

IMPACT OF REMITTANCES ON EXPENDITURES AND POVERTY AT HOUSEHOLD LEVEL IN PAKISTAN

REHMAT ULLAH AWAN, FASAHA WAQAR, SHAZIA RAHIM AND FALAK SHER *

Abstract. This study investigates the impact of remittances on level of expenditure and poverty at household level by using nationally representative household survey namely Pakistan Social and Living Standard Measurement survey (PSLM) for the year 2011-12. To handle the issue of potential endogeneity and selectively bias, Propensity Score Matching (PSM) technique is employed. PSM is best to construct counterfactual group to conduct comparison between the groups in which one group receives treatment while other doesn't. Three types of remittances recipient household situations are considered i.e. internal, international and both. Empirical findings unveil that internal and international remittances are used in productive way. At mean, internal remittances reduce the probability of household to fall under the poverty line by 2.6% more than that of non-recipient households. Likewise, an increase in total and per capita annual expenditures of internal remittances recipient household is on average, Rs. 10,242 and Rs. 1695 respectively than that of households who do not receive such remittances. International remittances reduce the probability of household to fall under the poverty line 16.7% and an increase in total and per capita annual expenditures of international remittances recipient household is, on average, Rs. 78,102 and Rs. 17,779, respectively than that of non-recipient households. Considering both types of remittances simultaneously, insubstantial

*The authors are respectively Associate Professor, Graduate Students and Lecturer at Department of Economics, University of Sargodha, Sargodha-Pakistan
Corresponding author e-mail: dr.rehmatullah@uos.edu.pk

and insignificant difference in level of expenditures and poverty status is captured. Thus, international remittances play greater role than internal remittances to bring change in level of expenditure and wellbeing.

Keywords: Remittances, Poverty, Expenditure pattern, Propensity score matching

JEL classification: F24, P46, H76

I. INTRODUCTION

For couple of years, Pakistan has gone through uprising migration phenomenon. Households intended to migrate for better employment and income opportunities to improve the economic status of their families. Migration occurring either within country or outside country alters the consumption behavior of migrant's household and their economic status. Precisely, remittances both internal and international are that money (cash/kind) remitted by the migrants to their families to their native homeland (Adam, 2005). Furthermore, remittances are described as private voluntary monetary and non-monetary transfers made by emigrants to the people or to communities not inevitably in their origin country (Kamuleta, 2014).

Household can put this incremental income into numerous uses such as consumption, savings or investment. Developmental impact of remittances can be assessed through the pattern of use in which they are put, whether productive or non-productive and change in well-being through poverty alleviation.

Growth and developmental impacts of remittances on migrant's origin country are determined through how marginal consumption behavior brings change in well-being. Remittances are associated with following developmental impacts: remittances increase the level of household's expenditures through multiplier effect; enhance and improve access to education and health; boost financial development and help in poverty reduction.

Since 1970, Pakistan is relying largely on remittances to meet its current account deficit, improving balance of payment and decreasing the

level of dependence on external borrowing. Remittances being a biggest source of foreign exchange and having substantial reliance on it. Pakistan often faces fluctuation in its inflow which may disturb various sectors of economy whose functioning is dependent on uninterrupted influx of these transfers. The Millennium Declaration of United Nations (2000) has placed the fight against poverty at the center of development policies. Pakistan committed, like all other signatories of this statement- itself to achieve measurable targets by 2015, among them to combat poverty.

In general, a rich literature on welfare impacts of private transfers highlights their positive effect on the poverty reduction in the counties of origin by increasing household income and smoothing consumption (Acosta *et al.*, 2007). For the given size, stability and countercyclical behavior of remittance in handling external shocks urge policy makers to mobilize remittances to instigate growth and eradicate poverty as well as utilizing remittances to cushion the impact of economic shocks.

Remittances can support these efforts in two ways. First, remittances flow towards the poorest segment of the population and therefore solidly contribute to poverty reduction. Secondly, remittances can also contribute to stir up investment in human and physical capital. Moreover, these contributions enable origin country to achieve higher rates of capital accumulation that is an indicator of country's growth in long run. Hence, remittances improve the integration of countries into the global economy. They play potentially significant role in supporting the development efforts of recipient countries.

