

## **International Remittances in Improving Household Economic Well-being: The Case of Sri Lanka**

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### **INTRODUCTION AND RESEARCH PROBLEM**

International labour migration and its socio-economic implications have become an important theme for discussion in Sri Lanka. International remittances, as the main visible benefit of labour migration, have become a vital source of foreign resources of the country. However, it is not clear whether the increase in international remittance flow is reflected at household level. Literature on remittances is mainly based on two phenomena: while many studies focus on motives behind remittances, relatively little attention has been paid to examining the impact of remittances on the economic well-being of households (see Koc and Onan, 2004; Cardona and Medina, 2006; Kibikyo and Ismail, 2012; Waheed and Adebayo, 2012; Adams and Page, 2005). Examining the impact of remittances, studies have found that remittances increase household income and decrease household poverty (see Bracking and Sachikonye, 2008; Kibikyo and Omar, 2012; Waheed and Shittu, 2012; Massey et al.,

1990, 1994; Semyonov, 2004; Stark, 1984; Adams and Page, 2005). Some studies have used household expenditure data to examine remittances and household well-being (see Koc and Onan, 2004; and Cardona and Medina, 2006), and found that the remittances make a significant impact on the economic well-being of households left behind. Studying both micro and macro level impacts of remittances, Arunatilake et al. (2010) show that remittance-receiving households in Sri Lanka spend a comparatively larger amount of money on consumption than other households. Gamburd (1995) shows that remittances sent by many Sri Lankan women migrants help their husbands and fathers to enjoy new social status and improved economic conditions. The importance of remittances in supporting households to move out of poverty was shown by Munas (2008) and De and Ratha (2012). Studying the context of the Western Province in Sri Lanka, Sharma, (2011) found that remittance enhances food and non-food expenditure of the households left behind. Studies such as; Gamburd, 2004; Shaw, 2008; Tidball, 2011 relating to migration and remittances in the Sri Lankan context focus on women migrants and their families left behind. De Prabal and Ratha, 2012 and Arunatilake, 2010 have focused on remittance utilization by households with either male or female labour migrants. Lack of studies on the impact of remittances at household level prevents policy makers from designing appropriate policies related to labour migration. Hence, present study aims to fill this literature gap by examining the impact of international remittances on the economic well-being of the households left behind. The research problem that the study focuses on is “what is the impact of international remittances on the economic well-being of the remittance receiving households in Sri Lanka?”

## **METHODOLOGY**

There is no unique definition for the economic well-being. Different studies have used definitions and measurements. Among these, consumption level, asset accumulation, financial status of the

households is commonly used as measurements or proxy for economic well-being. Following previous works in the field, (namely Cutler and Katz, 1991; Jorgenson, 1998; and Meyer and Sullivan, 2003), economic well-being is defined as; “*enjoying better economic conditions by the households*” and it is measured by using the food and non-food consumption of households. Since education and health are freely available in the country, health and education expenditures are not taken into account as they generate misleading results. In order to adjust the size and composition variations in the households, the oxford scale of adult equivalence is applied. Accordingly, adult equivalence consumption of the households is used to measure economic well-being. The study applied experimental research design and the household is taken as the unit of analysis. Primary data is collected by the survey conducted in the Kalutara District, and the size of the sample is 751 households. This includes 629 with labour migrants and 122 households without. Clustered sampling method is applied to gain a sample with the representation of households from urban, rural and estate sectors. For each cluster households are randomly assigned using a list of labour migrants who migrated in 2012 and the list of electoral registration. The main hypothesis tested in the study is that the international remittances improve the economic well-being of the remittance receiving households.

Propensity score matching method is used to analyze data. Stratified matching technique is applied in the matching procedure since the consumption level of the household represented a significant inequality among the households. Propensity scores are developed by estimating a logit model for remittance receiving status. As Rosenbaum and Rubin (1985) show five blocks as the most suitable strata levels, five strata are used in the study. Replacement ratio of the unit is used as three since the size of the control group is relatively small. Average treatment effects are estimated for each income quintile of the households and compared between remittance receiving and non-receiving households using independent sample t tests. After matching sample size become, 564 remittance receiving and 181 non-remittance receiving households.

## RESULTS AND FINDINGS

The description of variables and descriptive statistics are presented in Table 1, while the estimation results of logit model used to generate propensity scores in Table 2 and average treatment effect of the remittances on the economic well-being of the remittance receiving households in different income quintiles in Table 3 as follows.

Results show that remittances make a significant impact on the households in different income quintiles. Weighted average treatment effect shows the average impact of remittances on remittance receiving households. It shows that economic well-being is higher among remittance receiving households than their non-remittance receiving counterparts. The economic well-being is lower among low income earning households and higher among high income earning households. International remittances have improved economic well-being of low income households by a lower percentage. However, percentage of improvement is higher among high income earning households.

