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Unveiling the Impact of International Migration on the Economic and Subjective Wellbeing of Men and Women in Punjab Pakistan

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Abstract

International remittance inflow is still under debate regarding its effects on the economic and subjective wellbeing of relatives left behind in Pakistan. This study aimed to evaluate the impact of receiving international remittances on the economic and subjective wellbeing of men and women of the same household in the most populous province, Punjab, of Pakistan. The study makes efficient use of the latest multiple indicator cluster survey (MICS) dataset for Punjab Pakistan, whose hierarchal structure allows us to use the multi-level mixed effects logistic regression for evaluating these impacts at an individual and community levels. The ladder scale of life satisfaction was used in generating a dependent binary variable to represent subjective wellbeing, while wealth score was used for economic wellbeing. After controlling for various socio-economic characteristics at individual and household levels, our findings presented that the women who received remittances were 1.1 times more likely to report high levels of subjective wellbeing, however, this relationship tested insignificant for the men. For women the wealth score improved by 1 score if they reported to receive remittances and for men this figure was 0.1scores. Government should encourage inflow of international remittances as they promote wellbeing for people at all ages according to goal 3 of Sustainable Development Goal (SDG).

Key Words: Subjective Wellbeing, Remittances, Gender, MICS, Punjab, Pakistan

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1. INTRODUCTION

In the world that we live in today where globalization and labor mobility is much higher than it was ever before, the impact of international remittances (IRs) on the lives of people and communities has gone beyond the spectrum of their economic wellbeing (EWB) and has thus brought their subjective wellbeing (SWB) into the mix as well. IRs originate or occur through the phenomena known as migration or more specifically labor migration. Most

cases concerning migration involve people moving from rural areas to more urban settlements (Stark, 1984) or from less developed/developing nations such as Pakistan and India to highly developed nations such as the USA and UK (Hanson, 2010). It is important to note here that international migration has only been on the rise in the last few decades. The proportion of immigrants in Northern America has risen from 9.9% in 1990 to 16% in 2019. (United Nations, 2019)

Economic wellbeing (EWB) is a multidimensional concept that includes various economic indicators that are largely monetary. In brief, it's a term used to describe one's sense of financial security based on access to economic resources, and employment opportunities that are necessary to sustain future expenditures. Wealth, the primary indicator of a nation's economic wellbeing, is largely assessed through GDP or GNI. Alternative wealth measures such as wealth scores are far more appropriate for such analyses and offer a clearer picture of the sense of financial security felt at the individual level. (Kennedy et al., 2006).

To measure one's life satisfaction or subjective wellbeing (SWB), researchers primarily make use of self-report surveys and questionnaires (Thomas et al., 2018). One question included in these surveys is a self-report-scale, in which participants of the study are asked to place themselves on a hypothetical scale measuring their happiness at any given moment, or their overall satisfaction with life. The 0-10 scale, most commonly associated with the Cantril-ladder—in which each scale is visually expressed as a step in a ladder—is amongst the most commonly applied in SWB studies and is also the one used in this study and one by Ivlevs et al. (2019).

In the case of Pakistan, the received remittances have been on the rise for many decades now. They have increased from US $2.048 billion in 1980 to $22.245 billion in 2019. Similarly, the GDP per capita in the country has risen from the US $303 in 1980 to $1,248 in 2019 (World Bank, 2020). Both statistics show that rising remittances over the years are going hand in hand with the rising wealth and economic stability of the population. However, policy makers are still confused about whether to encourage them or not. Therefore, this study aims to find the impact of these IRs on the EWB and SWB of men and women separately in Punjab Pakistan. A gendered view of both types of wellbeing with regards to remittances has not been done before, as EWB and SWB have combined in the same paper for the first time

Our paper also contributes to the existing literature by conducting a two-level analysis, one at the individual level and one at the community level

while controlling for various socio-economic and household characteristics. Single level studies with regards to wellbeing and remittances are in abundance but this study will be the first of its kind. For this very purpose this study takes advantage of the hierarchical structure of the MICS 17-18 latest data set from Punjab and applies the multi-level mixed effects logistic regression for the analysis.

2. METHODOLOGY

2.1. Data Source

The study at hand is currently based on the data sets from the Multiple Indicator Cluster Survey (MICS) 2017-18 for Punjab province of Pakistan. A multi-stage stratified cluster sampling method was adopted for the collection of the data. The survey was conducted from 2017 till early 2018 and covered, a total of 51,660 households. Out of these households, 74,010 women and 27,097 men (both aged 15-49 years) were successfully interviewed. For the community analysis, the sample of households was divided into clusters of 20 each and thus 2,692 clusters were formed with 1,893 rural-based and 799 urban-based.