This study aims to evaluate the impact of domestic and international remittances separately and then simultaneously on household's total annual expenditures and household's per capita annual expenditures in Pakistan. Furthermore, it also analyzes the impact of domestic and international remittances separately and then jointly on the likelihood of household to be poor in case of Pakistan.

Remainder of study is organized as follows: situation of remittances inflows over the past few decades to Pakistan is given in section 2. Review of empirical literature is presented in section 3. Description of data sources, variables and empirical methodology used in the study is presented in section 4. Section 5 presents empirical results and analysis

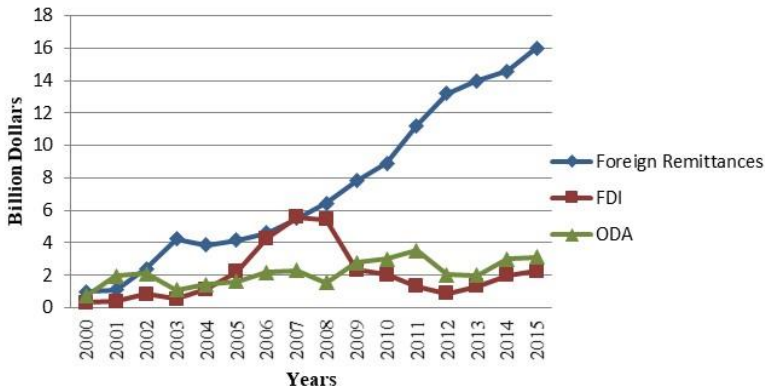
from all estimation techniques. Finally, section 6 is reserved for conclusion and policy recommendations.

II. SITUATION OF REMITTANCES INFLOWS TO PAKISTAN

For a developing country like Pakistan, remittances are considered biggest source of foreign funds. Unlike other sources of capital inflows, remittances are stable and nonrefundable source.

FIGURE 1

Trend of Capital Inflows to Pakistan



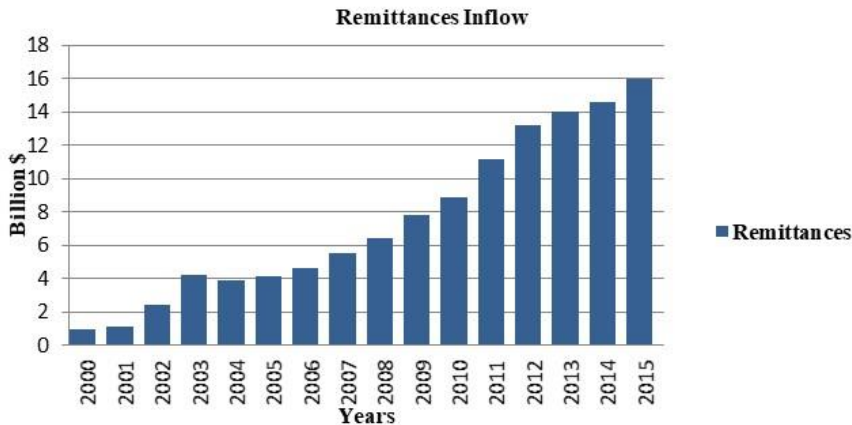
Source: WDI and SBP

Since 1970, Pakistan is enjoying uninterrupted upswing in remittances inflow than other sources of foreign exchange like Official Development Assistance (ODA) and Foreign Direct Investment (FDI). Figure 1 presents trend of different sources of capital inflows to Pakistan. As apparent from figure 1, external sector shows improvement in FY (2014-15) by narrowing current account deficit from 3.1 to 2.6 US billion dollars.

Current fiscal year 2014-15 has gained several major achievements than previous years. One of them is worker's remittances that have touched new heights. Pakistan is ranked at 7th number, in terms of the largest recipient of officially recorded remittances in the world (World Bank's report on Remittances & Migration, 2014). In South Asian region, Pakistan is the second leading beneficiary of remittances right after India. Remittances contribute 5.48% to GDP of Pakistan (World Bank). Figure

2 shows that inflow of remittances has increased steadily in Pakistan from fiscal year 2000-01 to 2014-15.

