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THE EFFECT OF INTERNATIONAL MIGRANT REMITTANCES ON EMPLOYMENT PATTERNS: EVIDENCE FROM KOSOVO[3]

This study examines the effect of international migrant remittances on the employment patterns of individuals receiving them. To do that we use a nationally representative labor force survey conducted in Kosovo by Millennium Challenge Corporation. To address endogeneity issues, we employ propensity score-weighted Probit models by weighting every individual in the sample by the probability of receiving remittances based on their observed characteristics. The findings suggest that remittances decrease the employment probability of individuals who receive them, while at the same time increasing the probability of inactivity and being a family worker. The impacts are stronger for individuals from urban areas, workers over the age of 55, and individuals from non-Albanian ethnicities.
Keywords: remittances; employment; inactivity; propensity score weighting; Kosovo
JEL: J22; F22; F24; C39

1. Introduction

Kosovo's GDP per capita has grown faster than other countries in the region in the last fifteen years, despite that it remains the country with the lowest GDP in the region as well as having the highest poverty and unemployment rates (Boubtane et al., 2013; Clemens, Postel, 2018). In this situation, the effect of remittances in cushioning the negative effects of this lack of development is immense. The role of remittances in helping many families to meet their basic needs is crucial as they continue to be one of the main sources of income for many Kosovar families, helping some survive but also improving the well-being of many others (Fayissa, Nsiah, 2010).

From the macroeconomic perspective, it is evident that remittances are crucial and have a direct effect on the labour market, as they surge the level of revenue in the country, increasing so consumption which results in increased production of goods and services this, in turn, is expected to improve the labour market conditions overall (Acosta et al., 2006; Catrinescu et

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al., 2009; Portes, 2006). Nevertheless, it is stressed further that individuals are directly impacted by the remittances that they are receiving.

Although it can be measured the volume of remittances received, however, on the other hand, it is highlighted that it seems to be harder to elaborate on remittance impacts a=on those receiving individuals and families, as it is not clear (or it is a complicated puzzle) how it affects the remittance receivers (Murakami et al., 2021).

Preceding study debates have emphasised three major (or probable) motivators of the effects of remittances on labour market outcomes by discussing the categorisation of remittances as a source of income (Adams, Page, 2005; Amuedo-Dorantes, Pozo, 2012; Narayan et al., 2011; Chami et al., 2012). One view is that remittances are temporary income and therefore are used mainly for investments, which means that the remittance effects on the labour markets can only be observed in the long term as they are used mostly for human capital investments (Azizi, 2018; Murakami et al., 2021; Gibson et al., 2014).

Another popular view is that migrant family members send money home because of the need of their families, which means that remittances are a sort of compensation for the lack of local income of that household, which should produce no direct effect on the labour outcomes of the family (Démurger, 2015; Shair, Majeed, 2020). The final view categorises remittances as any other source of income, which implies that remittances may have direct effects on the employment patterns of the individuals receiving them (Ceesay et al., 2019).

The objective of this study is to contribute to the extension of the debate on the topic regarding the effect that remittances have on individuals and the working engagement of individuals from remittance-receiving families. The data for this research is extensive and comprises a reliable source of confirmed data and the research applies methods that address the endogeneity in appraising the impact of remittances on employment patterns in Kosovo. An extensive volume of inquiry has been dedicated to exploring the effect of remittances on the receiver on different aspects of remittance receivers' lives, such as household consumption, poverty, and employment patterns.

Previous research has found that remittances indeed do have positive effects on increasing household consumption (Adams, Cuecuecha, 2010; Clément, 2011; Duval, Wolff, 2016); however, they report heterogeneous effects of investment goods compared to consume goods, moreover, the effect on reducing poverty seems to be universally positive (Dey, 2015; Garip, 2014; Jimenez-Soto, Brown, 2012; Adams, Page, 2005; Morabito and Sergi, 2017; Petreski et al., 2018; Mintchev and Boshnakov, 2021)

While for employment patterns, the literature suggests that remittance-receiving individuals are less likely to be employed or even active in the labour market, usually because of more complicated trajectories to find a job because of increased reservation wages and decreased job-search effort. These findings have been replicated in many countries in different contexts, forming a solid foundation of literature on which this thesis builds (e.g., Abdul-Mumuni et al., 2019; Acosta, 2011, 2020; Cox-Edwards, Rodríguez-Oreggia, 2009; Démurger, Li, 2013; Mughal, Makhlouf, 2013; Nwokoye et al., 2020; Randazzo, Piracha, 2019).

Section 2 describes the data and provides the descriptive statistics of the sample, while section 3 discusses in detail the empirical problem of this study and explains the econometric

approach. Section 4 presents and discusses the main findings of this study while also presenting the heterogeneity analysis. The last section (5) is the concluding remarks.

2. Data and Descriptive Analysis

2.1. Data description and sample selection

This empirical analysis uses data from labour Force Survey, conducted in Kosovo in 2017 by Millennium Challenge Corporation through its program (Millennium Challenge Foundation). This cross-sectional survey provides detailed evidence on demographic characteristics, education, labour market status, work patterns, income, and a wide range of information on time use, consumption, wealth, agriculture, and other household characteristics. Most importantly, this paper provides household-level information on remittance reception which we use to construct our main variable of interest. What sets this survey apart from any other data source in Kosovo containing information regarding remittances is that this survey is the only survey with a sampling frame that covers the whole population of the country; making it a nationally representative survey. This survey collected data for 8,533 households with a total of 32,742 individuals in all 7 regions of Kosovo the data were collected on all household members above 15 years of age.

