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# ESTIMATING THE IMPACT OF MIGRATION AND REMITTANCES ON HOUSEHOLD INCOME DISTRIBUTION AND POVERTY: EVIDENCE FROM RURAL KOSOVO

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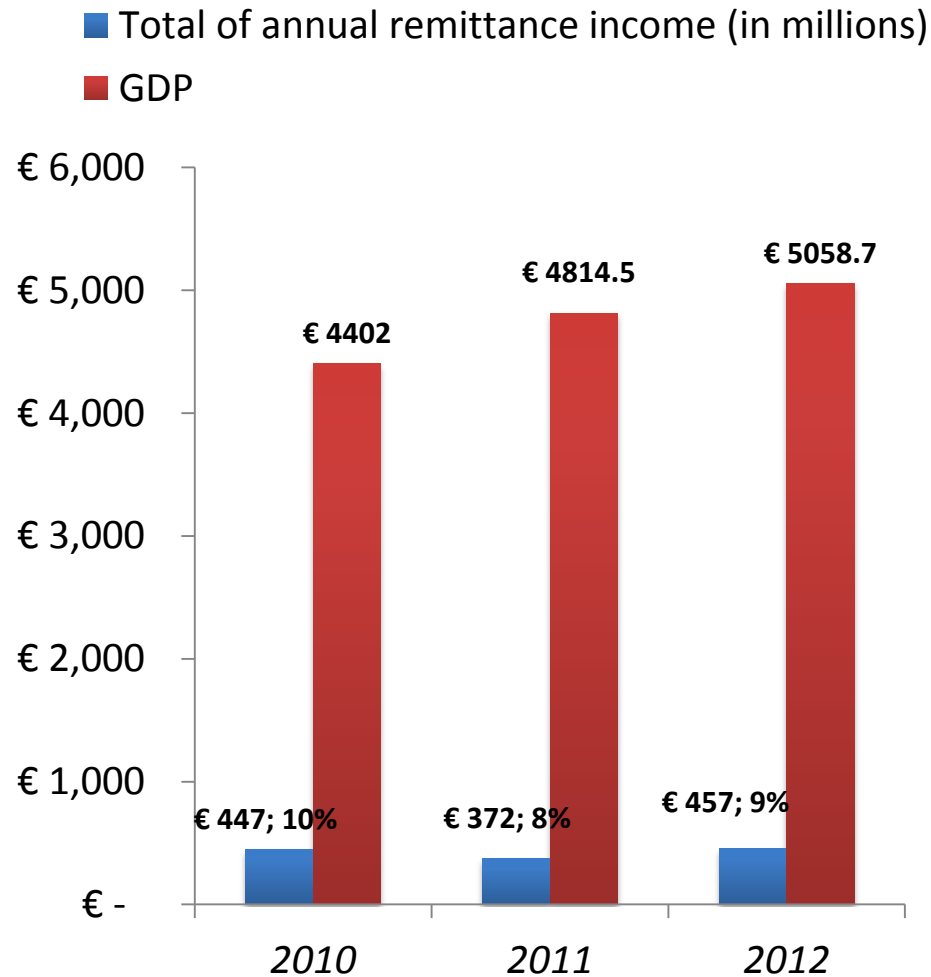
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*Photos by Elian and Arjola Arapi-Gjini*