2.2. Variables of the Study

2.2.1. Dependent Variables

Since our study has considered both EWB and SWB we have formed dependent variables for each of them separately. For the SWB we constructed a binary variable from the Cantril-ladder scale of life satisfaction where people were asked to place their life satisfaction on a scale from 0 to 10. The score of 5 and above was denoted by 1 (high satisfaction) and below 5 was denoted by 0 (low satisfaction). However, we chose a continuous variable for the EWB in the form of the individual wealth score as provided by the MICS 2017-18 dataset. This variable was also used in papers by Ivlevs et al. (2019) and Sulemana et al. (2019).

2.2.2. Independent Variables

At the individual level for all models, we picked several socio-economic variables that we believed could have confounding effects on the SWB and EWB. This included age of each individual along with binary variables for their marital status, level of education, health insurance, discrimination on the lines of gender, discrimination on the lines of

race/ethnicity and their safety levels which were represented by how safe they feel to go out in the neighborhood after night. Aside from age, all these variables were made in the form of binary variables with their results being in the form of 0 and 1.

The household characteristics included for our main independent variable and the most important variable in this whole study is the international remittances (IRs) for which we used the variable from the MICS dataset that stated whether the household receives remittances or not. For this, we formed a binary variable where 1 was denoted where the individuals in the households did receive remittances in the last year and 0 for the ones who did not. Papers which also used remittances as their main independent variable included those by Semyonov and Gorodzeisky (2008), Cohen (2011) and Henry (2013). We made dummy variables for the other household characteristics as well which include family size, donations, the wealth quintiles were also added for which we made 2 separate variables one represented the households which fell into the elite or high wealth class and one represented the households that were part of the middle-income wealth class, the poor wealth class was added to the control variables.

The community level variables we chose was the type of community the individual lived in rural or urban, community higher education (if 60% or more individuals in the community had higher education), along the 9 divisions of Punjab (Bahawalpur, DG Khan, Faisalabad, Gujranwala, Lahore, Multan, Rawalpindi, Sahiwal) and Sargodha was added to control list.

2.3.3. Multi-level Multivariate Regression Analysis

The structure of the MICS data is hierarchical which means that the individuals are present within the households and the households are further present within communities. Therefore, it is believed that multi-level models are best to use in a hierarchical dataset such as the MICS which considers the absence of independence among observations in different clusters (Kamanda et al., 2016). Due to this, we used the two-level Mixed-effects logistic regression model to better estimate the impact of individual, household (especially remittances), and community factors on their subjective and economic wellbeing.

We fitted four models for our analysis. In the first model, the SWB of women has been chosen as the dependent variable and her characteristics along with the individual, household, and community characteristics discussed above have been chosen as the independent variables. The second model has chosen

the economic well-being of women as the dependent variable with the same independent variables as the first model. The third model and fourth model are identical to the first and second respectively and are for the men.

Our data was fitted mainly into the two-level model as shown below

$$\log\left(\frac{\pi_{ij}}{1-\pi_{ij}}\right) = \beta_0 + \beta_1 I_{1ij} + \beta_2 I_{2ij} + \cdots + \beta_k I_{kij} + \alpha_1 H_{1ij} + \alpha_2 H_{2ij} + \cdots + \alpha_L H_{Lij} + \gamma_1 CC_{1ij} + \gamma_2 CC_{2ij} + \cdots + \gamma_m CC_{mij} \quad \ldots (1)$$

$$\beta_{oij} = \beta_o + v_{ok} + e_{oij} \quad \ldots (2)$$

Where
Individual-level variables (Women or Men): $I_1, I_2, \ldots, I_k$
Household-level variables: $H_1, H_2, \ldots, H_L$
Community-level variables: $CC_1, CC_2, \ldots, CC_m$

3. RESULTS AND DISCUSSIONS

3.1. Results for International Remittances and Subjective Wellbeing of Women

When we look at the table, we can see in the case of the women in the households who receive international remittances, there are higher odds of reporting increased SWB by 1.1times (OR=1.105) compared to those who did not showing that the IRs and SWB of women share a significant (at 0.01 or 1%) and positive link with each other. These results are consistent with previous research such as (Anderson, 2014) and (Sulemana et al., 2019); these studies also tested similar positive relationship between the two variables in question.

3.2. Results for International Remittances and Economic Wellbeing of Women

Our IRs variable was found to be significant at the 1% level and appears to share a positive relationship with the EWB as if the woman is receiving remittances from outside the country her EWB will rise by 1 score. There is an abundance of studies that support this finding and establish positive significant links between IRs and EWB such as (Rapoport, 2004) and (McKay and Deshingkar, 2014). Belonging to the rich quintile raised the wealth score of women more than those in the middle wealth quintile.

