 Observations)</i></b>			
<b>Major Four Countries</b>	<b>964</b>	<b>127,500</b>	<b>4,095</b>
Saudi Arabia	478	143,121	6,877
U.A.E.	262	106,752	5,928
Malaysia	132	112,197	6,654
Kuwait	92	127,391	12,717
<b><i>Other Countries (373 Observations)</i></b>			
Other Countries	373	157,030	17,031
t-test of mean differences t = 2.37 (with degrees of freedom 1,335); p-value= 0.018			

# Evidence From Micro Data:

*Remittance amount increases with age of the remittance-senders*

<b>Age Group</b>	<b>No. of Observations and Percent of total</b>	<b>Average Remittance Sent (TK.)</b>	<b>Standard Error</b>
<b>Up to 30 years</b>	567 (42.41)	120,900.4	4180.02
<b>Age in between 30 and 40</b>	455 (34.03)	137,053.7	13027.19
<b>Age in between 40 and 50</b>	236 (17.65)	148,540.4	12,890.4
<b>Age above 50 years</b>	79 (5.91)	196,421.5	30,445.8
<b>Total</b>	1,337 (100.00)	135,738.8	5,602

# Evidence From Micro data:

*Educational level matters for remittance amount sent, at least at the SSC level*

<b>Educational Level Attained</b>	<b>No. of Observations and Percent of total</b>	<b>Average Remittance Sent (TK.)</b>	<b>Standard Error</b>
<b>Illiterate</b>	128 (9.57)	139,236	18,256
<b>Class 1 to 5</b>	343 (26.65)	114,401	5,777
<b>Class 6 to SSC/Equivalent</b>	706 (52.80)	138,505	8,460
<b>HSE/Equivalent and Higher</b>	160 (11.97)	166,480	20,584
<b>Total</b>	1,337 (100.00)	135,738.8	5,602



# Methodology and Data

- Remittance-recipient and non-recipient households are likely to differ from each other in many observable and unobservable characteristics that might be correlated with the outcome variables.
- Selectivity issues therefore, complicate studies measuring the impact of remittances.
- Existing studies are mostly non-experimental and do not always use an appropriate method to deal with selection issues.
- Some authors use instrumental variables to overcome this problem; however, it is difficult to determine and test a correct instrument

# Methodology and Data

- In order to address potential bias due to unobserved heterogeneity we use **propensity matching estimators** introduced first by Rosenbaun and Rubin (1983).
- In this type of method each treated observation (remittance-receiving household) is matched to a fixed number of control observations (non-remittance-receiving household) based on a propensity score.
- With this approach we are able to calculate robust estimators in order to determine the effects of remittances on households' poverty levels.
- Basically, this method makes it possible to construct counterfactuals to find out what would happen to a remittance-receiving household's poverty level if the household does not receive remittances.

# Data

- We have used Household Income and expenditure Survey to estimate the impact of remittance on household welfare.
- Variables that used have been used to estimate Propensity score are listed below

✓ Household Head's sex	✓ No of household members	✓ Source of Drinking Water
✓ Household Head's age	✓ Access to electricity	✓ Wall Material
✓ Household Head's education level	✓ Access to mobile	✓ Sanitation type
✓ Household Head's occupation	✓ Land size	✓ Rural/Urban dummy
	✓ Household Usable Space (Sq. feet)	✓ Division Dummies

# Result of Logit Model for PSM

	(1)	(2)	(3)
<b>VARIABLES</b>	<b>Household received any type of remittance</b>	<b>Household received inward remittance</b>	<b>Household received foreign remittance</b>
Household size	0.000235*** (5.79e-05)	0.000130*** (3.85e-05)	0.000160*** (4.81e-05)
mobile	0.662*** (0.0512)	0.153** (0.0598)	1.017*** (0.0776)
telephone	-0.0745 (0.132)	-0.000646 (0.169)	-0.0671 (0.149)
electricity	0.120*** (0.0421)	-0.0962* (0.0547)	0.255*** (0.0523)
Sex of HH head	-1.381*** (0.0441)	-0.785*** (0.0541)	-1.312*** (0.0490)

# Result of Logit Model for PSM

	(1)	(2)	(3)
Age of HH Head	0.0107***	0.0164***	0.00398**
	(0.00134)	(0.00159)	(0.00166)
Education of HH Head	-0.0151***	0.00870	-0.0252***
	(0.00484)	(0.00624)	(0.00569)
Land	0.136***	0.0833***	0.139***
	(0.0150)	(0.0185)	(0.0175)
<b>Wall Materials (Base: Brick)</b>			
Wood	-0.0974*	0.0919	-0.150**
	(0.0520)	(0.0734)	(0.0585)
Mud Brick	-0.188***	0.115	-0.305***
	(0.0690)	(0.0921)	(0.0790)
Bamboo	-0.144**	0.181**	-0.290***
	(0.0668)	(0.0892)	(0.0801)

