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NAVIGATING POVERTY: THE ROLE OF INTERNAL MIGRATION AND REMITTANCES IN PAKISTAN

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ABSTRACT

Internal migration and remittance inflows play a critical role in shaping the socio-economic dynamics of households, particularly in developing countries like Pakistan. Understanding the factors driving migration and the subsequent impact of remittances on poverty is essential to designing policies that effectively address poverty and improve living standards for vulnerable populations. This study investigates the factors influencing the incidence of internal migration and compares poverty levels between households that receive internal remittances and those that do not. Additionally, it assesses the impact of remittance inflows on the poverty status of recipient households. The research utilizes data from the Pakistan Social and Living Standards Measurement–Household Integrated Economic Survey (PSLM – HIES 2018-2019). A logistic regression model was employed due to the binary nature of the dependent variables. The regression analysis identified various demographic factors of household heads and household characteristics that impact the incidence of internal migration. The analysis shows that households receiving internal remittances are less likely to be in poverty compared to those who do not receive remittances. The empirical analysis reveals a significant inverse relationship between the amount of monthly remittances received and the probability of household poverty. It also shows that remittances equivalent to the minimum wage can reduce the poverty incidence to below forty percent. The insights from this study are vital for the formulation of targeted social and economic policies aimed at harnessing the potential benefits of remittances in mitigating poverty among migrant-sending communities.

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INTRODUCTION

Labour mobility across various regional, state, and national borders has increased significantly in recent years. In Pakistan, internal migration greatly surpasses international migration, impacting demographic and economic trends significantly. Data from the Labour Force Survey (2021) indicates that the internal migrant population is approximately four times larger than that of international migrants, underscoring the extent of domestic migration. International Organization for Migration (IOM, 2019) reveals that about 13% of the Pakistani population are internal migrants, driven by factors such as economic opportunities, urbanization, and regional development disparities (Bloom et al., 2008). The distribution of intra-provincial migration varies significantly by region: Punjab leads with 66.9%, followed by Sindh at 18.8%, Khyber Pakhtunkhwa at 12.5%, and Balochistan at 1.7%. These figures reflect the varying economic opportunities and living conditions across provinces. Additionally, the movement from rural to urban areas signifies not only a quest for better living conditions but also ongoing economic transformations, making urban centers hubs of economic activity and attracting populations from less developed regions (Barrett et al., 2017).

Additionally, it is important to consider the reasons behind these migration trends. Data suggest that marriage accounts for 38.2% of migration instances, while relocation with parents represents 19.8%, pointing to familial and social factors as primary motivators. In contrast, economic factors such as job searching (6.5%), job acquisition (4.3%), and job transfers (1.1%) also play crucial roles, albeit to a lesser extent. These figures indicate that while economic motivations are significant, social and familial reasons are predominant drivers of internal migration in Pakistan. Consequently, many individuals migrate internally in search of better job prospects, higher wages, and overall improved economic conditions (Morrison & Clark, 2011). This is particularly common from rural to urban areas, where industrial and service sectors might offer more employment opportunities.

Push and pull factors play a crucial role in internal migration, influencing individuals to relocate within a country. Push factors such as economic disadvantage, poor living conditions, deficiencies in education and healthcare, safety concerns, and environmental challenges compel people to leave their current locations (Deshingkar & Grimm, 2004; Crisp et al., 2012; Hove et al., 2013; Nkechi et al., 2012). Additionally, factors such as lack of job opportunities, high crime rates, and the impact of natural disasters also serve as push factors (Castelli, 2018; Czaika & Reinprecht, 2022). Conversely, pull factors attract migrants to new areas offering better job prospects, higher education opportunities, superior healthcare, improved living standards, and proximity to family or cultural communities (Skeldon, 2006;

Van Hear et al., 2020; Mazzarol & Soutar, 2002). These motivations collectively shape migration patterns, aiding policymakers in developing strategies to manage and benefit from migration's socio-economic impacts.

Internal remittances, a critical outcome of internal migration, play pivotal roles in the economic landscapes of households. Migrants obtaining better employment opportunities fundamentally shapes the dynamics of economic stability and household poverty. By remitting a substantial portion of their earnings back to their origin families, these migrants directly affect the economic health of the households. Given the context of internal remittances and poverty, the existing literature has extensively examined the impact of external remittances on poverty. For instance, Shair and Anwar (2023) assessed the influence of external and internal remittances on household expenditure inequality, while Shair and Majeed (2020), along with several subsequent studies by Shair et al. (2023a; 2023b; 2024), explored the impact of external remittances on labour market outcomes. Additionally, Ahmad et al. (2024) examined the impact of external remittances on food insecurity. However, the impact of internal remittances on household-level outcomes is scant in existing literature. Despite the breadth of research, a comprehensive analysis of the developmental impact of internal remittances at the household level, particularly concerning poverty, remains elusive.

This research aims to explore the determinants of internal migration. Additionally, it seeks to compare poverty levels between households receiving internal remittances and those that do not. The third objective of this study is to assess the impact of internal remittance inflows on poverty alleviation among recipient households. The findings of the study have important implications related to how internal migration and remittances contribute to poverty alleviation, offering valuable information for policymakers to devise more effective social and economic interventions.