We exclude from the sample all households for which the information on the remittances is missing, moreover, since we rely on a propensity score approach to model the probability of receiving remittances, we also have to exclude from the sample all individuals for whom the information on the key individual or household characteristics are missing. Finally, we focus on men and women who were between 15-65 years old at the time of the interview; this leaves us with a total of 20,130 individuals, 3,825 of whom are from remittance-receiving households, and 16,305 from households that do not receive remittances.

As already discussed, this study aims to identify the effect of receiving remittances on labour market outcomes. Table 1 provides definitions of the key variables of this study. Starting from dependent variables, which in our case are a set of labour market outcomes, specifically employment status, being a paid employee, being a family worker, and being inactive. We keep in our sample only individuals with full information regarding our dependent and independent variables. Therefore, each individual in our sample falls into one of the categories. We know the employment status of each individual; in addition, conditional on working, we know whether they are paid employees, family workers, further conditional of not working, we know whether they are active in the labour market or not.

The information regarding remittances in the survey is collected only at the household level and not at an individual level, to overcome this issue, we define a binary indicator of remittance-receiving status, which equals *1* for all individuals living in households that receive remittances and *0* for all individuals who live in the household who do not receive household. Although, the concern regarding the mismeasurement of remittance-receiving status is valid since we do not know if every individual in the household benefits from the remittances, knowing family behaviour and strong family ties in Kosovo, it is safe to assume

that the remittances are used for mutual family benefits which means that every individual in the household benefits from the remittances.

The literature suggests that employment outcomes are quite sensitive to individual and household characteristics, for instance, prime-age workers differ dramatically in terms of employment prospects compared to younger and older workers, similarly, in the context of Kosovo the gender differences in labour market outcomes are huge, moreover living are seems to be an important factor in explaining the variation in labour market outcomes, further, education level is one of the main factor explaining labour market differences between workers Karymshakov et al., 2018). To control for these effects, we include a wide range of control variables such as age, gender, marital status, living area, ethnicity, household size, education level, and region (Binci, Giannelli, 2018; Wooldridge, 2015).

Table 1. Variable's description

Variable	Definition	Measurement
DEPENDENT VARIABLES		
Employed	*Employment status.*	Binary: 0= Not working; 1=Working.
Paid employee	*Being a paid employee.*	Binary: 0=Not a paid employee; 1=Paid employee.
Family worker	*Conditional on working whether a worker is a family worker.*	Binary: 0= Not a family worker; 1=Family worker.
Inactive	*If an individual is not active in the labour market*	Binary: 0= Active in the labour market; 1=Inactive.
INDEPENDENT VARIABLES		
Remittance receiving HH	*Living in a remittance-receiving household.*	Binary: 0=Living in a remittance-receiving; 1=Paid employee.
Age & Age^2	*Age and age squared.*	Continuous variable.
Male	*Indicator for gender.*	Binary: 0=Femle; 1=Male.
Married	*Indicator for marital status.*	Binary: 0=Single; 1=Married.
Urban	*Indicator for living area.*	Binary: 0=Rural; 1=Urbam.
Albanian ethnicity	*Indicator for ethnicity.*	Binary: 0=Non-Albanian; 1=Albanian.
Household size	*Number of members living in the HH.*	Continuous variable.
Education dummies	*Education level indicators.*	Education dummies: 1= Low level of education; 2=Medium level of education; 3=High level of education
Region dummies	*Region indicators.*	Regional dummies:1= Prishtina; 2= Mitrovica; 3= Peja; 4= Prizreni; 5= Ferizaji; 6=Gjilanil 7= Gjakova.

Source: compiled and calculated by the authors.

2.2. Descriptive statistics

Table 2 presents descriptive statistics of our sample. The sample includes a total of 20,121 individuals, of which 3,816 are from remittance-receiving households and the remaining 16,305 are from households that do not receive remittances. Table 2 is split into two parts; in the left panel, we report the raw unweighted means and percentage difference by remittance-receiving status, while on the right panel, the same analysis is presented, but now the means are weighted by propensity scores.