- **Introduction**
- **Motivation**
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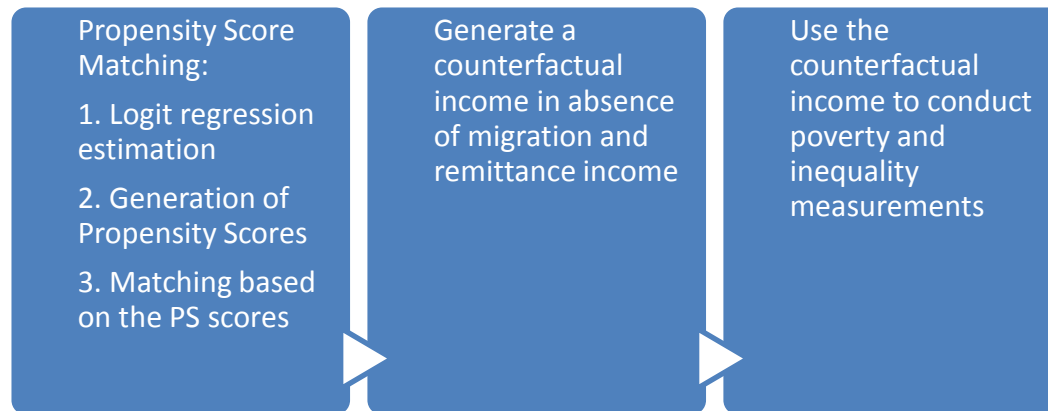


Source: Own calculation based on Kosovo Agency of Statistics (KAS) 2013 data

- One fifth of Kosovar households are involved in active labor migration
- We need to have a better understanding of the interplay between migration, remittances and socio-economic development in rural areas!

- Migration exerts a strong influence on socio-economic transformative processes in Kosovo
- Yet, impacts on key development indicators remain largely unexplored
- Rural income inequality and poverty are in focus of this research...

## What is the impact of remittances on inequality and poverty reduction in rural households in Kosovo?



- Estimating net effects of ‘exposure’ to migration on poverty and inequality is not novel
- Studies typically find that migration and remittances have the potential to increase economic growth and reduce poverty (ADAMS, 1989, 2004; ADAMS & PAGE 2005; ACOSTA, CALDERÓN, FAJNZYLBER & LOPEZ 2006; TAYLOR, ADAMS, MORA & LÓPEZ-FELDMAN 2006; LOKSHIN et al. 2010; MÖLLERS & MEYER 2014)

- The literature on the impact of migration and remittances on income inequality is more varied
- Some studies find a positive, equalizing effect of remittances on household income inequality (OBERAI & SINGH 1980; TAYLOR, ROZELLE & de BRAUW 2003)
- Other studies highlight a negative unequalizing effect of migration (ADAMS 1989; LEONES & FELDMAN, 1998; DOCQUIER & RAPOPORT, 2003; KIMHI 2010)

- Research on Kosovo focuses on:
  - Motives for remitting (HAVOLLI 2009 & 2011; MEYER et. al 2012)
  - Effects of migration on health and education (ALISHANI & NUSHI 2012), social developments (GASHI & HAXHIKADRIJA 2012)
  - Impact of remittances on rural households (HAXHIKADRIJA, 2009; MÖLLERS et al. 2013; ELEZAJ et al. 2012)
- The exception is the study by Möllers and Meyer (2014)



- The Counterfactual Framework of Causality and Propensity Score Matching (Neyman, 1923; Rubin, 1974; Rosenbaum & Rubin, 1983)

$$Y_i = W_i Y_{1i} + (1 - W_i) Y_{0i}$$

- Three treatment effects are measured:
  - Average Treatment Effect (ATE)
  - Average Treatment Effect for the Treated (ATT)
  - Average Treatment Effect for the Untreated (ATU)

**Poverty** measured via three poverty measures:

1. The Headcount Index
2. Poverty Deficit Index
3. Poverty Severity Index

**Gini coefficients** by the source of income in line with the methodology developed by Lerman and Yitzhaki (1985) & Stark, Taylor and Yitzhaki (1986)

$$\sum_{k=1}^K R_k G_k S_k$$

- Cross sectional data from **Kosovo Remittance Survey (KRS)** conducted by UNDP Kosovo in coordination with Kosovo Agency of Statistics (KAS)
- **8000 randomly selected households** in urban and rural areas in the summer of 2011
- Our rural **subsample** consists of **4,013 rural households**