3.3. Results for International Remittances and SWB of Men

In the case of the men in the households who receive international remittances, there are higher odds of reporting increased SWB, but this variable was insignificant at all levels meaning that IRs had no real impact on the SWB of men (OR=1.067). This may be because some studies show that men are not the ones who benefit from IRs as they are usually earning themselves and sending the money back to their wives, children, and parents which also explains lower male immigrant life satisfaction (De Jong et al., 2002). Men in the rich wealth quintile had better chances of reporting high SWB than those in the middle wealth quintile. This result shows that higher wealth leads to enhanced life satisfaction (Carbionell, 2005).

Table 1. Results for IRs with SWB and EWB of Women

Women's Characteristics	Model 1 SWB dependent (Odds Ratio)	Empty model 1	Model 2 EWB dependent	Empty model 2
Individual characteristics Age	0.979*** (0.001)		0.002*** (0.000)	
Education Level	1.390*** (0.031)		0.197*** (0.004)	
Marital Status	1.127*** (0.029)		0.006** (0.004)	
Safety of going out in neighborhood after dark	1.056 (0.020)		-0.005*** (0.003)	
Gender discrimination	0.545*** (0.028)		- 0.037*** (0.008)	
Racial discrimination	0.606*** (0.033)		- 0.079*** (0.009)	
Health insurance	1.231*** (0.068)		0.069*** (0.008)	
Household characteristics				
Number of household members (No.)	1.027*** (0.003)		0.009*** (0.000)	
International Remittances	1.105*** (0.037)		1.003*** (0.005)	
Wealth quintiles Poor Middle Rich	- 1.643*** (0.043) 2.426*** (0.075)		- 0.760*** (0.004) 1.439*** (0.005)	
Donations	0.728*** (0.037)		- 0.030* (0.008)	
Community Characteristics				

Place of Residence Rural or Urban	0.791*** (0.030)		0.270** (0.010)	
Community Higher education	1.512** (0.250)		0.633*** (0.034)	
Divisions				
Bahawalpur	1.451*** (0.102)		-0.046*** (0.193)	
DG Khan	1.827** (0.131)		- 0.257* (0.019)	
Faisalabad	1.196*** (0.077)		0.085*** (0.018)	
Gujranwala	2.127*** (0.133)-		0.182*** (0.017)	
Lahore	1.786*** (0.118)		0.194*** (0.018)	
Multan	1.050 (0.068)		0.080*** (0.018)	
Rawalpindi	1.352*** (0.089)		0.249*** (0.018)	
Sahiwal	0.581*** (0.044)		0.077*** (0.021)	
Sargodha	-		-	
Random Effects	For model 1 (SWB)	Empty model 1	For model 2 (EWB)	Empty model 2
Cluster-level OR	0.420	0.636	0.042	0.609
Cluster variance (SE)	0.019	0.048	0.001	0.017
Chi-square test	3613.36	0	149461.97	0
Residual intra-cluster correlation (ICC)	0.113	0.162	0.248	0.648
ICC (SE)	0.004	0.005	0.006	0.006

***, **, * Significant at the 1%, 5% and 10% level, respectively.
Note: Odds Ratios with 95% confidence intervals are shown with standard errors in parenthesis. Data Source: Multiple Indicator Cluster Survey 2017-18.

3.4. Results for International Remittances and EWB of Men

Our main IR variable was tested to be significant at the 1% level and has been found to be positively related with the EWB. Men receiving remittances from outside the country have EWB increased by 0.1 scores (0.092). National policies should be formed in a way that supports the inflow of international remittances as they promote individual and household economic wellbeing (Hass, 2007) and reduce the severity of poverty in many nations (Adams, 2004). Belonging to the rich quintile raised the wealth score of men more than those in the middle wealth quintile (Wolff and Zacharias, 2007).