Table 2. Characteristics of households by remittance-receiving status

	Unweighted means				Propensity score weighted means		
	(I)	(II)	(III)		(IV)	(V)	(VI)
	Non-Remittance HH	Remittance HH	I-II % difference		Non-Remittance HH	Remittance HH	IV-V % difference
Individual characteristics							
Age	39.09 (12.70)	39.41 (13.29)	-0.81%		39.00 (12.68)	39.81 (13.23)	-2.03%
Male	0.73 (0.44)	0.71 (0.45)	2.82%		0.73 (0.44)	0.75 (0.43)	-2.66%
Married	0.70 (0.46)	0.70 (0.46)	0.00%		0.70 (0.46)	0.71 (0.45)	-1.40%
Low-level education	0.26 (0.44)	0.40 (0.49)	-35%		0.28 (0.45)	0.34 (0.47)	-17.64%
Medium level education	0.57 (0.50)	0.49 (0.50)	16.32%		0.56 (0.50)	0.54 (0.50)	3.70%
High-level education	0.16 (0.37)	0.11 (0.31)	45.45%		0.16 (0.37)	0.12 (0.32)	33.33%
Household characteristics							
Household size	4.70 (1.94)	4.67 (1.90)	0.64%		4.67 (1.91)	4.97 (2.02)	-6.03%
HH has children under 15	0.61 (0.49)	0.63 (0.48)	-3.17%		0.60 (0.49)	0.69 (0.46)	-13.04%
HH has individuals over 65	0.01 (0.08)	0.01 (0.09)	0.00%		0.01 (0.08)	0.01 (0.07)	0.00%
HH. owns agricultural land	0.52 (0.50)	0.65 (0.48)	-20%		0.53 (0.50)	0.52 (0.50)	1.92%
Urban	0.39 (0.49)	0.24 (0.43)	62.5%		0.37 (0.48)	0.37 (0.48)	0.00%
Albanian ethnicity	0.92 (0.26)	0.98 (0.15)	-6.13%		0.93 (0.25)	0.94 (0.25)	-1.06%
Prishtine	0.16 (0.36)	0.07 (0.26)	128.57%		0.14 (0.35)	0.14 (0.34)	0.00%
Mitrovice	0.13 (0.34)	0.10 (0.30)	30%		0.12 (0.33)	0.10 (0.29)	20%
Peje	0.14 (0.35)	0.12 (0.32)	16.66%		0.13 (0.34)	0.15 (0.35)	-13.33%
Prizren	0.14 (0.35)	0.17 (0.38)	-17.65%		0.14 (0.35)	0.17 (0.37)	-17.65%
Ferizaj	0.16 (0.36)	0.10 (0.30)	60%		0.15 (0.36)	0.16 (0.36)	-6.25%
Gjilan	0.11 (0.31)	0.12 (0.33)	-8.33%		0.11 (0.31)	0.12 (0.33)	-8.33%
Gjakove	0.17 (0.38)	0.31 (0.46)	-45.16%		0.20 (0.40)	0.18 (0.38)	11.11%
Household head characteristics							
Head of the HH is male	0.90 (0.29)	0.91 (0.29)	-1.09%		0.90 (0.30)	0.93 (0.25)	-3.22%
Age of the HH head	53.41 (11.29)	54.15 (11.99)	-1.37%		53.55 (11.34)	53.14 (11.68)	0.77%

	Unweighted means				Propensity score weighted means		
	(I)	(II)	(III)		(IV)	(V)	(VI)
	Non-Remittance HH	Remittance HH	I-II % difference		Non-Remittance HH	Remittance HH	IV-V % difference
Low-level education (HH head)	0.34 (0.47)	0.46 (0.50)	-26.08%		0.36 (0.48)	0.38 (0.49)	-5.26%
Medium-level education (HH head)	0.54 (0.50)	0.47 (0.50)	14.9%		0.53 (0.50)	0.51 (0.50)	3.92%
High-level education (HH head)	0.12 (0.33)	0.08 (0.27)	50%		0.12 (0.32)	0.11 (0.32)	9.09%
Employed HH. head	0.74 (0.44)	0.72 (0.45)	2.78%		0.72 (0.45)	0.79 (0.41)	-8.86
Dependent variables							
Employed	0.82 (0.38)	0.67 (0.47)	22.4%		0.81 (0.39)	0.72 (0.45)	12.5%
Paid employee	0.65 (0.48)	0.52 (0.50)	25.0%		0.64 (0.48)	0.56 (0.50)	14.28%
Family worker	0.18 (0.38)	0.33 (0.47)	-45.45%		0.19 (0.39)	0.26 (0.44)	-26.92%
Inactive	0.51 (0.50)	0.56 (0.50)	-8.92%		0.51 (0.00)	0.54 (0.50)	-5.55%
Observations Pseudo-R-squared	16,305 0.25	3,816 0.13	20,121 0.24	0.49	16,305	3,816 0.24	20,121 0.15

Source: compiled and calculated by the authors.

On the left panel of Table 2, we can see that individuals living in households not receiving and those receiving remittances are almost identical to those living in regarding the demographic patterns; though, they significantly differ in other aspects. One of the major differences is evident, in terms of education, of those receiving compared to non-receivers of remittances as they are 35% more likely to have a low level of education and up to 45 percent less likely to be highly educated, this is extremely important for our analysis as it is widely known that the level of education is an important predictor of labour market success, therefore a simple mean comparison between remittance-receiving and non-receiving individuals would produce biased estimates simply because these groups differ this much in terms of education. Moreover, the probability that the individuals living in remittance-receiving families have small children is higher by 3%. In terms of the geographical extent of remittance-receiving individuals, it is evident that it is 63% more likely that they live in a rural area, thus they are more focused and engaged in the agriculture sector. The research has revealed that the majority of remittance-receiving individuals and families are mainly located or come from the South-West of Kosovo, mainly in Peja and Prizren region, which is also traditionally known for migration in the past several decades. Whereas, they are less likely to be from the region of Prishtina and Ferizaj, which are considered to have a more developed industry even in the past. Another difference that the research has reviled is the role of the family head and the role that they play and the differences that they make in receiving and non-receiving households. It is even more imperative when considering the patriarchal

tendency in developing countries and emerging economies (Chami et al., 2012; Justino, Shemyakina, 2012). It is evident that the lower the education the family head member, the more likely is to be part of a receiver family, whereas the family heads that are more successful in gaining higher education are more likely to belong to a non-receiver remittance household, As already noted, these differences give a clear indication that comparing these two groups head-to-head without further empiric procedures would overestimate the parameters of interest dramatically, therefore to balance the groups and make the analysis more reliable we employ a propensity score weighting procedure.