METHODOLOGY

The first objective of this study is to identify the determinants of receiving internal remittances. For this purpose, the dependent variable is defined as a binary indicator, where it is coded as '1' if a household has an internal migrant and '0' otherwise. Given the binary nature of the dependent variable, the logistic regression model is deemed appropriate. The equation to be used for the first objective is specified as follows:

$$Migrant_i = \alpha_0 + \alpha_1 \text{Male\_head}_i + \alpha_2 \text{Head\_age}_i + \alpha_3 \text{Head\_married}_i + \alpha_4 \text{Head\_Labour\_participation}_i + \alpha_5 \text{Urban}_i + \alpha_6 Province_i + \alpha_7 \text{Pension\_receipt}_i + \alpha_8 \text{Dependency\_ratio}_i + U_i \quad (1)$$

In the specified model, migration serves as the dependent variable, influenced by covariates including the demographic characteristics of the household head and other household demographics. The variables used in Equation 1 are detailed in Table 1.

As the second objective of our research, we aim to compare poverty levels between households that receive internal remittances and those that do not. To achieve this, we adapted Equation 1 by substituting the dependent variable with the incidence of poverty, where a household is designated as poor (coded as 1) or not poor (coded as 0). Given the binary nature of the dependent variable, a logistic regression model is appropriate for comparing poverty incidence between the two groups while controlling for additional covariates. The revised equation for this objective is presented below:

$$Poor_i = \beta_0 + \beta_1 \text{Internal\_remittance\_receipt}_i + \beta_2 \text{Male\_head}_i + \beta_3 \text{Head\_age}_i + \beta_4 \text{Head\_married}_i + \beta_5 \text{Head\_Labour\_participation}_i + \beta_6 \text{Urban}_i + \beta_7 Province_i + \beta_8 \text{Pension\_receipt}_i + \beta_9 \text{Dependency\_ratio}_i + U_i \quad (2)$$

The third objective of this research is to assess the differential effects of internal remittance flows on poverty among households that receive internal remittances. To achieve this, we have adjusted Equation 2 to incorporate the key variable as well as specified covariates. Given that the dependent variable, poverty, is binary, we will employ a logistic regression model. This model will allow us to estimate the differential effects of internal remittance inflows on the incidence of poverty in remittance-receiving households, controlling for other covariates. The revised equation for this objective is presented as follows:

$$Poor_i = \gamma_0 + \gamma_1 \text{Ln(Internal\_remittance\_inflow)}_i + \gamma_2 \text{Male\_head}_i + \gamma_3 \text{Head\_age}_i + \gamma_4 \text{Head\_married}_i + \gamma_5 \text{Head\_Labour\_participation}_i + \gamma_6 \text{Urban}_i + \gamma_7 Province_i + \gamma_8 \text{Pension\_receipt}_i + \gamma_9 \text{Dependency\_ratio}_i + \gamma_{10} Ln(\text{Non} - \text{remittance\_incoem})_i + U_i \quad (3)$$

Table 1. Definition of variables

Variables	Description
Dependent variables:	
Migrant	Dichotomous variable coded 1 if household has internal migrant, zero otherwise.
Poor	Dichotomous variable assigned a value of 1 to households classified as poor, and 0 otherwise. A household is classified as poor if its daily per capita expenditure is less than one dollar, based on an exchange rate of 130 PKR per USD.
Key variables:	
Internal remittances recipient	Dichotomous variable, coded 1 if a household receives internal remittances, zero otherwise.
Internal remittances inflow monthly	A continuous variable represents the total monthly internal remittances received by a household.
Covariates:	
Household head's demographics:	
Male head	Dichotomous variable coded 1 if household's head is male, zero otherwise.
Head Age	The variable is continuous and denotes the age of the household head, measured in years.
Head Married	Dichotomous variable coded 1 if household's head is married, zero otherwise.
Labour participation	Dichotomous variable coded 1 if the household head participates in labor, and 0 otherwise.
Household demographics:	
Urban	A binary variable, coded as 1 if the household is located in an urban area, and 0 otherwise.
Province	A multinomial categorical variable consists of the four provinces of Pakistan, namely: Balochistan, KPK, Punjab Sindh.
Dependency ratio	The variable is a ratio that represents the number of dependents in the household relative to the total household size. Dependents are defined as individuals either below the age of 16 or above the age of 64.

Pension receipt	Dichotomous variable with a value of 1 indicating that the household receives remittances, and 0 if it does not.
Non-remittances income	The variable is continuous and represents the monthly income from non-remittance sources received by households that receive remittances.

Data and Descriptive analysis

Data Source

The research employs data from the Pakistan Social and Living Standards Measurement–Household Integrated Economic Survey (PSLM – HIES 2018-2019), available on the Pakistan Bureau of Statistics (PBS) website. The survey covers 24,809 households across Pakistan's four provinces. However, in this study, after excluding households receiving external remittances, the sample size narrowed to 23,105, with 2,537 households receiving internal remittances and 20,568 not receiving any.