FIGURE 2
Trend in Remittances Inflow (2000-2015)



Source. World Development Indicators (WDI)

III. LITERATURE REVIEW

Relationship between remittances and household's expenditures and poverty status has been explored empirically by many studies. Bouoiyour and Miftah (2014) investigated the impact of remittances on living standard by using Moroccan Living Standard Measurement Survey (MLSMS) for 2006-07. Estimated average treatment obtained through applying PSM. It is observed that the probability of recipient households to being in poverty declined to 4.5% and 5.5%, respectively and increase in total expenditure per HH by 12167 MAD per year under nearest neighbor matching, considering the whole sample. Later on, breaking of sample into urban-rural sub sample; the findings unveiled the facts that decline in the probability to be under the poverty for rural and urban areas accounted for 11.3 percent and 3 percent, respectively.

Karymshakov et al. (2014) evaluated the potential impact of both types of remittances on poverty in Kyrgyzstan by using household survey for 2011. Two-stage multinomial logit methodology was adopted. They found that international remittances reduced the poverty level by increasing household's expenditure level. Unlike international

remittances, internal remittances reduce household's expenditures, but they still remain above poverty line.

Afridi and Mehmood (2014) analyzed remittances poverty nexus at macro level by using data for the period (1972-2010) obtained from Pakistan Economic Survey (PES) along with Hand Book of Statistics by using PSM technique. They concluded that for remittances recipient households, per capita income increased by 45% as compare to the non-recipients' households. For urban areas, it accounted for higher percentage that is 64%. As far as impact of remittances on poverty is concerned, for entire sample remittances substantially reduced the probability of a household getting under a poverty line by 30%. Higher percentage was recorded in rural areas i.e. 36% as compared to 23% in urban areas.

Dey (2014) evaluated the role of remittances in poverty reduction in rural segment of India by using data of nationwide migration survey conducted by NSSO for year 2007-08 by applying Propensity score matching technique. Remittances recipient households were matched with non-recipients having similar background and then magnitude of poverty was ascertained. Although the role of both types of transfer is important to serve as a tool to reduce incidence of poverty but this study supports the evidence that international remittances have stronger effect than internal remittances to combat poverty.

Petreski and Jovanovic (2013) studied the effect of remittances on poverty and inequality for Macedonia using two household surveys (2008, 2012). Two stage estimation techniques were used and an 'IV' was undertaken to deal the endogeneity and selectivity bias. They concluded that remittances affect the poverty in positive pattern such that on average, each additional euro of remittances reduces the probability of being poor by 27 percent. Further, solely considering the poverty indicates that higher education of head and high dependency ratio increase the probability of falling into poverty. These findings highlight the fact that remittances play a significant role in putting downward pressure on poverty and inequality in consumption.

Adams and Cuecuecha (2013), in case of Ghana, examined the usage of remittances by the households and extent to which they affect poverty by using a nationally representative household survey "Ghana Living

Standards Survey (2005-06)”. Two Stage Multinomial Logit was used. They summed up that on average, international remittances receiving households spent 2.4% and internal remittances receiving spent 1% less at margin on food as compared to the non-recipient households. On average, both internal and international remittances receiving households devoted 1.9% and 3.6% more at margin on education, 3.3% and 5.7% more at margin on housing and 0.8% and 3% more at margin on health, respectively as compared to the non-recipient households. These figures indicate that households spend, at margin, to a greater extent on investment goods in Ghana. They also found that remittances played significant role in poverty alleviation. Internal and international remittances reduced the probability of being poor by 17% and 97%, respectively.

Chukwuone *et al.* (2012) analyzed the remittances influence on poverty in Nigeria by employing two alternate techniques of Multinomial Logit with IV and PSM by employing data of Nigerian National Living Standard Survey (NNLSS) for 2004. PSM results show that on average, per capita household expenditure for remittances recipient vs non recipient households, internal remittances recipient vs. non recipient households are 2800.27 and 7261.71 Naira respectively. On the other hand, international remittances have insignificant impact on poverty that account for 15236.7 Naira. Internal remittances reduce the household’s poverty headcount and poverty gap by 11.14% and 9.7%, respectively. While, international remittances reduce all three poverty measures by 100percent.

Javid *et al.* (2012) assessed at macro level the role of remittances in growth and elimination of poverty. Data for the period 1973-2010 were used along with ARDL technique to achieve the objectives of study. They arrived at conclusion after empirical investigation that remittances inflow had positive and significant role in enhancing growth and alleviating poverty.