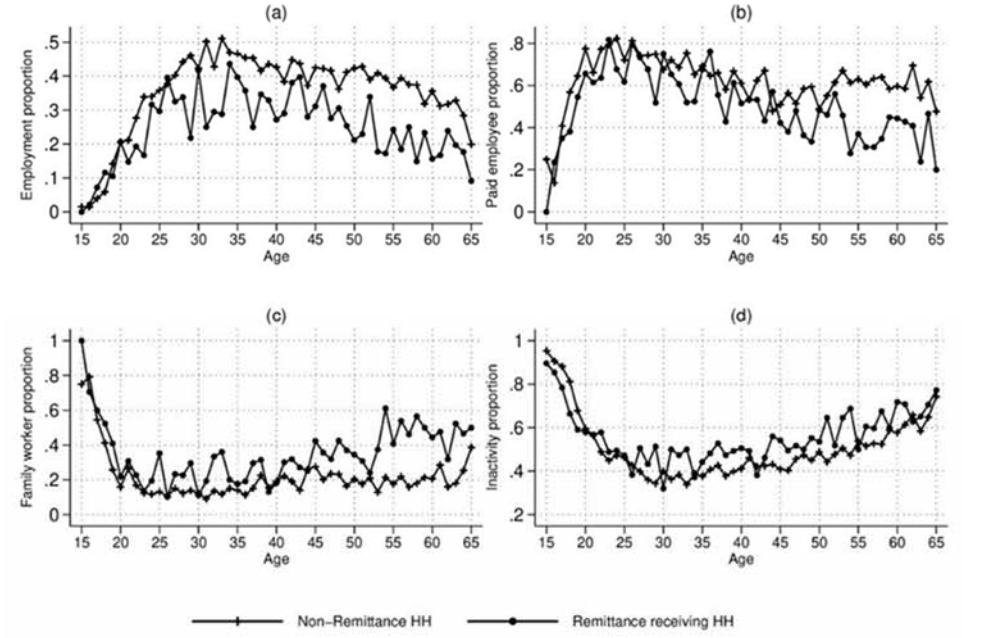
On the right panel of Table 2, we see that the propensity score weighting procedure has achieved its aim to a large extent as the differences are reduced significantly and the groups are overall much more balanced in all aspects. Most importantly the educational differences are reduced by more than half in terms of low level of education the groups are the same in terms of medium level of education, moreover even though the difference in the high level of remains large it has been reduced by more than 12pp. Further, differences in the living area, region of residence, ethnicity, and household head characteristics are reduced to the minimum. This, we believe, balances the groups to the extent that makes the comparison free of biases. Therefore, we are confident that the selected strategy provides estimates that are free from unobserved heterogeneity biases.

The bottom rows of Table 2 compare the selected labour market outcomes, and as it is seen, the differences are substantial; however, we continue the discussion about them in Figure 1 presented below.

In Figure 1, we analyse the dynamics of selected labour market outcomes by age in four separate graphs. The overall trends, for both remittance receivers and non-receivers, are similar and consistent with the literature suggestions, meaning that young workers (15-24) are less likely to be employed, but more likely to be inactive as a good proportion of them are still on education. Moreover, the group with the highest probability of employment and the lowest probability of inactivity are prime-age workers (25-54). While old workers (55+) exhibit ever-worsening labour market trends with decreasing probability of employment and an increasing probability of becoming inactive.

Panel (a) of Figure 1 shows the average employment rate by age. The difference between the two groups is clear and systematic; the figure clearly shows that living in a household that receives remittances is associated with a substantially lower probability of employment. However, from the graph, it is impossible to differentiate between the remittance effect and unobserved heterogeneity effect, we quantify this relationship at a late phase in our analysis. Overall, panel (a) suggests the existence of three different patterns in employment. First, the differences between remittance-receivers and not receivers for young workers (15-25) are not that consistent, we believe this to be due to the extremely small number of individuals employed in this age group. Second, the difference in employment probability for prime-age workers (25-54) is clear and consistent, meaning that remittance receivers lag behind non-receivers on average for every single age. Third, the average employment difference is the largest for old workers (55+).

Figure 1. labour market outcome averages by age



Labour market outcome averages by age, a comparison between household remittance-receiving status. Average employment by age in panel (a), an average rate of paid employee by age in panel (b), an average rate of the family worker by age in panel (c) and average proportion of inactivity by age in panel (c).
Source: compiled and calculated by the authors.

Panel (b) plots the average shares of being a paid employee conditional on being employed. In this case, the difference between remittance-receivers and non-receivers is a bit more unclear, but it is still evident that remittance-receiving individuals are less likely to be paid workers. Interestingly, the difference in being a paid employee for old workers (55+) remains even when they are employed, which suggests that the probability of self-employment or being a family worker is higher among remittance receivers. Panel (c) shows the average shares of being a family wage earner, which highlights the fact that remittance receivers are more likely to be family workers compared to non-receivers. The patterns are a reflection of the first two graphs, in this case, the probability of being a family worker is disproportionally larger for remittance receivers, up to 60 percent of old (55+) remittance receivers are family workers compared to around 20 % of those from non-remittance receiving households. Panel (d) presents the average shares of being inactive. In this aspect, the differences between remittance receivers and remittance non-receivers are the smallest, but still consistent, despite the age the probability of being inactive is slightly higher for remittance-receivers compared to the other group.

In sum, in Figure 1, we can read a descriptive story that suggests that remittances are relaxing individuals who receive them from the need to find a paid job and are enabling them to engage

in household activities to a greater extent. However, we cannot draw causal conclusions about this relationship without employing more sophisticated methods.