Descriptive analysis

The descriptive statistics of the variables used in the study have been presented in Table 2. The descriptive statistics of the categorical variables are also presented in Figure 1. The data indicates differences in demographic and economic characteristics between households receiving internal remittances and those that do not. In the study "Whole sample" consists of 23,105 households, the "Remittance receiving sample" includes 2,537 households, and the "Non-receiving sample" comprises 20,568 households. On average, 47.12% of the whole sample is classified as poor, slightly higher than the 45.84% in the remittance-receiving sample and marginally lower than the 47.27% in the non-receiving sample. This suggests that receiving remittances might be associated with a slightly better economic status, potentially due to the additional income from remittances. Approximately 10.98% of the whole sample receives internal remittances, with no corresponding data shown for the specific samples. The average monthly internal remittance amount for the remittance-receiving sample is 15,725.97 PKR which is less than the median minimum wage in Pakistan 16,350PKR. About 90.56% of the whole sample has a male head of household, but this proportion drops significantly to 56.84% in the remittance-receiving sample and rises to 97.17% in the non-receiving sample. The average age of the head of household is 45.87 years across the whole sample, older in the remittance-receiving households at 48.29 years, and younger in the non-receiving households at 45.24 years. Most heads of households are married, with 90.53% in the whole sample, 81.67% in the remittance-receiving sample, and 91.95% in the non-receiving sample. Labor force participation is 81.61% for the whole sample but lower at 51.32% for the remittance-receiving sample and higher at 88.38% for the non-receiving sample.

On average, 35.77% of the whole sample resides in urban areas, but this figure is lower at 21.99% for remittance-receiving households and higher at 37.69% for non-receiving households. Balochistan represents 9.38% of the whole sample, but only 1.02% of remittance-receiving households and 11.09% of non-receiving households. KPK constitutes 18.08% of the total sample, higher at 28.77% for remittance-receiving, and lower at 14.78% for non-receiving households. Punjab makes up 47.49% of the whole sample, 66.5% of remittance-receiving, and 44.63% of non-receiving households. Sindh accounts for 25.05% of the whole sample, but drops to 3.71% for remittance-receiving and rises to 29.51% for non-receiving households.

The dependency ratio averages 2.6852 for all households, slightly lower at 2.611 for remittance-receiving households, and 2.6732 for non-receiving households. An average of 4.91% of all households receive a pension, with a higher percentage of 6.23% among remittance-receiving households compared to 4.49% among non-receiving households. Internal remittance-receiving households have the same average non-remittance income of 13,075.05PKR.

In a nutshell, the data provides insights into the observed heterogeneity in demographic and economic factors between households that receive remittances and those that do not, highlighting variations in urban residence, provincial distribution, dependency ratios, pension receipt, and income sources.

Table 2. Descriptive statistics of the variables

Variables	Whole sample N=23,105 (Mean)	Remittance receiving sample N=2,537 (Mean)	Non-receiving sample N=20,568 (Mean)
Poor	0.4712	0.4584	0.4727
Receiving internal remittances	0.1098		
Internal remittances monthly	15725.97	15725.97	
Male head	0.9056	0.5684	0.9717
Head age	45.8737	48.2874	45.2434
Head married	0.9053	0.8167	0.9195
Labour participation	0.8161	0.5132	0.8838
Urban	0.3577	0.2199	0.3769
Balochistan	0.0938	0.0102	0.1109
KPK	0.1808	0.2877	0.1478
Punjab	0.4749	0.665	0.4463
Sindh	0.2505	0.0371	0.2951
Dependency ratio	2.6852	2.611	2.6732
Pension receipt	0.0491	0.0623	0.0449
Non-remittances income	13075.05	13075.05	