Beyene (2011) using the data of Ethiopian Urban Socio-economic Survey (EUSE) for the year 2004 evaluated that how the foreign remittances affect poverty and inequality in urban areas of Ethiopia. Hypothetically computed counterfactual consumption for households without migration and remittances reveal that the poverty head count

declined to 25% against 30% that was before receipt of remittances. Moreover, poverty gap decreased to 5.2% and the poverty severity reduced to 1.7% as compared to 6.6 percent and 2.2 percent before receipt of remittances, respectively. Contrary to this, receipt of remittances raised inequality to 22.5% with negligible magnitude.

Mughal and Diawara (2010) evaluated the relations among remittances, poverty and inequality by undertaking both micro and macro evidences, in case of Pakistan. Analysis at macro level used the data from World Bank, WDI, UNESCO and UNU-WIDER World Income Inequality Database (WIID, 2010) spanning from 1963 to 2006. 2SLS and OLS yielded the results that remittances significantly reduced income inequality and left consumption inequality unaltered due to the fact that it doesn't bring substantial change in consumption pattern. Stronger impact of remittances on poverty was recorded, as opposed to consumption and income inequality.

Adams (2006) investigated the effect of remittances on poverty, in case of Ghana; by using Ghana Living Standards Survey (1998-99). Two-stage Multinomial Logit-OLS technique was used with migration networking as an IV. The study concluded that household's income including international remittances reduced poverty significantly more than that of internal remittances. Expenditure, instead of income was used due to various reasons. Household's expenditures including international remittances caused to reduce poverty severity by 3.8% as opposed to 4.1percent when internal remittances were included.

Esquivel and Huerta-Pineda (2006) analyzed that how remittances play their role in poverty reduction by utilizing the data of Household's Income-Expenditure National Survey (2002) of Mexico. Propensity score matching technique was used which reflected that the likelihood of being food based and capabilities based poor declined to 7.7% and 6.3%, respectively.

IV. DATA AND METHODOLOGY

DATA

The study employed a part of nationally representative household survey namely Pakistan Social and Living Standard Measurement (PSLM)

survey for period 2011-12. This nationwide survey contains information of 15807 respondent households, selected through two-step random stratified sampling technique. PSLM comprises of information about social and demographic characteristics like income, wealth, expenditures categories etc. under various time spans i.e. fortnightly, monthly and annually. But the information about the variable of concern is given for the ‘year’ such as receipt of remittances (internal and international) in last year. This induces to annualize all expenditure to conduct the analysis. As this survey is designed not specifically to collect information on migration and remittances, therefore, it does not provide voluminous information about migrants. To capture change in households’ consumption behavior all types of expenditures are split into two broad categories i.e. consumption (food & non-food) and investment (education, health, housing and others).

METHODOLOGY

To ascertain difference in consumption behavior of remittances recipient (internal, international and both) and non-recipient households require the implementation of PSM. It is best for handling fundamental evaluation problem and addresses occurrence of possible selection bias. Causal effect between treated and control group is given as under:

$$Y_i = Y_i^1 - Y_i^0 \tag{1}$$

where, Y_i^1 = Outcome after treatment

Y_i^0 = Outcome without treatment

The estimated (or average) causal effect can be given as under:

$$E(Y) = E(Y^1 - Y^0) = E(Y^1) - E(Y^0) \tag{2}$$

The expression given in Eq. 2 is also called average treatment effect (ATE) i.e. average difference in outcome between treated and control observations. Propensity score matching (PSM) technique successfully handles potential selectivity bias and computes counterfactual effects. The propensity score is the conditional probability of assignment to a particular treatment given a vector of observed covariates, Rosenbaum and Rubin 1983).

Econometric model is specified to determine average budget and marginal budget share as under:

Let,

Z_j^1 = Budget share of household j on good i in the presence of remittances

Z_j^0 = Budget share of household j on good i in the absence of remittances

Budget share can be written in the form:

$$Z_j = \frac{C_{ij}}{EXP_j} \quad (3)$$

where, C_{ij} reflect the consumption of household j on good i and

Exp_j shows the total annual expenditures of households.