3. Econometric Approach

To estimate the effect of remittances on labour market outcomes, this study employs a probit model, which models the inverse normal distribution as a linear combination of the predictors. The model takes the form:

$$\Pr(Y_i = 1|X) = \phi(\beta_0 + \beta_1 Remittances_i + \beta' X_i + \varepsilon_i) \quad (1)$$

The set of outcome variables Yi captures labour market outcomes consisting of employment status, being paid worker, being a family worker, or being inactive. The function $\boldsymbol{\phi}$ represents the cumulative normal distribution. The main variable of interest is captured by the binary indicator $Remittnces_i$, which equals one if individual $\boldsymbol{i}$ lives in a household that receives remittances and zero if individual $\boldsymbol{i}$ lives in a household that does not live in a remittance-receiving household. We include a wide range of control variables which are captured by vector $\boldsymbol{\beta'}$such as household size, age, and its square, binary indicators for being male, married, Albanian, living in an urban. It also includes three dummies for education levels and regions dummies (Asiedu, Chimbar, 2020; Nwokoye et al., 2020).

Despite controlling for a wide range of household and household characteristics, the approach presented above actually directly compares individuals living in remittance-receiving households with those living in households that do not receive remittances. If we could assume that the remittance-receiving status is entirely random, then this comparison would produce unbiased estimates. However, remittance-receiving status is far from being a random occurrence (Butschek, Walter, 2014). Therefore, the remittance-receiving status may be endogenous, as it is conditioned by having a migrant household member or a relative. The migration decision itself could be highly selective due to unobserved household or individual characteristics (Berthélemy et al., 2009; Ayalew, Mohanty, 2022; Tsegai, 2007). For instance, individuals from poorer households may be both more prone to out-migrate and have, in general, worse labour market prospects, or migrant household members or relatives may send remittances to their relatives in Kosovo because they are facing tough economic conditions or prolonged unemployment spells (Boubtane et al., 2013; Ceesay et al., 2019). The endogenous selection into migration or receiving remittances leads to a correlation between our variable of interest and the error term ε_i, providing us with biased estimates forβ_1, therefore, this coefficient cannot be interpreted causally without addressing this issue. The unweighted means in Table 2 prove this suspicion by showing that individuals living in households who do not receive remittances differ significantly from those who do.

To address the above-mentioned selection issues, this study uses a propensity score weighting procedure, which balances the distribution of observable characteristics of both groups (remittance receivers and non-receivers). Specifically, with this approach, we model the probability of receiving remittances conditional on observed household and individual characteristics, and then these probabilities are used as weights that enable us to balance two

groups. Formally the probability of receiving remittances (R=1) is modelled by a probit model presented by the following equation:

$$P^R[R_i] = \delta X_i + \varepsilon_i \quad (2)$$

The probability to receive remittances is estimated by including a comprehensive set of individual and household characteristics in the vector δX_i. Specifically, we include household size, number of children below 15 in the household, number of old people in the household, living is, ethnicity, ownership of agricultural land, household head sex, household head age, household head education, household head employment status and regional dummies. The estimated probabilities using this model are used to construct propensity scores weights based on the remittance-receiving status, as Table 1 shows this procedure indeed balances the two samples (remittance receivers and non-receivers) as they are much more balanced after the weighting is applied. Finally, we use weighted least squares estimator to compare the labour market outcomes of individuals who have the same probability of receiving remittances despite their true remittance-receiving status. This gives unbiased estimates of the parameter β_1, allowing us to interpret it causally.

4. Results and Discussion

4.1. Main results

The average marginal effects of the parameters as reported in Table 3. This section focuses primarily on the interpretation of the consequence of remittances, on the probability of being employed, a paid employee, a family worker, and an inactive individual. Columns (1-4) show the average marginal effects of unweighted probit models, which we believe provide overestimated coefficients due to the reasons discussed above, we include them here only as a benchmark for comparison with our preferred weighted probit estimates, which are shown on the columns (5-8) of Table 3.

In the unweighted panel (Columns 1-4) of the analysis, we show that individuals living in remittance-receiving households face worse labour market prospects overall compared to individuals living in a non-remittance-receiving household. Namely, the probability of being employed is up to 6.6 percent lower for remittance receivers; moreover, the probability it is evident that working as a paid worker is 4.8% lower, though the highest probability, with 4.6%, for an individual to be an unpaid member of the family, and being an inactive family member is less than one percent higher.

The fifth column of Table 3 shows the effect of remittances on the employment probability with propensity score weighted observations. The table shows that compared to the unweighted estimates the effect is around 1.9 percent smaller (-6.6 percent vs -4.7 percent), suggesting that the unobserved characteristics that drive remittance-receiving status have inflated the effect. In both unweighted and weighted models, we include the set of controls usually used in explaining employment outcomes. As expected, we find significant effects of gender, living area, marital status, and age on the probability of employment; moreover, the effect of education and region of residence seems to have a huge impact on this probability. Therefore, after all these control variables have been included in the model, this means that

the models compare individuals only within these categories and within the same probability range of receiving remittances. Hence, we believe that the unbiased estimated effect of remittances on employment probability is around -4.7 percent, which is pretty high. The estimated effect on employment probability is consistent with reported effects in several studies (e.g., Abdul-Mumuni et al., 2019; Acosta, 2011, 2020; Cox-Edwards, Rodríguez-Oreggia, 2009; Démurger, Li, 2013; Mughal, Makhlouf, 2013; Nwokoye et al., 2020; Randazzo, Piracha, 2019).