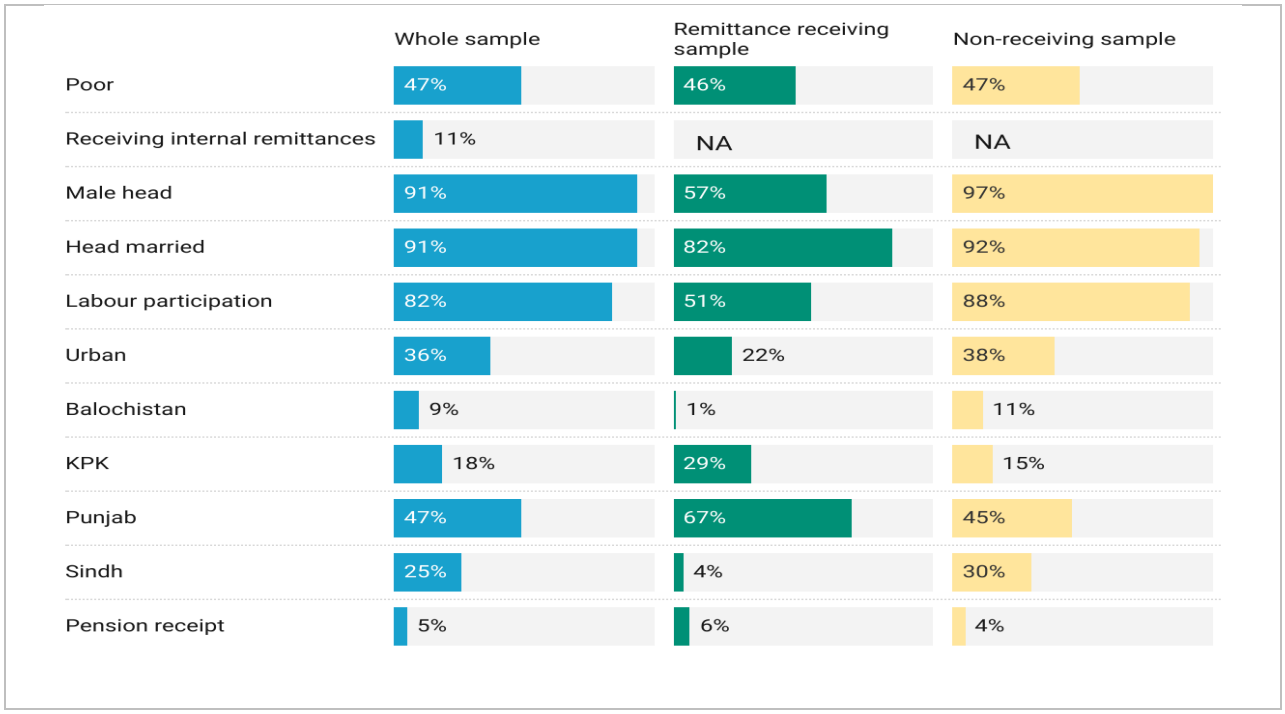

Figure 1. Descriptive statistics for categorical variables.

RESULTS AND DISCUSSION

Determinants of Internal Migration

Table 3 and Figure 2 present the logistic regression estimates addressing the study's first objective—identifying the determinants of internal migration. We have opted to report marginal effects rather than odds ratios or log-odds ratios to facilitate clearer interpretation. The marginal effects in a logit regression model represent the change in the probability of the outcome variable (in this case, the presence of an internal migrant in the household) for a one-unit change in the predictor variables while holding other variables constant. The model suggests that if the household head is male, the probability of having an internal migrant decreases by about 45.42 percentage points. With a z-score of -20.95 and a p-value of 0.000, this effect is highly statistically significant, indicating strong evidence that the gender of the household head affects the presence of internal migrants. It suggests a higher prevalence of households headed by females as a result of male migration. Often, women become household heads due to the migration of male partners or sons, who leave to seek employment internally, thereby leaving women as the de facto heads of households.

The age effect is statistically significant (z = 8.73, p-value = 0.000), suggesting that the age of the head is a relevant factor in determining the likelihood of internal migration within the household. Each additional year in the age of the household head slightly increases the probability of having an internal migrant by 0.09 percentage points. In some contexts, older household heads are more established and financially stable. They might support family members' internal migration for career and financial stability, especially as they reach near retirement, to diversify household income and ensure economic security.

If the household head is married, the probability of having an internal migrant increases by 3.49 percentage points. This effect is also statistically significant (z = 13.96, p-value = 0.000), reinforcing the importance of marital status in influencing internal migration patterns. The negative relationship between labor participation and internal migration is significant (z = -11.12, p-value = 0.000), indicating that household head employment is associated with a lower likelihood of internal migration. Household head labour participation is associated with a decrease in the probability of having an internal migrant by 6.98 percentage points. In some contexts, employment of the household head, particularly in stable or well-paying jobs, reduces the economic need for other members to migrate for better employment or living conditions. This financial stability allows for strategic investments in education and local opportunities, decreasing the drive for family members to relocate.

Table 3. Marginal effects of the logit model on internal migrant.

Variables	dy/dx	Std. err.	Z	P>z
Male head	-0.4542	0.0217	-20.95	0.000
Head age	0.0009	0.0001	8.73	0.000
Head married	0.0349	0.0025	13.96	0.000
Labour participation	-0.0698	0.0063	-11.12	0.000
Urban	-0.0306	0.0026	-11.91	0.000
KPK	0.3134	0.0374	8.38	0.000
Punjab	0.1499	0.0149	10.06	0.000
Sindh	0.0209	0.0128	1.64	0.101
Pension receipt	-0.0122	0.0038	-3.17	0.002
Dependency ratio	0.0172	0.0051	3.37	0.001
Observations	23,105			
Pseudo R2	0.3215			
LR chi2(10)	5141.94			
Prob > chi2	0.0000			

The z-statistic and p-value of the variable 'urban' show the effect of living in an urban area on the probability of having an internal migrant is statistically significant. Living in an urban area decreases the probability of having an internal migrant by about 3.06 percentage points. The lower likelihood of having internal migrants compared to rural ones exhibits that urban areas offer richer employment opportunities, and educational and healthcare facilities, thereby reducing the need to relocate for better prospects. Additionally, many urban areas have been the end-point of previous migration waves, leading to a population that has already stabilized after migrating. Residing in KPK increases the probability by 31.34 percentage points, this effect is statistically significant. Residing in Punjab increases the probability by 14.99 percentage points, this effect is statistically significant. This p-value suggests that the effect of being in Sindh on the likelihood of having an internal migrant is not statistically significant.