The difference in budget share between remittances recipient and non-recipient households takes the following form:

$$\Delta = Z_j^1 - Z_j^0 \quad (4)$$

Average impact of treatment on treated (ATT) obtained on the basis of given set of covariates can be computed such as:

$$E(\Delta | X, D_j = 1) = E(Z_j^1 - Z_j^0 | X, D_j = 1) = E(Z_j^1 | X, D_j = 1) - E(Z_j^0 | X, D_j = 1) \quad (5)$$

where

$E(Z_j^1 | X, D_j = 1)$ represents average spending behavior of household j who receives remittances and

$E(Z_j^0 | X, D_j = 1)$ represents average spending behavior of household j who does not receive.

Propensity score [$P(X) = (D_j=1|X)$] can be expressed by modifying Eqn.5 as under:

$$ATT = E(\Delta | X, D_j = 1) = E(Z_j^1 | X, D_j = 1) - E(Z_j^0 | X, D_j = 0) \quad (6)$$

Implementation of PSM requires the fulfillment of two assumptions. Firstly, Conditional Independence Assumption (CIA) requires that the outcome of interest is independent of treatment assignment conditional on the propensity score i.e.:

$$Z_j^1, Z_j^0 \perp D_j \quad (7)$$

Secondly, common support or overlap shows that the individuals possessing similar characteristics must have same probability of being recipient of treatment or non-recipient of treatment. i.e.

$$0 < (D_j=1) | X < 1 \quad (8)$$

To get the robust estimates, three different matching algorithms namely Nearest Neighbor (NN) Matching, Caliper Matching and Kernel Matching (KM) are used. First matching algorithm is a sophisticated algorithm that chooses an individual with closest propensity score from comparison group as matching partner for the treated group.

While in second matching method, an individual with closest propensity score lying in caliper is chosen from control group as matching partner for treated group. This empirical analysis is accomplished by setting tolerance level at 0.01. Similarly, last matching method i.e. KM constructs counterfactual outcome by using weighted average from comparison group. Being a non-parametric matching algorithm KM is capable of reducing variance more effectively.

V. RESULTS AND DISCUSSIONS

RESULTS OF PSM

Table 1 portrays the logit results showing the likelihood of household to receive remittances of different types on the basis of selected covariates. The covariates have no behavioral interpretation. In case of proportion of women, the household's probability of getting any kind of remittances rises significantly with the increase of the proportion of women in a household.

TABLE 1
Logit Regression Results for Remittances Receipt

Variables	Internal Remittances Vs. No remittances		International Remittances Vs. No remittances		Internal & international Remittances Vs. No remittances	
	Coef.	z-stat	Coef.	z-stat	Coef.	z-stat
Constant	-3.07	-17.18	-5.14	-20.91	-9.60	-9.53
Household Characteristics:						
Region(Rural=1)	0.60	8.93	0.27	3.37	0.67	1.92
Household size	-0.03	-2.98	0.05	4.10	0.15	4.31
Child dependency	1.08	5.30	1.49	5.76	4.05	3.79
Proportion of Women	2.45	13.72	2.78	12.01	4.23	4.67
Personal Residence	0.003	0.03	0.41	3.38	0.13	0.27
Human Capital:						
Number of household members over age 15 with primary school education	-0.05	-1.25	0.01	0.14	-0.05	-0.27
Number of household members over age 15 with secondary education	0.04	1.35	0.13	4.46	0.04	0.37
Number of household members over age 15 with University education	-0.16	-3.23	-0.02	-0.36	0.17	1.12
Household's Head Characteristics:						
Age_HH	0.02	7.50	0.01	3.40	0.02	2.27
Marital Status_HH	-0.67	-8.43	-0.09	-0.86	-0.75	-1.95
No of Observations	15805		15805		15805	
Pseudo R ²	0.06		0.04		0.09	

Note. Significance level is 0.05

TABLE 2
Internal Remittances versus No remittances

	Nearest Neighbor		Radius Caliper (0.01)		Kernel	
	ATT	t-stat	ATT	t-stat	ATT	t-stat
Poverty	-0.026 (0.018)	-1.41	-0.026 (0.018)	-1.41	-0.042 (0.012)	-3.27
Per capita Annual Expenditures	1695.76 (1556)	1.09	1695.76 (1556)	1.09	1044.08 (1159.08)	0.90
Annual Expenditures	10242.75 (6864.24)	1.49	10242.75 (6864.24)	1.49	-4341.87 (5046.52)	-0.86

Note. Bootstrapped standard errors obtained with 50 replications are shown in parentheses.