Table 3. Marginal effects of receiving remittances on labour market outcomes

	Unweighted				**Propensity score weighted**			
	Employed	Paid employee	Family worker	Inactive	Employed	Paid employee	Family worker	Inactive
Remittance receiving HH	-0.066***	-0.048***	0.046***	0.009*	-0.047***	-0.050***	0.037***	0.011*
	(0.007)	(0.013)	(0.010)	(0.005)	(0.009)	(0.019)	(0.012)	(0.007)
Age	0.042***	0.004	-0.019***	0.019***	0.042***	0.007*	-0.021***	0.018***
	(0.001)	(0.003)	(0.002)	(0.001)	(0.002)	(0.004)	(0.003)	(0.002)
Squared age	-0.000***	-0.000**	0.000***	-0.000***	-0.000***	-0.000**	0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	0.289***	0.091***	-0.162***	-0.318***	0.298***	0.112***	-0.172***	-0.337***
	(0.005)	(0.012)	(0.008)	(0.004)	(0.009)	(0.016)	(0.010)	(0.006)
Married	0.003	-0.085***	0.032***	0.104***	-0.006	-0.100***	0.059***	0.134***
	(0.008)	(0.015)	(0.012)	(0.006)	(0.014)	(0.022)	(0.017)	(0.011)
Urban	0.022***	0.097***	-0.163***	-0.022***	0.012	0.133***	-0.205***	-0.016**
	(0.006)	(0.011)	(0.009)	(0.005)	(0.010)	(0.019)	(0.013)	(0.007)
Albanian ethnicity	0.018*	-0.057***	0.043**	0.031***	0.086**	0.105	0.111***	0.009
	(0.011)	(0.021)	(0.017)	(0.008)	(0.037)	(0.087)	(0.025)	(0.020)
Household size	-0.001	-0.011***	0.008***	-0.001	0.009***	-0.010**	0.005	-0.004**
	(0.002)	(0.003)	(0.002)	(0.001)	(0.003)	(0.005)	(0.003)	(0.002)
Medium level of education	0.157***	0.159***	-0.128***	-0.109***	0.118***	0.145***	-0.120***	-0.098***
	(0.006)	(0.011)	(0.008)	(0.004)	(0.012)	(0.023)	(0.012)	(0.008)
High level of education	0.325***	0.375***	-0.277***	-0.288***	0.288***	0.370***	-0.234***	-0.280***
	(0.009)	(0.016)	(0.015)	(0.011)	(0.016)	(0.027)	(0.026)	(0.021)
Mitorvice	-0.013	-0.052**	0.056***	-0.052***	-0.025	-0.075**	0.105***	-0.046***
	(0.010)	(0.020)	(0.017)	(0.008)	(0.017)	(0.032)	(0.025)	(0.014)
Peje	0.012	-0.119***	0.108***	0.015*	0.031*	-0.168***	0.157***	0.011
	(0.010)	(0.019)	(0.016)	(0.008)	(0.018)	(0.032)	(0.024)	(0.014)
Prizren	0.056***	-0.042**	0.015	-0.029***	0.046**	-0.103**	0.060**	-0.023
	(0.011)	(0.019)	(0.016)	(0.008)	(0.021)	(0.041)	(0.024)	(0.015)
Ferizaj	-0.001	-0.042**	-0.009	0.011	0.004	-0.076**	0.030	0.029*
	(0.010)	(0.019)	(0.017)	(0.008)	(0.019)	(0.036)	(0.031)	(0.015)
Gjilan	0.047***	-0.091***	0.080***	0.000	0.042**	-0.148***	0.140***	0.009
	(0.011)	(0.020)	(0.017)	(0.009)	(0.018)	(0.032)	(0.024)	(0.014)
Gjakove	-0.026***	-0.205***	0.131***	-0.006	-0.040**	-0.245***	0.170***	0.007
	(0.010)	(0.018)	(0.014)	(0.008)	(0.016)	(0.028)	(0.021)	(0.012)
Observations	20053	7932	7932	20053	20053	7932	7932	20053
Pseudo-R-squared	0.25	0.13	0.24	0.49	0.24	0.15	0.27	0.49

Source: compiled and calculated by the authors.

The reasons behind this difference we believe to be driven by several factors. First, individuals that belong to a remittance-receiving household due to higher financial support and security are more likely to have a higher reservation wage compared to the mean wage within the skill level that individuals possess, hence discouraging remittance receivers from getting jobs. Another possible explanation could be the effort that one needs to put in to find jobs in a tight labour market such as Kosovo's, again as a result of relative security remittance receivers could put less effort in searching for work even if their reservation wage matches that of the market.

The sixth column (6) of the same table depicts the effect of remittances on the probability to be a paid employee. As opposed to the employment probability, in this case, both weighted and unweighted models yield almost identical effects (-4.8 percent vs -5 percent). Similar to the employment probability, we find significant that personal characteristics such as gender, living area, and household size play an important role in explaining the paid employee variation; however, the most important factors by far are education and region of residence differences. Again, the inclusion of these individual characteristics allows us to make only within-group comparisons, while the propensity score weighting allows us to compare individuals only in the same probability range of receiving remittances. Therefore, the unbiased consequence of remittances on the probability of being a paid employee is around -5 percent. Hence, it is confirmed that the research findings are in line with the majority of the literature on this topic (e.g., Acosta, 2011; Démurger, Li, 2013; Mughal, Makhlouf, 2013; Nwokoye et al., 2020; Randazzo, Piracha, 2019). The drivers behind this finding, we believe to be related to the ones that we discussed for the employment probability (Van Hear et al., 2018). Again, because of the relative financial security remittance receivers create due to the financial support and stable income, it is more that they are engaged in activities that are characterised as self-employed or even in non-payable activities only to retain the flow of remittances or even not to have any impact on the continuous flow (income) through remittance.