Figure 1 presents percentage change in the average treatment effect on treated, estimated for rural and urban sector households in different income quintiles. Estimations are done by the stratified matching method. Impact of remittances on economic well-being is estimated as the percentage change in the economic well-being of the households in different income quintiles.

In the rural sector it was found that there is a significant improvement in household economic well-being among the households in all income quintiles. However, the size of the improvement varies with the level of income. Improvement is rather lower among poor households and higher among high income earning households.

**Table 1: Description of Variables and Descriptive Statistics**

Variables	Variable Description	Remittance Receivers		Non-Receivers	
		Mean	SD	Mean	SD
WB	Economic well-being, measured by Adult Equivalence Consumption	32819	26815	28521	23805
AGE	Age of Head of the household	44.00	14.64	51.22	14.56
HHS	Size of the household	1.125	0.422	1.206	0.443
GEN	Gender of head of the household	0.592	0.491	0.227	0.421
EDU	Highest education level of head of the household (primary =1)	0.108	0.311	0.111	0.315
CHILD1	Number of children below 5 years	0.273	0.526	0.183	0.454
CHILD2	Number of children between 5 and 15 years	0.608	0.803	0.444	0.678
ADULT	Number of adults in the household	0.211	0.461	0.144	0.368
EMPLD	Number of people employed in the household	1.828	0.874	1.638	1.002
REGI	Availability of regular income	0.561	0.496	0.794	0.405
IREGI	Availability of irregular income	0.281	0.450	0.488	0.501
AST	Asset Index of the household	4.119	1.411	4.144	1.691
RURAL	Household is in rural sector (yes=1)	0.870	0.339	0.90	0.301

**Table 2: Estimated Results of the Logit Model**

Variable Name	Coefficient	Std. Error	Wald Test	Exp(B)
<b>Characteristic/Head</b>				
GEN	1.105**	0.223	24.522	3.02
AGE	-0.019**	0.007	6.330	0.98
EDU	0.555	0.356	2.439	1.74
<b>Characteristics/Household</b>				
HHS	-.908**	0.146	38.595	0.43
CHILD 1	1.04**	0.260	16.073	2.84
CHILD 2	1.00**	0.196	26.153	2.72
ADULT	0.885**	0.168	27.661	2.42
EMPLD	0.530**	0.142	13.970	1.69
REGI	-1.320**	0.262	25.272	0.26
IREGI	-1.122**	0.221	25.784	0.33
AST	0.114	0.071	2.552	1.12
RURAL	0.392*	0.211	3.448	2.13
Constant	0.481	0.654	0.541	
Dependent variable: Remittance receiving status (1=yes; 0=otherwise)				3.016
Percentage Correct	83.6			
N	751			

Source: Estimated by author using survey data in SPSS 21

Note: Confidence levels for significance; \*\*\* <0.01p, \*\* <0.05p, \* <0.1p

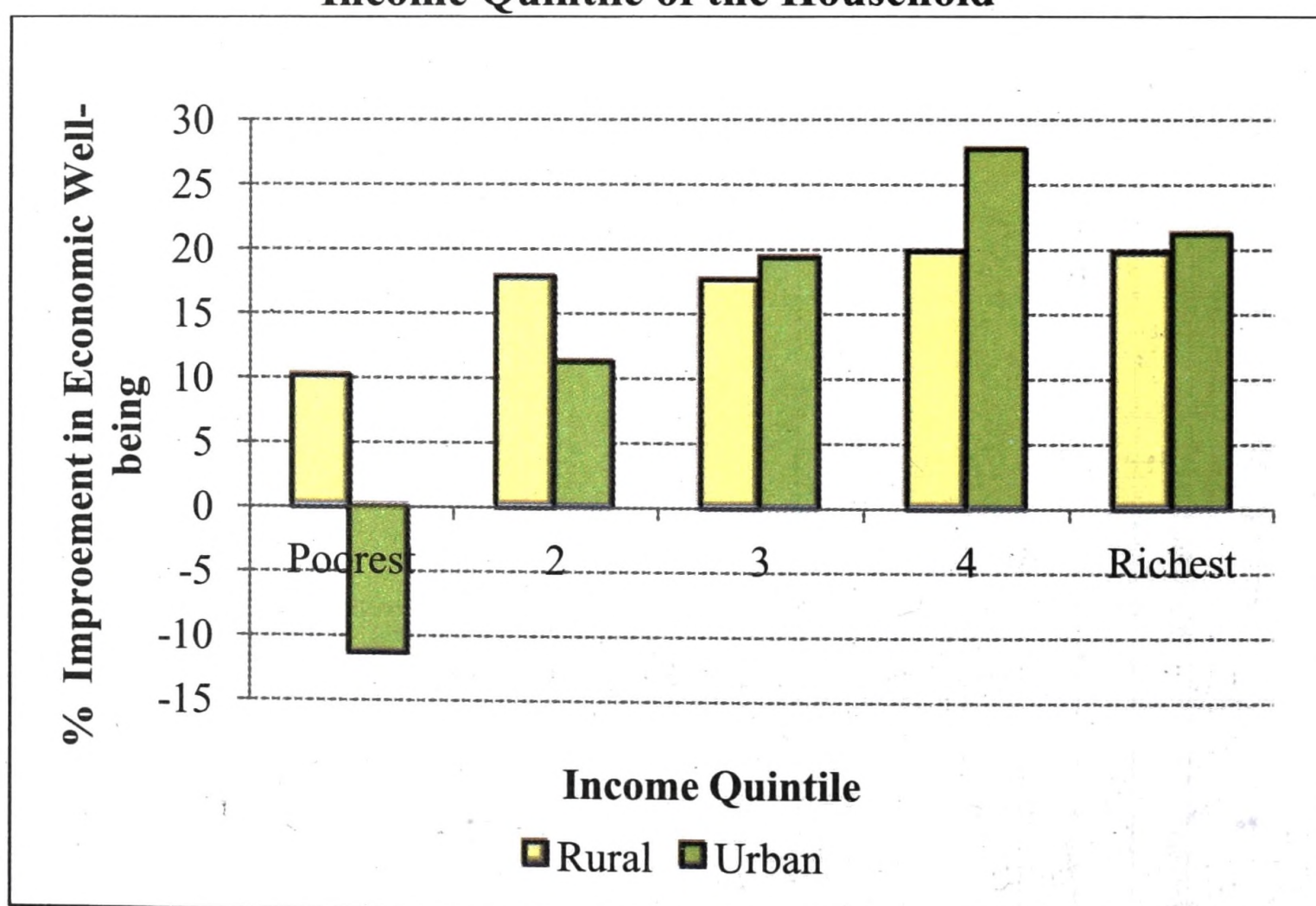
**Table 3: Remittance on Economic Well-being: Average Treatment Effect**