Table 2 sheds light on the impact of internal remittances on likelihood of household falling below poverty threshold level of total and

per capita annual expenditure. NN matching shows that on average, the likelihood of falling below poverty line for internal remittances recipient household reduces 2.6% more than that of non-recipient households. Considering per capita annual expenditures, internal remittances recipient household spend on average Rs. 1695.7 more per year than that of non-recipient households. Moreover, in case of total annual expenditures, internal remittances recipient households spend on average Rs. 10242.7 more per year than that of non-recipient households

TABLE 3
International Remittances versus No Remittances

	Nearest Neighbor		Radius Caliper (0.01)		Kernel	
	ATT	t-stat	ATT	t-stat	ATT	t-stat
Poverty	-0.167 (0.021)	-7.97	-0.167 (0.021)	7.97	-0.191 (0.0124)	-15.38
Per capita Annual Expenditures	17779 (2543.24)	7.00	17779 (2543.24)	7.00	18576.25 (2176.00)	8.54
Annual Expenditures	78102.61 (11199.19)	6.97	78102.61 (11199.19)	6.97	88380.87 (9016.19)	9.80

Note. Bootstrapped standard errors obtained with 50 replications are shown in parentheses.

Table 3 shows the results of PSM that reflect the impact of international remittances on likelihood of household falling below poverty threshold level of total and per capita annual expenditure. NN matching shows that on average, the likelihood of falling below poverty line for international remittances recipient household reduces 16.7% more than that of non-recipient households. Considering Per capita annual expenditures international remittances recipient households spend on average, Rs. 17779 more per year than that of non-recipient households. Moreover, in case of total annual expenditures, international remittances recipient households spend on average Rs. 78102.61 more per year that that of non-recipient households.

Table 4 indicates the impact of internal remittances on likelihood of household falling below poverty threshold level of total and per capita annual expenditure. ATT Obtained under NN matching shows that on average, the likelihood of falling below poverty line for internal

remittances recipient household reduces 8.3% more than that of non-recipient households. Considering per capita annual expenditures, remittances recipient households spend on average Rs. 24450.30 more per year than that of non-recipient households when both types of remittances are considered simultaneously. Moreover, in case of total annual expenditures, internal remittances recipient households spend on average, Rs. 143032.80 more per year than that of non-recipient households. Household receiving internal and international remittances jointly shows inconclusive views about its impact on the economy.

TABLE 4

Internal and International Remittances versus No Remittances

	Nearest Neighbor		Radius Caliper (0.01)		Kernel	
	ATT	t-stat	ATT	t-stat	ATT	t-stat
Poverty	-0.083 (0.089)	-0.94	-0.083 (0.089)	-0.94	-0.105 (0.059)	-1.77
Per capita Annual Expenditures	24450.30 (143032.8)	1.56	24450.30 (143032.8)	1.56	23622.40 (14910.03)	1.58
Annual Expenditures	143032.80 (58166.81)	2.46	143032.80 (58166.81)	2.46	161415.3 (54193.73)	2.98

Note. Bootstrapped standard errors obtained with 50 replications are shown in parentheses.

Table 5 presents balancing test results of nearest neighbor matching for all type of remittances received by household. Quality of matching can be assessed through balancing test. Successful matching requires the percentage reduction in bias satisfaction along with the satisfaction of hypothesis that is

H_0 = Means of each covariate remain same between treated and control units after matching.

H_1 = Means of each covariate differ between treated and control units after matching.

It requires that t-stat should be insignificant to not reject null hypothesis. Furthermore, successful matching requires the reduction in bias after matching should be fairly less than 5%. Above table shows that balancing

requirement fulfills for all covariates expect household size and child dependency in case of internal remittances whereas human capital variables along with age give unsuccessful balancing in case of international remittances, where percentage reduction in bias is above 5%. Moreover, analysis of t-test shows that requirement of well balancing requires that mean of covariates after matching should be similar. However, judgment of successful matching can be assessed from insignificant t-test.