Column 7 illustrates the probability of being a non-played family worker based on the direct effect that remittances have on those families. In this case, the effect of weighted and unweighted models differs by almost 1% (4.7 percent vs 3.6 percent), suggesting that the status of the unobserved characteristic has overestimated the effect. Individual characteristics seem to play a huge role in explaining the probability of being a family worker.

As predicted, based on the cultural background and patriarchal tendency in developing and poor countries, the probability for males (based on gender variable) is 17% smaller of being a family worker, which is mainly impacted by the living area (rural vs urban) and the level of education of family members (Binci, Giannelli, 2018; Dey, 2021; Ebrima, Ceesay, 2020). After setting the possible impact of these characteristics, by evaluating them in the probit model, the likelihood of being an unpaid worker is 3.7% for members part of families that receive remittances. The projected surge in the prospect to work as a family unpaid worker is similar to most of the findings in other studies (e.g., Abdul-Mumuni et al., 2019; Démurger, Li, 2013; Mughal, Makhlouf, 2013; Nwokoye et al., 2020).

The eighth and final column of Table 3 shows the impact of remittances on the probability to be inactive in the labour market. The effect of weighted and unweighted models differs only slightly (0.7 percent vs 1.1 percent). Similar to all other variables, individual

characteristics seem to play a huge role in elucidating the possibility of inactivity. As anticipated, the female members of families are likely to be more inactive compared to male members of the same family. Which is disproportionally large and is affected directly by education level. Receiving remittances increases the probability of inactivity by more than 1 percentage point. Our finding on the inactivity decrease is consistent with reported effects in several studies (e.g., Abdul-Mumuni et al., 2019; Acosta, 2011, 2020; Cox-Edwards, Rodríguez-Oreggia, 2009; Démurger, Li, 2013; Mughal, Makhlouf, 2013; Nwokoye et al., 2020; Randazzo, Piracha, 2019). The mechanism driving this finding is similar to the ones already discussed.

4.2. The effect of remittances of different demographics

This part of the report elaborates on how diverse groups are impacted by remittances concerning their demographic characteristics. Table 4 and Figure 2 summarise the average marginal effects of remittances on labour market outcomes by different groups. Separate effects are presented by age, gender, lignin area, and ethnicity.

Table 4. Marginal effects of receiving remittances on labour market outcomes by different sub-samples

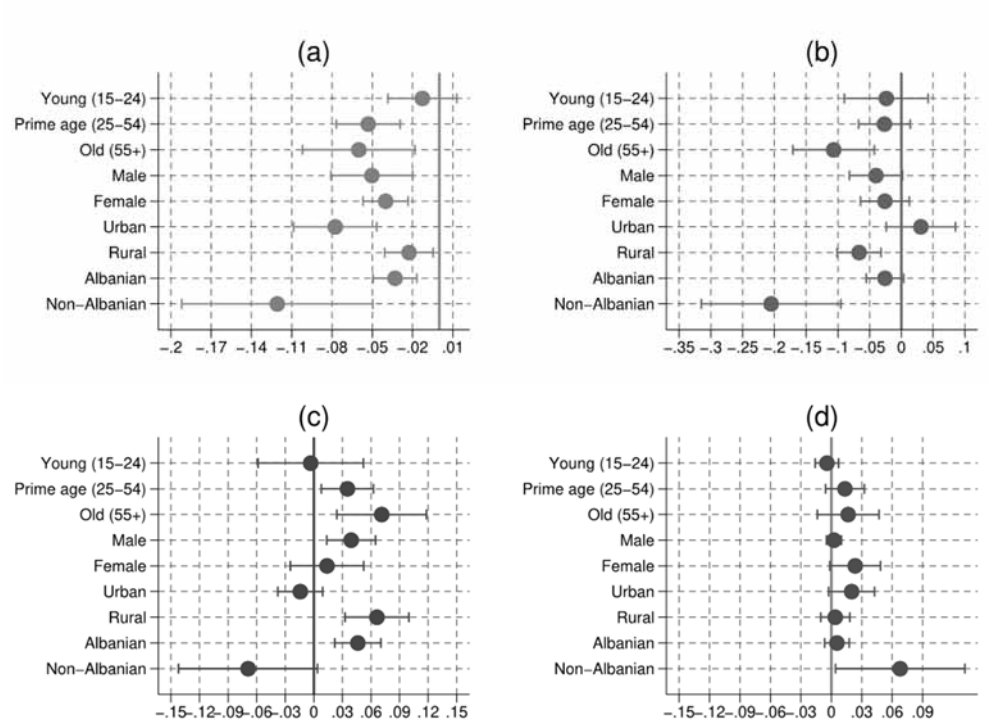
	Unweighted				Propensity score weighted			
	Employed	Paid employee	Family worker	Inactive	Employed	Paid employee	Family worker	Inactive
Age groups								
Young (15-24)	-0.018 (0.013)	-0.046 (0.032)	0.019 (0.029)	-0.002 (0.006)	-0.014 (0.013)	-0.026 (0.034)	-0.002 (0.028)	-0.004 (0.006)
Prime age (25-54)	-0.076*** (0.010)	-0.028* (0.016)	0.036*** (0.012)	0.008 (0.008)	-0.056*** (0.012)	-0.024 (0.020)	0.035** (0.014)	0.014 (0.009)
Old (55+)	-0.096*** (0.018)	-0.096*** (0.033)	0.098*** (0.024)	0.020 (0.015)	-0.062*** (0.021)	-0.109*** (0.032)	0.074*** (0.025)	0.017 (0.016)
Sex Male	-0.098*** (0.012)	-0.043*** (0.016)	0.051*** (0.011)	0.008** (0.004)	-0.053*** (0.015)	-0.039* (0.021)	0.039*** (0.013)	0.003 (0.004)
Female	-0.036*** (0.009)	-0.037* (0.021)	0.023 (0.019)	0.012 (0.009)	-0.041*** (0.009)	-0.027 (0.020)	0.014 (0.020)	0.024** (0.012)
Living area								
Urban	-0.114*** (0.014)	0.020 (0.025)	0.009 (0.014)	0.016* (0.009)	-0.082*** (0.015)	0.030 (0.028)	-0.013 (0.012)	0.021* (0.011)
Rural	-0.044*** (0.009)	-0.065*** (0.016)	0.058*** (0.013)	0.006 (0.006)	-0.022** (0.009)	-0.066*** (0.017)	0.065*** (0.017)	0.004 (0.007)
Ethnicity Albanian	-0.063*** (0.008)	-0.047*** (0.014)	0.049*** (0.010)	0.007 (0.005)	-0.034*** (0.008)	-0.027* (0.015)	0.046*** (0.012)	0.007 (0.006)
Non-Albanian	-0.096** (0.044)	-0.107 (0.077)	-0.047 (0.072)	0.065** (0.030)	-0.132*** (0.035)	-0.202*** (0.058)	-0.068* (0.038)	0.064** (0.030)