Receiving a pension decreases the probability of having an internal migrant by 1.22 percentage points. In general, pension income provides a steady and predictable source of income for the household, mitigating the need to seek better economic opportunities elsewhere. Furthermore, the presence of pension income lowers economic pressure and allows family members to live comfortably without relying on additional income that might come from migrating members. The effect is statistically significant. Each unit increase in the dependency ratio increases the probability of having a migrant by 1.72 percentage points. This effect is statistically significant. The presence of more dependents creates economic pressure, driving members to migrate for better job opportunities and higher wages to financially support the household. Migration also serves as a strategy for income diversification which can alleviate local resource strains and is part of long-term planning to improve family welfare, particularly in areas lacking sufficient opportunities.

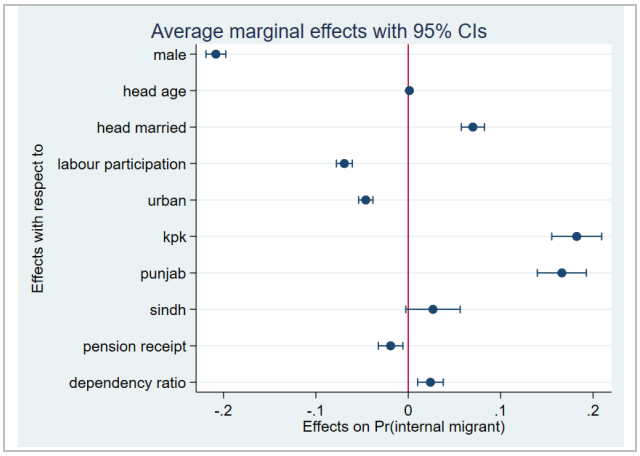

Figure 2. Margin plot of covariates on internal migrant.

Internal migration and poverty

In addressing the study's second objective, which examines the differences in poverty levels between households that receive internal remittances and those that do not. We refer to the logistic regression analysis detailed in Table 4 and visually represented in Figure 3b. Although the primary marginal effects are displayed in Table 4, a distinct margin plot illustrating the specific impact of receiving internal remittances on poverty status is further highlighted in Figure 3a. The findings indicate a decrease in the probability of being in poverty by approximately 6.74 percentage points for households receiving internal remittances. This reduction is significant and suggests that such households are markedly less likely to be classified as poor. The statistical significance of this effect underscores its reliability and relevance in understanding the economic dynamics influenced by internal remittances.

Remittances offer an extra source of income to households, which can be referred to as an economic buffer to many challenges like unemployment, illness, or any unforeseen expenditure shock (Chatterjee & Turnovsky, 2018). Remittances as a supplementary income are mainly helpful to meet day-to-day expenses and also for education and healthcare, thereby enhancing living standards (Brown et al., 2014). This financial cushion is vital for preventing households from falling into poverty during unexpected financial hardships. Furthermore, remittance not only finances expenditure but also enables households to invest in productive activities (Adams Jr & Cuecuecha, 2010). By starting small businesses, purchasing livestock, or investing in agricultural inputs, households can enhance their income generation over time, thereby improving their long-term economic stability and reducing the incidence of poverty.

Having a male head of household increases the probability of being in poverty by 5.46 percentage points, statistically significant with a z-score of 2.91 and a p-value of 0.004. Each additional year in the age of the household head slightly increases the probability of the household being in poverty by 0.14 percentage points, which is statistically significant ($z = 4.68$, $p < 0.001$). Being married has a small and statistically insignificant effect on poverty, slightly reducing the probability by 0.41 percentage points ($z = -0.28$, $p = 0.782$). Participation in labor increases the probability of being in poverty by 3.04 percentage points, which is statistically significant ($z = 2.37$, $p = 0.018$).

Living in an urban area significantly reduces the probability of being in poverty by 37.96 percentage points, with a very high level of statistical significance ($z = -58.43$, $p < 0.001$). Residing in the KPK region reduces the probability of being in poverty by 6.13 percentage points than in Balochistan, statistically significant ($z = -4.15$, $p < 0.001$). A household from Punjab has a 13.56 percentage point lower probability of being in poverty, while a household from has 7.29 percentage points less likelihood of being poverty than a household from Balochistan, with significant statistical evidence ($p < 0.001$).

Receiving a pension decreases the probability of being in poverty by 24.8 percentage points, a substantial reduction that is highly statistically significant ($z = -16.57$, $p < 0.001$). A higher dependency ratio significantly increases the probability of being in poverty by 74.19 percentage points, which is extremely statistically significant ($z = 43.27$, $p < 0.001$). These results provide insights into the factors that influence the likelihood of poverty in households, highlighting the significant roles played by location, demographic characteristics, and economic activities.