TABLE 5
Balancing Test Results Nearest Neighbor (NN) Matching

Internal Remittances				
Covariates	Unmatched Matched	%bias	%age reduction in bias	t-test (prob.)
Region	Unmatched	-26.6	83.7%	-9.30
	Matched	4.3		1.19
HH_size	Unmatched	-19.8	64%	-7.31
	Matched	7.2		1.92
Child dependency	Unmatched	-9.4	28.7%	-3.43
	Matched	6.7		1.75
Proportion of Women	Unmatched	45.8	95.2%	18.67
	Matched	2.2		0.62
HH_mem_primary	Unmatched	-3.1	-26.3%	-1.09
	Matched	3.9		1.04
HH_mem_Secondry	Unmatched	-0.3	-157.5%	-0.10
	Matched	0.7		0.19
HH_member_university	Unmatched	-10.8	69.4 %	-3.61
	Matched	3.3		0.98
Age	Unmatched	24.8	93.7 %	9.61
	Matched	1.6		0.39
Personal_residence	Unmatched	8.1	92.2%	2.83
	Matched	-0.6		-0.17
Marital status_HH	Unmatched	-31.7	99.3%	-13.40
	Matched	0.2		0.05
International Remittances				
Region	Unmatched	-11.1	73.0%	-3.14
	Matched	-3.0		-0.61
HH_size	Unmatched	13.4	97.6%	4.24
	Matched	-0.3		-0.06
Child dependency	Unmatched	-0.5	2.9 %	-0.13
	Matched	0.5		0.09

Proportion of Women	Unmatched	40.5	98.9 %	11.97
	Matched	-0.5		-0.10
HH_mem_primary	Unmatched	6.8	-11.1 %	2.02
	Matched	7.6		1.59
HH_mem_Secondry	Unmatched	22.8	67.4%	6.81
	Matched	-7.4		-1.42
HH_member_university	Unmatched	3.6	-28.7%	1.04
	Matched	-4.6		-0.86
Age	Unmatched	21.1	71.1%	6.50
	Matched	6.1		1.23
Personal_residence	Unmatched	18.6	96.1 %	4.91
	Matched	0.7		0.16
Marital status_HH	Unmatched	-9.0	74.4 %	-2.74
	Matched	2.3		0.45
Internal & International Remittances				
Region	Unmatched	-26.2	100%	-1.78
	Matched	0.0		0.00
HH_size	Unmatched	56.2	60.9 %	4.82
	Matched	22.0		0.48
Child dependency	Unmatched	27.9	69.5%	1.79
	Matched	8.5		0.45
Proportion of Women	Unmatched	50.7	48.9 %	3.49
	Matched	-25.9		-1.05
HH_mem_primary	Unmatched	9.5	42.1 %	0.64
	Matched	5.5		0.28
HH_mem_Secondry	Unmatched	19.1	81.8 %	1.39
	Matched	-3.5		-0.15
HH_member_university	Unmatched	22.2	-37.3%	1.84
	Matched	30.4		1.56
Age	Unmatched	49.2	95.4%	3.84
	Matched	-2.3		-0.10
Personal_residence	Unmatched	16.5	100%	1.08
	Matched	0.0		-0.00
Marital status_HH	Unmatched	-34.0	66.2 %	-2.93
	Matched	11.5		0.48

Source. Author's own calculations.

V. CONCLUSION AND POLICY IMPLICATION

The aim of the study is to assess the impact of remittances on level of expenditures and poverty by using national household data PSLM 2011-12. Empirical results are obtained using Propensity Score Matching (PSM) that handles potential endogeneity and selectivity bias.

Remittances are considered as important strategy to cope with dependence and to motivate the use of this incremental income in productive channel.

Internal remittances play minimal and insignificant role in the improvement of household's welfare status and reducing poverty. Internal remittances recipient households reduce the likelihood of falling below poverty line by 2.6% more than that of non-recipient households. Considering per capita annual expenditures, internal remittances recipient households spend on average Rs. 1695.7 more per year than that of non-recipient households. Moreover, in case of total annual expenditures, internal remittances recipient households spend on average Rs. 10242.7 more per year than that of non-recipient households.