Table 2. Results for IRs with the SWB and EWB of Men

Men's Characteristics	Model 3 SWB dependent	Empty model 3	Model 4 EWB dependent	Empty model 4
Individual characteristics	0.942***	-	0.003*	
Age	(0.01)	-	(0.002)	
Education Status	1.414***	-	0.205***	
	(0.060)		(0.006)	
Marital Status	1.158**	-	0.002	
	(0.051)		(0.006)	
Safety of going out in neighborhood after dark	2.081	-	0.034***	
	(0.126)		(0.009)	
Gender discrimination	0.937	-	- 0.062***	
	(0.129)		(0.020)	
Racial discrimination	0.536***	-	- 0.083***	
	(0.047)		(0.014)	
Health insurance	1.487***	-	0.077***	
	(0.134)		(0.012)	
Household characteristics				
umber of household members	1.023***	-	0.007***	
(No.)	(0.005)		(0.001)	
International Remittances	1.067	-	0.092***	
	(0.067)		(0.009)	
Wealth quintiles	-	-	-	
Poor	1.491***	-	0.794***	
Middle	(0.067)	-	(0.007)	
	2.122***	-	1.504***	
Rich	(0.110)	-	(0.008)	
Donations	0.850*	-	0.008	
	(0.078)	-	(0.014)	
Community Characteristics				
Place of Residence Rural or	0.883**	-	0.258***	
Urban	(0.053)		(0.011)	
Community Higher education	1.292*	-	0.361***	
	(0.175)		(0.025)	
Divisions		-		
Bahawalpur	1.988***	-	-0.044*	
	(0.226)	-	(0.022)	
DG Khan	0.805*	-	- 0.230***	
	(0.091)	-	(0.023)	
Faisalabad	2.062***	-	0.129***	
	(0.212)	-	(0.020)	
Gujranwala	2.387***	-	0.205***	
	(0.240)	-	(0.019)	
Lahore	1.889***	-	0.226***	
	(0.196)	-	(0.020)	
Multan	1.436***	-	0.085***	

	(0.150)	-	(0.021)	
Rawalpindi	1.671***	-	0.260***	
	(0.180)	-	(0.021)	
Sahiwal	2.126***	-	0.114***	
	(0.044)	-	(0.024)	
Sargodha	-	-	-	
Random Effects				
Cluster-level OR	0.901	1.102	0.046	0.621
Cluster variance (SE)	0.049	0.055	0.002	0.018
Chi-square test	1043.01	0	66697.42	0
Residual intra-cluster correlation	0.215	0.251	0.278	0.661
(ICC)	0.009	0.009	0.008	0.007
ICC (SE)				

***, **, * Significant at the 1%, 5% and 10% level, respectively.
Note: Odds Ratios with 95% confidence intervals are shown with standard errors in parenthesis. Data Source: Multiple Indicator Cluster Survey 2017-18.

4. CONCLUSION AND POLICY RECOMMENDATIONS

The argument surrounding IRs has always been controversial as researchers have never truly been able to come to a consensus regarding its relationship with SWB and EWB. The reason for this is because many have believed that the process of international migration causes skilled workforce to leave their home countries to fulfil their future aspirations or to find better work opportunities. This is termed as brain drain, which as a result leaves the home country with a less skilled workforce causing its production and efficiency levels to fall greatly. However, our results show that the inflow of remittances has greatly improved not only the economic conditions of economies and households but also aided in increasing their overall life satisfaction. Punjab is Pakistan's most populated province and thus also sees higher rates of international migration which is the reason it was selected for our analysis.

Using the multi-indicator cluster surveys 2017-18 (MICS 17-18) we applied multilevel mixed-effects logistic regression (non-logistic for the EWB models) for men and women separately and found the IRs were positively affecting the SWB of women in Punjab. This was not true for the men as no significant relationship was tested as men's SWB does not rise much as in majority they are the ones who are sending the remittances not receiving them, unlike the women. The IRs had a positive and significant relationship with the EWB of men and women both which helped us deduce that rising IRs were leading to economic and financial stability for the men and women in Punjab.

4.1. Policy Recommendations

The SWB and EWB of men and women in the Punjab province of Pakistan remain an issue yet to be solved. Through this study, we found that the increased inflow of remittances was leading to improvements in the levels of SWB and EWB of the people. Therefore, this study encourages the relevant policymakers to make decisions in a form that enhances the SWB and EWB among the people and the communities further. For this reason, we recommend designing their policies in the following ways:

1- Easing the process/red tape for its potential migrant workers to leave and work in foreign countries. According to the World Bank statistics Pakistan received a boost in the remittance levels in 2020 by 23%. Considering they represent 8% of the entire GDP it is very important to make sure that their inflows remain stable.
2- Promoting channels that deal with the inflow of remittances through specially designed departments and systems in various financial institutions
3- According to SDG 3 of the United Nations all members of economy deserve higher wellbeing so for the men who are less satisfied working outside the country, special incentives and tax reductions can be provided to encourage higher remittances.
4- Creating awareness and educating the public about the opportunities they can have in foreign countries to earn a better living for themselves and their families (either through nationwide workshops or awareness campaigns).

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