# Results: Some Descriptives

	All households	Migrant household		Test statistics $\chi^2 / p$
		Migrant hh	Nonmigrant hh	
Number of rural HH	4,013	1,330	2,683	--
HH size	4.81	4.92	4.75	6.991/0.008
Dependency ratio	0.49	0.51	0.48	0.274/0.600
Age of HH head	48.57	50.4	47.68	38.473/0.000
Years of education of HH head	11.08	10.76	11.45	15.204/0.000
Number of migrants	0.56	1.67	0.00	2,337.547/0.000
Highest level of education in HH				
- Primary School (up to 4 years) or lower	0.47	0.98	0.2	0.325/0.568
- Secondary General School (~ 8 years)	4.66	5.19	4.36	0.000/1.000
- Vocational or Grammar School (~12 years)	53.08	45.64	54.23	0.484/0.486
- University degree	41.79	48.19	41.21	4.093/0.043
Household income (€)	6,478	7,186	6,126	18.888/0.000
Household income incl. remittances (€)	6,907	8,481	6,126	159.433/0.000
PC income, equivalised (€)	2,524	2,723	2,425	8.646 /0.000
PC income incl. remittances, equivalised (€)	2,686	3,212	2,425	122.539/0.000
Income shares (%)				
- Waged employment	72.80	59.80	78.17	342.442/0.000
- Self-employment	9.38	8.62	12.07	23.442/0.000
- Remittances	4.04	13.40	0.00	969.754/0.000
- Other income	14.10	18.80	9.76	4.235/0.000

Note: HH=household, PC = per capita; Test statistics refer to a Kruskal-Wallis-Test

**Table 2: Estimated treatment effects on migrant households**

Variable	Sample	Treated	Controls	Difference	Std. Err.	t / z
PC income incl. remittances, equivalised (€)	Unmatched	3212.67641	2425.56795	787.108462	65.3125234	12.05
	<b>ATT</b>	3217.62682	2263.29008	<b>954.36738</b>	75.5715247	11.63
	<b>ATU</b>	2294.90701	3217.37237	<b>922.465358</b>	.	.
	<b>ATE</b>			<b>938.720007</b>	.	.

Source: Own calculation based on KRS 2011 data

**Table 3: Poverty in rural Kosovo (2011)**

	Yearly income (€)	Headcount- index	Poverty deficit	Poverty severity	Headcount index	
					Without remittances	Counterfactual incomes
<b>Absolute poverty line</b>						
€ 1.72 line, 2011 prices*	628	0.03	0.01	0.00	0.04	0.04
€ 1.20 line, 2011 prices*	438	0.02	0.00	0.00	0.02	0.02
<b>Relative poverty line</b>						
60% of sample median**	1269	0.20	0.06	0.03	0.22	0.23

Source: Own calculation based on KRS 2011 data.

\*Absolute poverty line used by the WORLD BANK (2013) for Kosovo on the basis of a cost-of-basic needs approach for 2011.

\*\*This poverty line corresponds to 60% of the median equivalised per capita income within the sample.

**Table 4: Income distribution and remittances (2011)**

## **Gini coefficient**

▪ on the basis of equivalised per capita incomes	0.35
▪ remittances excluded	0.35
▪ using counterfactual incomes	0.34

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## **Decomposed Gini coefficients (elasticity in brackets)**

▪ on the basis of waged incomes	0.45 (-0.023)
▪ on the basis of farm employment	0.95 (-0.018)
▪ on the basis of remittances	0.92 ( 0.036)
▪ on the basis of other incomes	0.89 (-0.034)
▪ on the basis of self-employment	0.94 (-0.004)

Source: Own calculation based on KRS 2011 data

- Migration is beneficial for those engaging in it: on average it significantly raises migrant households yearly income
- However, the overall poverty effects seem rather modest
- One reason for this might be seen in the fact that poor households are significantly less involved in migration and have less access to remittances.
- Lacking trickle down effects are also mirrored in the negative effect of remittances on the income distribution