# Result of Logit Model for PSM

	(1)	(2)	(3)
Chittagong	0.211*** (0.0671)	-0.458*** (0.0822)	0.775*** (0.0934)
Dhaka	-0.191*** (0.0636)	-0.564*** (0.0732)	0.344*** (0.0908)
Khulna	-0.522*** (0.0796)	-0.663*** (0.0926)	-0.0433 (0.110)
Rajshahi	-0.497*** (0.0846)	-0.727*** (0.104)	0.0257 (0.113)
Rangpur	-0.636*** (0.0982)	-0.536*** (0.100)	-0.685*** (0.168)
Sylhet	-0.226*** (0.0870)	-0.933*** (0.133)	0.431*** (0.110)
Constant	-1.885***	-2.417***	-2.606***

# Impact on Per Capita Consumption

		N (treatment )	N (Control)	ATT	t
<b>Internal Remittance</b>	Nearest Neighbor Matching	540	498	95.357	0.656
	Stratification Matching	539	11695	244.483	2.791
	Radius Matching	517	11609	327.426	3.869
<b>External Remittance</b>	Nearest Neighbor Matching	1104	785	500.285	3.943
	Stratification Matching	1104	10611	701.182	6.98
	Radius Matching	995	10421	909.239	10.521

# Impact on Per capita Food Expenditure

		N (treatment )	N (Control)	ATT	t
<b>Internal Remittance</b>	Nearest Neighbor Matching	540	498	119.089	2.158
	Stratification Matching	539	11695	140.245	3.467
	Radius Matching	517	11609	179.054	4.678
<b>External Remittance</b>	Nearest Neighbor Matching	1104	785	191.381	4.165
	Stratification Matching	1104	10611	256.75	6.872
	Radius Matching	995	10421	333.424	9.667



# Impact on Poverty (Upper Poverty Line)

		N (treatment )	N (Control)	ATT	t
<b>Internal Remittance</b>	Nearest Neighbor Matching	540	498	-0.052	-1.956
	Stratification Matching	539	11695	-0.073	-4.078
	Radius Matching	517	11609	-0.09	-4.896
<b>External Remittance</b>	Nearest Neighbor Matching	1104	785	-0.075	-4.056
	Stratification Matching	1104	10611	-0.115	-9.583
	Radius Matching	995	10421	-0.172	-15.9

# Impact on Health Expenditure

		N (treatment )	N (Control)	ATT	t
<b>Internal Remittance</b>	Nearest Neighbor Matching	540	498	1435.387	2.3
	Stratification Matching	539	11695	802.655	1.52
	Radius Matching	517	11609	802.655	1.52
<b>External Remittance</b>	Nearest Neighbor Matching	1104	785	1919.215	1.659
	Stratification Matching	1104	10611	2714.036	3.39
	Radius Matching	995	10421	3086.422	3.776

# Impact on Calorie Intake

		N (treatment )	N (Control)	ATT	t
<b>Internal Remittance</b>	Nearest Neighbor Matching	540	498	108.126	2.789
	Stratification Matching	539	11695	119.501	4.009
	Radius Matching	517	11609	118.35	4.116
<b>External Remittance</b>	Nearest Neighbor Matching	1104	785	-7.395	-0.236
	Stratification Matching	1104	10611	40.916	1.696
	Radius Matching	995	10421	84.11	4.11

# Concluding Remarks

- The results of the empirical exercise tend to support the conclusion that remittances have a positive impact on per capita incomes and, crucially, contribute to a decline in poverty status.
- Our empirical results reveal therefore that appropriate policy to explore more foreign employment and more proficient use of remittances would help the well-being of the households.

# Policy Suggestions

- First, Competition within the banking sector needs to be encouraged to mitigate the high fees charged by financial institutions and harness a greater number of formal remittances.
- Second, in order to capitalize on the untraditional market effectively the government must promote and empower women in the workforce.

# Policy Suggestions

- Third, our study finding echoes the findings of World Bank (2012) such that direct benefits of remittance earning fall disproportionately on the Eastern part of the country, whereas the Western and the Southern part of the country have been largely bypassed.

The government of Bangladesh should proactive measures to increase the number of migrant workers from the Southern and western belt in order to reduce this regional disparity.

# Policy Suggestions

- **Fourth**, the overseas migration in Bangladesh traditionally have been limited to mostly Middle East and only recently in some South-East Asian countries.
- Therefore GOB should take steps to explore new market opportunities not only limited to these ones, but also include other European countries like Federation of Russia, Sweden, Norway, Germany, the Netherlands as well as some South East Asian countries like Brunei, Malaysia, Singapore and Hong Kong.

# Policy Suggestions

- **Fifth**, the amount of illegal migration that still occurs in Bangladesh warrants further attention.
- There should also be increased cooperation between origin countries and countries of destination so that there is a more coordinated and uniform effort in regulation of migration and enforcement of ethical practices and laws.
- **Sixth**, It is also important that institutions introduce new savings instruments as well as further opportunities whereby migrants can channel their remittance funds into productive sectors of the economy (World Bank 2005)



# Policy Suggestions

- **Finally**, while it is clear that remittances improves welfare, it is the households that are better able to afford the initial cost of the overseas migration that benefit the most (World Bank 2007).
- Policy initiatives such as the expansion of social programs in microfinance and skills development, and the lowering of interest rates on pre-departure loan schemes (World Bank 2005) could provide the necessary help for struggling households not yet meeting the initial cost of migration.

Questions

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Answers