Table 4. Marginal effects of logit model – poverty comparison of recipient and non-recipient

Variables	dy/dx	Std. err.	z	P>z
Receiving internal remittances	-0.0674	0.0138	-4.90	0.000
Male head	0.0546	0.0188	2.91	0.004
Head age	0.0014	0.0003	4.68	0.000
Head married	-0.0041	0.0148	-0.28	0.782
Labour participation	0.0304	0.0128	2.37	0.018

Urban	-0.3796	0.0065	-58.43	0.000
KPK	-0.0613	0.0148	-4.15	0.000
Punjab	-0.1356	0.0129	-10.54	0.000
Sindh	-0.0729	0.0136	-5.37	0.000
Pension receipt	-0.248	0.015	-16.57	0.000
Dependency ratio	0.7419	0.0172	43.27	0.000
Observations	23,105			
Pseudo R2	0.1811			
LR chi2(10)	5786.89			
Prob > chi2	0.0000			

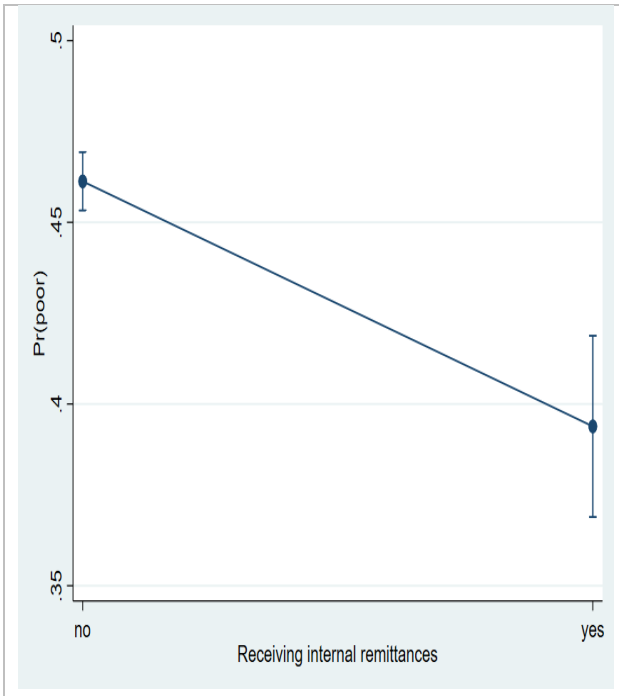

Figure 3a. Margin plot of impact of internal remittances on incidence of poverty.

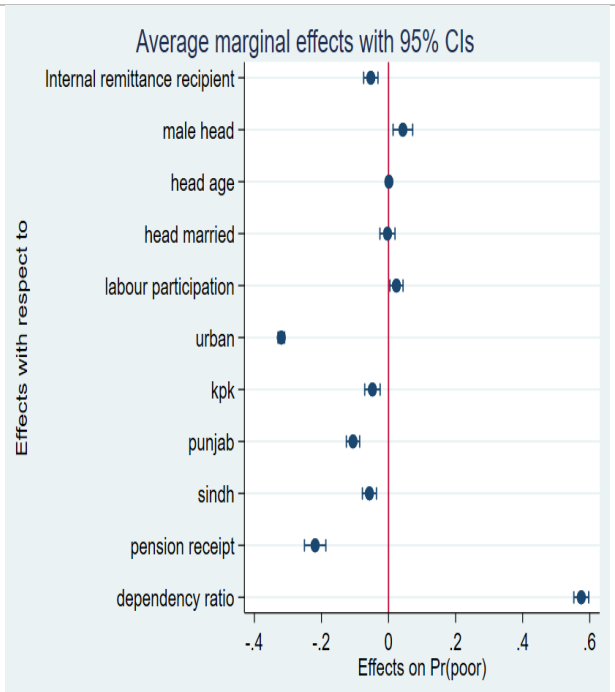

Figure 3b. Margin plot of covariates on incidence of poverty.

Internal Remittances Inflow and Poverty

Addressing the third objective of our study, we aimed to assess the impact of monthly internal remittance inflows on the poverty status of recipient households. The analysis presented in Table 5 and illustrated in Figure 4 elucidates the differential impact of monthly internal remittance inflows on the likelihood of households being in poverty across various remittance levels. The data reveal a significant inverse relationship between the amount of monthly remittances received and the probability of household poverty. Specifically, households receiving a monthly sum as low as PKR 403, equivalent to a natural logarithm of 6, face an 86.95% probability of being in poverty. Conversely, this probability diminishes substantially with higher remittance levels; households receiving PKR 8,103 monthly, or a natural logarithm of 9, exhibit a 50.83% probability of poverty. The trend continues, with the probability further declining to 35.56% for those receiving PKR 22,026 monthly (log natural of 10), and it sharply drops to 12.56% for households with remittance inflows of PKR 162,754 monthly, corresponding to a natural logarithm of 12. This trend highlights the potent mitigating effect of higher remittance inflows on poverty incidence within recipient households.