In case of international remittances recipient households reduce the likelihood of falling below poverty line for 16.7% more than that of non-recipient households. Considering per capita annual expenditures international remittances recipient households spend on average, Rs. 17779 more per year than that of non-recipient households. Moreover, in case of total annual expenditures, international remittances recipient households spend on average Rs. 78102.61 more per year than that of non-recipient households

International remittances show highly significant result in all cases which mean that international remittances play crucial and significant role in the improvement of household's welfare status and reducing poverty when it is compared with the results of internal remittances. Considering households receiving both types of remittances simultaneously leads to inconclusive view for those household's spending behavior and change in their welfare status. Results of present study are consistent among all matching criterion and with previous studies (see for example Iqbal, 2013; Bouoiyour & Miftah, 2014; Videla & Machuca, 2014). Based on findings, it is concluded that international remittances have positive impact on the living standards of emigrant families. Most of the emigrant families want to improve their social status as well as the living standards by investing remittances in productive channels.

Present study recommends that the government of Pakistan and other concerned bodies should take measures that attract substantial stock of

remittances into the country and then use those remittances for productive uses. Government should take measures to export labor services in labor scarce countries through providing them technical / professional education and skills so that workers are capable of competing with the labor of other countries in the labor importing countries. Government should facilitate the migrant people to finance migration cost by providing them credit on soft conditions and through establishment of facilitation centres to provide guidance about visas and employment opportunities at low cost. Pakistan is basically labor surplus country therefore, labor friendly policies should be designed to encourage more remittances at international level.

REFERENCES

- Adams, R. (2006). Remittances, poverty and investment in Guatemala. *International Migration, Remittances and the Brain Drain* Washington DC: World Bank,53-80.
- Adams, R. H., & Cuecuecha, A. (2013). The impact of remittances on investment and poverty in Ghana. *World Development*,50, 24-40.
- Bouoiyour, J., & Miftah, A. (2015). The impact of migrant workers' remittances on the living standards of families in Morocco: A propensity score matching approach. *Migration Letters*,12(1), 13-27.
- Beyene, B. M. (2014). The Effects of International Remittances on Poverty and Inequality in Ethiopia. *The Journal of Development Studies*,50(10), 1380-1396.
- Chukwuone, N., Amaechina, E., Enebeli-Uzor, S. E., Iyoko, E., & Okpukpara, B. (2012). Analysis of Impact of Remittance on Poverty in Nigeria. Partnership for Economic Policy Working Paper.
- Dehejia, R.H and Wahba, S. (1999), "Causal Effects in Non-Experimental Studies: Re-Evaluating the Evaluation of Training Programmes", *Journal of the American Statistical Association*, 94, 1053-1062.
- Dey, S. (2014). Impact of remittances on poverty at origin: a study on rural households in India using Covariate Balancing Propensity Score Matching. *Migration and Development*, 1-15.
- Esquivel, G., & Huerta-Pineda, A. (2007). Remittances and poverty in Mexico: A propensity score matching approach. *Integration and Trade Journal*,27, 45-71.
- Faridi, M. Z., & Mehmood, K. A. (2014). Workers' Remittances and Poverty in Pakistan. *Pakistan Journal of Social Sciences (PJSS)*,34(1), 13-27.
- Heckman, J. J., LaLonde, R. J., & Smith, J. A. (1999). The economics and econometrics of active labor market programs. *Handbook of labor economics*, 3, 1865-2097.
- Javid, M., Arif, U., & Qayyum, A. (2012). Impact of remittances on economic growth and poverty. *Academic Research International* Vol, 2.
- Karymshakov, K., Sulaimanova, B., Sultakeev, K., & Abdieva, R. (2016). Remittances impact on youth labour supply: evidence from Kyrgyzstan (No. 2016-05). PEP-PMMA.

- Mughal, M., & Diawar, B. (2010). Impact of Remittances on Inequality and Poverty: Macro and micro-evidence from Pakistan.
- Petreski, M., & Jovanovic, B. (2013). Do Remittances Reduce Poverty and Inequality in the Western Balkans? Evidence from Macedonia.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.
- Rosenbaum, P.R. and Rubin, D.B. (1985), "Constructing a Control Group Using Multivariate Matched Sampling Methods that Incorporate the Propensity Score", *The American Statistician*, 39(1), 33-38
- Rubin, D.B. (1974), "Estimating Causal Effects of Treatments in Randomised and Non-Randomised Studies", *Journal of Educational Psychology*, 66, 688-701.