Source: compiled and calculated by the authors.

The fifth column of Table 4 and panel (a) of Figure 2 shows average marginal effects for employment. The effect of receiving remittances is negative and statistically significant for

most groups. Being a member of a household that receives remittances seems to have the largest negative effect on employment probability for non-Albanian communities (-13.2 percent) followed by urban workers (-8.2 percent), old workers (6.2 percent), and males (-5.3 percent). However, the negative effect on employment probability seems to be universal, the effect is also large for prime-age workers (-5.6%), Albanian workers (-3.4 percent), and rural workers (-2.2 percent). The only group that seems to be unaffected by remittances are young workers, even though this is likely to be from the small number of observations on this group.

Figure 2. Average marginal effects of the regressors for propensity score weighted models



Average marginal effects of the regressors for propensity score weighted models are plotted on graphs. For simplicity, only the coefficients of remittances are plotted; however, all models include the full set of covariates, namely: age and age squared, binary indicators for male, married, urban, Albanian ethnicity, household size, education dummies, and region dummies. Propensity score weighted average marginal effects for employment in panel (a), propensity score weighted average marginal effects for a paid employee in panel (b), propensity score weighted average marginal effects for family worker in panel (c), propensity score weighted average marginal effects for inactivity by age in panel (d).

Source: compiled and calculated by the authors.

The sixth column of Table 4 and panel (b) of Figure 2 shows the average marginal effects of being a paid employee. In contrast to unemployment, the effect of these outcomes is, in most

cases, not statistically significant or marginally significant. The negative effect on this variable seems to be entirely driven by old workers (-10.9 percent), rural workers (-6.6 percent), and non-Albanian communities (-20.2 percent). While for other groups, the effect is quite small and marginally not statistically significant.

The seventh column of Table 4 and panel (c) of Figure 2 shows the average marginal effects of being an unpaid family worker. Receiving remittances seems to increase the probability of being a family worker for old workers (7.4 percent), rural workers (6.5 percent), Albanian Workers (4.6 percent), and male workers (3.9 percent). The remittances seem to not affect the probabilities of being a family worker for young workers, females, and urban workers. Surprisingly, it seems to have a negative consequence on the likelihood of being a family worker in non-Albanian communities. Finally, column 8 within Table 4 and panel (d) for Figure 2, illustrates the heterogeneous effect of inactivity in the labour market triggered by remittances. The increasing probability of inactivity as a result of remittances seems to be entirely driven by females, urban workers, and non-Albanian workers.

5. Conclusions

Remittances are an important income source for many Kosovar families, and in the public discourse, the general perception is that even though they are helping the economy at the individual level the remittances are contributing to deformities in worker behaviours. However, the empirical evidence to back up these claims is scarce. Therefore, this study aimed to analyse the effect of remittances on employment patterns in Kosovo. Data used for this research is retrieved from a survey conducted by Millennium Challenge Corporation. Contrary to most previous studies on this topic in Kosovo, we go beyond means comparisons and simple OLS models. Our approach aimed at addressing endogeneity issues in the remittance reception status by employing a propensity weighting procedure.

Our findings suggest that remittances have significant implications on the employment patterns of individuals living in remittance-receiving households. Specifically, remittances seem to lower the overall probability of being employed or a paid member by up to 5%, whereas increasing the probability of being a family worker or being inactive by 3.7% and 1.1%, respectively. These effects are larger for non-Albanian communities, rural workers, old workers, and males. The suggestion of these findings seems to be that the remittances help create a more relaxed approach in the labour market for remittance-receiving individuals, possibly as a result of a relatively more secure financial position. We believe that the remittances increase the reservation wage and decrease job-search efforts resulting in a tougher scenario for getting jobs.

The findings of this empirical analysis provide an important contribution to the literature on the effects of remittances on individual labour market behaviour in Kosovo. It adds to the scarce literature on this topic and also provides possibly the first analysis of the heterogeneous effects by using a reliable database. Therefore, future studies ideally should address this drawback.

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