Figure 4 also shows the predictive margins of the probability of being in poverty as it relates to the natural logarithm of internal remittances received monthly. The x-axis represents the log of the monthly internal remittances, and the y-axis represents the probability of being in poverty. The graph displays a clear downward trend in the probability of being in poverty as the amount of internal remittances increases. As the log value of the remittances increases from 6 to 12, the probability of being in poverty drops substantially. The vertical blue line indicates where the log natural of internal remittances corresponds to the median minimum wage in Pakistan, which is PKR 16,350. This provides a reference point to evaluate the impact of remittances at a typical wage level. At this median wage, the probability of poverty decreases to below 40%, highlighting its significance for policy targeting.

In Figure 4, around the log value of 9 (circled on the graph), corresponding to remittances of about PKR 8,103 monthly, the probability of poverty crosses below the 50% threshold. This point might be of particular interest as it suggests that remittances above this amount significantly reduce the risk of being in poverty. The horizontal red line appears to indicate a specific poverty threshold in terms of probability, which seems to be around 40%. This line could be used to gauge the level of remittances necessary to reduce the poverty probability to below this threshold.

Table 5. Marginal effects of different level of internal remittances on poverty.

Ln(Internal remittances)	Internal Remittances (Monthly PKR)	Margin	Delta-method std. err.	Z	P>z	[95% conf.	interval]
6	403	.8695343	.019526	44.53	0.000	.831264	.9078046
7	1,096	.7794691	.0203729	38.26	0.000	.739539	.8193991
8	2,980	.6562006	.0163717	40.08	0.000	.6241127	.6882885
9	8,103	.5082719	.0098613	51.54	0.000	.4889441	.5275997
10	22,026	.3556341	.0114649	31.02	0.000	.3331633	.3781049
11	59,874	.2226614	.0165304	13.47	0.000	.1902624	.2550603
12	162,754	.1255804	.0167143	7.51	0.000	.092821	.1583399

Internal remittances enhanced household incomes, particularly in deprived areas, serving to cover essential expenditures and reduce poverty (Adams Jr & Page, 2005). They allow households to maintain consistent consumption levels notwithstanding economic hardships and invest in education and health, enhancing future earning potential and well-being (Deshingkar, 2006). Moreover, heightened remittance funds inflow are often used to clear debts and invest in local businesses or agriculture, creating jobs and fostering economic stability (King & Skeldon, 2010). Collectively, these factors significantly decrease the likelihood of poverty by promoting financial stability and enabling investments in human and economic development.

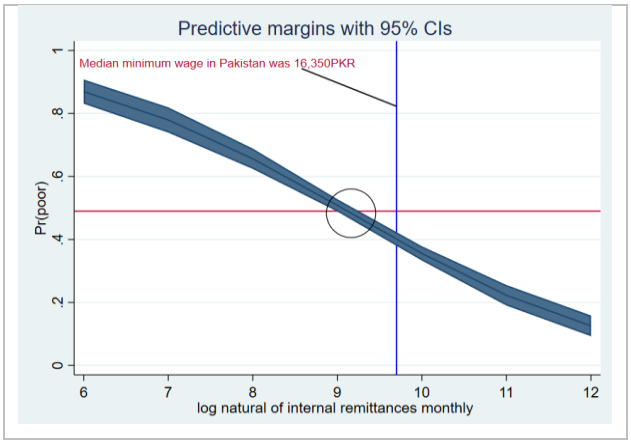

Figure 4. Margin plot of different level of internal remittances on poverty.

The results of our logistic regression analysis are detailed in Table 6, with corresponding visual representation provided in the coefficient plot in Figure 5. Further analysis of the differential impact of remittances is documented in Table 6 and Figure 4 as well. The coefficient for the logarithm of monthly internal remittances inflow is -0.1913, indicating that a 1 log point increase in internal remittances decreases the probability of being in poverty by 19.13 percentage points, with a significant z-score of -12.43 and a p-value of less than 0.001. This finding underscores the substantial protective effect of remittances against poverty among recipient households.

Similarly, a 1% increase in non-remittance income (log-transformed) decreases the probability of being in poverty by 2.25 percentage points, also significant ($z = -5.29$, $p < 0.001$). This underscores the poverty-reducing impact of income from other sources. Households with a male head are 7.57 percentage points more likely to be in poverty compared to those headed by females, with moderate statistical significance ($z = 2.47$, $p = 0.014$). The effect of the head's age on poverty is very small (0.003 percentage points increase per year) and not statistically significant ($z = 0.03$, $p = 0.973$), suggesting age alone does not significantly impact poverty status. Being married increases the probability of being in poverty by 4.61 percentage points, though this effect is not statistically significant ($z = 1.47$, $p = 0.141$). Active labour participation of the household's head is associated with an 11.09 percentage points increase in the probability of being in poverty, which is significant ($z = 4.07$, $p < 0.001$). This could reflect low-wage employment that is insufficient to lift the household out of poverty.