Income Quintile	Weighted Average Treatment Effect (Rs.)	Improvement in the Economic Well-being (%)
Poorest 20%	2454.77*	8.19
2 <sup>nd</sup> 20%	4808.71*	17.19
3 <sup>rd</sup> 20%	4897.94*	17.77
4 <sup>th</sup> 20%	5663.82*	20.61
Richest 20%	5411.31*	19.55

Source: Estimated by authors using survey data in SPSS 21

Note: Confidence levels for significance; \*\*\* <0.01p, \*\* <0.05p, \* <0.1p

**Figure 1: Improvement of Economic Well-being by Sector and Income Quintile of the Household**



Source: Estimated by author using stratified matching analysis and survey data, 2013

On the other hand, remittances have made a negative impact on the economic well-being among the poorest group of households in the urban sector. Their economic well-being is significantly lower than that of their non-remittance receiving counterparts, who are in the same level of household income. Improvement in well-being among lower middle income earners in the urban sector is low, compared to their counterparts in the rural sector. However, well-being improvement through remittances among both high middle income earners and high income earners is significantly higher compared to that in the rural sector.

## **CONCLUSIONS, IMPLICATIONS AND SIGNIFICANCE**

Objective of this study was to examine the impact of international remittances on economic well-being of remittance receiving households in Sri Lanka. Study used primary data collected through a sample survey. Propensity score matching method with stratified matching technique was used to analyze data. It was found that, international remittances make a significant impact on the economic well-being of the remittance receiving households. Improvement in well-being was estimated by weighted average treatment effect of treated, that estimates the impact of the independent variable in the stratified matching method. Results show that improvements in economic well-being vary with the income level of households. While the well-being improvement with remittances is lower among the low income earning households, it is higher among high income earning households. This situation is common to both urban and rural sectors. However, in the urban sector, economic well-being of low income earning remittance receivers is comparatively lower than their non-remittance receiving counterparts. Results are consistent with the findings of previous research done in various country contexts (e.g., Koc and Onan, 2004; Cuong, 2008; Tullao and Rivera, 2008, Taylor et al., 1996).

International labour migration is one of the main sources of employment in Sri Lanka. With a wide variety of socio-economic costs and benefits, remittances are considered the main return, though short term, to the sending country. In a developing country like Sri Lanka, remittances play a vital role at the macroeconomic level. However, relevant literature is rather scanty in the Sri Lankan context, where the role of remittances at household level has not been sufficiently examined. This is one of the first papers to examine the impact of remittances on household well-being in both the Sri Lankan and South Asian contexts. Hence, this study is timely and addresses the existing gap in literature, where previous research on remittance-well-being nexus has not paid sufficient attention to the selection bias generated. This study, taking into account the determinants of remittances and employing propensity score matching method, has controlled the selection bias and produced more accurate results. Stratified matching approach was also used to improve the accuracy of results, which is a step further from similar studies in the field.

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