Living in an urban area decreases the probability of being in poverty by 31.16 percentage points, strongly significant ($z = -13.42$, $p < 0.001$), indicating better economic opportunities or social services in urban settings. Living in KPK, Punjab, or Sindh shows a significant decrease in the probability of being in poverty compared to Balochistan, with Punjab and Sindh showing strong effects (Punjab: -31.44, Sindh: -31.75, both $p < 0.005$) and KPK not significantly different from the baseline ($z = -1.45$, $p = 0.148$). Receiving a pension reduces the probability of being in poverty by 12.81 percentage points, significant ($z = -2.77$, $p = 0.006$), highlighting the importance of stable retirement income in preventing poverty.

Table 6. Marginal effects of logit model – impact of internal remittances inflow on poverty

Variables	dy/dx	Std. err.	z	P>z	X
Ln(internal remittances)	-0.1913	0.0154	-12.43	0.000	9.32404
Ln(non-remittance income)	-0.0225	0.0043	-5.29	0.000	7.67274
Male head	0.0757	0.0307	2.47	0.014	.568388
Head age	0.00003	0.0009	0.03	0.973	48.2873
Head married	0.0461	0.0313	1.47	0.141	.816713
Labour participation	0.1109	0.0272	4.07	0.000	.513205
Urban	-0.3116	0.0232	-13.42	0.000	.219945
KPK	-0.1619	0.1118	-1.45	0.148	.287741
Punjab	-0.3144	0.1094	-2.87	0.004	.664959
Sindh	-0.3175	0.0664	-4.78	0.000	.037052
Pension receipt	-0.1281	0.0462	-2.77	0.006	.062278
Dependency ratio	0.6427	0.0475	13.55	0.000	.429238
Observations	2,537				
Pseudo R2	0.1886				
LR chi2(10)	659.93				
Prob > chi2	0.0000				

An increase in the dependency ratio raises the probability of being in poverty by 64.27 percentage points, significantly ($z = 13.55$, $p < 0.001$), indicating that higher numbers of dependents relative to earners strain financial resources, increasing poverty risk. These results provide nuanced insights into the various factors that influence poverty, emphasizing the importance of income sources (both remittances and other income), demographic characteristics, labor market participation, geographical location, and household composition in shaping economic vulnerability.

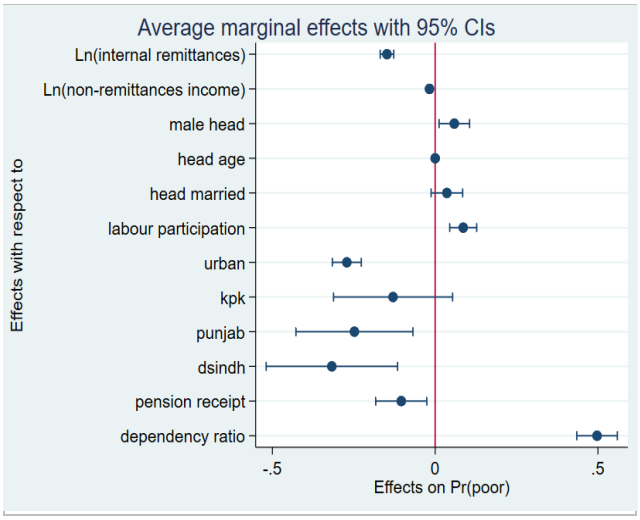

Figure 5. Margin plot of covariates on incidence of poverty.

CONCLUSIONS

This study investigates the determinants influencing the incidence of internal migration. It compares poverty levels between households that receive internal remittances and those that do not. It also assesses the impact of remittance inflows on the poverty status of recipient households. The regression analysis reveals how various factors impact the incidence of internal migration, where being a male head, actively participating in labor, and urban residency significantly reduce the incidence of internal migration. In contrast, older heads and married heads, along with higher dependency ratios, increase the likelihood of migration. Regional variations show that living in KPK and Punjab is linked to a higher incidence of migration, while pension receipt slightly lowers it.

The analysis of factors influencing poverty incidence shows that internal remittance-receiving household has less likelihood of being in poverty vis-à-vis non-receiving households. The empirical analysis reveals a significant inverse relationship between the amount of monthly remittances received and the probability of household poverty. This trend highlights the potent mitigating effect of higher remittance inflows on poverty incidence within recipient households. Remittances act as an economic buffer for households, providing supplementary income that covers daily expenses, education, and healthcare, thereby enhancing living standards. This financial cushion helps prevent poverty during hardships and supports investment in productive activities like small businesses and agriculture, improving long-term economic stability.

Although the migration of a family member often leads to improved living standards, it can also accelerate urbanization, primarily because most internal migrants originate from rural areas. This rapid urbanization introduces various complexities, necessitating a strategic management of migration volumes to align with urban capacities. Furthermore, while internal migration of a family member can elevate households out of poverty, poverty still persists in households receiving internal remittances. This issue could be alleviated by increasing internal remittance amounts. The empirical analysis shows that remittances equivalent to the minimum wage can reduce poverty incidence to below forty percent. Thus, enhancing economic prospects to boost internal remittances to at least the minimum wage level is crucial. Additionally, it is vital to expand economic opportunities for households unable to migrate a family and to address the economic shortfalls in regions with high rates of internal migration.

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