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M. Giannetti¹, D. Federici², M. Raitano³

1) University of Rome "La Sapienza"

2) University of Cassino

3) ISAE, Rome

Does Migration Help Reducing Inequality and Social Exclusion?

Dipartimento di Scienze Economiche

Università degli Studi di Cassino

Via S. Angelo Località Folcara, Cassino (FR)

Tel. +39 0776 2994734 Email dipse@eco.unicas.it

Does Migration Help Reducing Inequality and Social Exclusion?¹

M. Giannetti², D. Federici³, M. Raitano⁴

Abstract⁵

The impact of remittance flows on growth and income distribution has attracted a great deal of attention, but the theoretical and empirical literature on the relationship between remittances and economic development is far from clear. Although there is wide consensus that foreign remittances can help receiving households to increase income, consumption and capabilities to cope with socioeconomic shocks, there has been little quantitative research on impacts of remittances on household welfare and poverty. Our paper seeks to fill some of these gaps proposing an empirical analysis of the role of remittances as a tool for reducing inequality and covering households against poverty and social exclusion risks. The empirical analysis focuses on four Eastern European Countries: Slovenia, Poland, the Czech Republic and Hungary, and is based on the EU-SILC 2005 data-set providing for each household information as to the received inter-household cash transfers and amongst which regular cash support from households in other countries (i.e. remittances) are included.

Keywords: Remittances, inequality, poverty.

JEL classification: O10, O15, O52

1. Introduction

Migration affects sending countries in a variety of ways: through labour supply, changes in skill composition, in internal consumption, in trade pattern and so on. Among those aspects, the impact of remittances flows on growth and income distribution has attracted a lot of attention from economists and international institutions although the theoretical and empirical analysis of the effects of remittances on economic development is far from clear⁶.

While there is wide consensus among researchers that foreign remittances can help receiving households to increase income and well-being as well as to cope with socioeconomic shocks, there has been little quantitative research on the impact of migrant remittances on household's welfare and poverty. Although the immediate impact of remittances is on transient poverty, its long-term effects should not be underestimated. Poor households that receive remittances rapidly attain

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² University of Rome "La Sapienza", Italy

³ University of Cassino, Italy. Corresponding author: d.federici@unicas.it

⁴ ISAE, Rome, Italy

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⁶ For a comprehensive survey on the theoretical and empirical economic literature on migrants' remittances see Rapoport and Docquier (2006)

standards of living higher than those who do not have family members working abroad. These financial transfers have the potential capacity to generate wealth in the home and in the migrant-sending community; remittances lead to increased household expenditure in areas considered important for development, particularly education, entrepreneurship and health.

Our paper seeks to fill some of these gaps and it proposes an empirical analysis of the role of remittances in reducing inequality and protecting households against poverty and social exclusion risks. By focusing on households with migrants, the paper determines whether and to what extent remittances affect the well-being of household members left behind. We use household survey data for selected CEE countries - Slovenia, Poland, the Czech Republic and Hungary – with quite different migration patterns.

The paper represents a contribution to the existing literature on the effects of remittances on poverty and inequality along two major dimensions. A very large nationally representative household survey dataset is used. Moreover, we compare four of the biggest new EU entrant countries with respect to both the characteristics of remittances recipients and the effects of transfers on poverty and social exclusion risks.

The paper is organized as follow. In the next section a brief literature review on the impact of remittances on poverty and development is carried out. In the third section, the key macroeconomic factors of the considered countries are provided. The empirical analysis is the object of the fourth section. After the description of the data and the method of analysis, the results of the logit regression constitutes the core of the section. In the fifth section conclusions are drawn.

2. Literature Review

Empirical literature on the effect of remittances on income distribution and on poverty reduction is rather mixed. Some researchers argue that migrant remittances tend to reduce income inequality (Oberai et al. 1989; Guest 1998, Taylor and Wyatt, 1996), while others point out that remittances increase inequality (Barham and Boucher 1998). Evidence remains contradictory and the answer is likely to critically depend on the specific socioeconomic circumstances of households from which migrants come, the types of migration and the different phases in a community's migration history (Stark, Taylor and Yitzhaki 1988; Russell 1992; Taylor 1999). However, more unanimous seems to be the answer to the question of whether remittances help to reduce poverty. The most recent research (World Bank, 2006; Jongwanich, 2007) supports the positive effects of remittances in the alleviation of poverty. Furthermore, Taylor (1992) notes that, in addition to the direct impact on income, remittances play an important role in easing credit constraints for liquidity constrained households. Once the indirect effects are considered, the remittances act to equalize incomes.

Stark et al. (1986 and 1988) analyzed household data from two Mexican villages, one with a relatively recent Mexico-to-U.S. migration experience, and one with a longer history of migration. Their findings indicate that the distributional impact of remittances strongly depends on the village's migration history. Adams (1989) by using a sample of three villages in Egypt concludes that the inclusion of remittances from abroad worsens income inequality. In contrast, following the same approach with households from 4 districts in Pakistan, Adams (1992) observes that remittances have an essentially neutral impact on the rural income distribution. The same result is obtained by Milanovic (1987), who, using panel data from the 1973, 1978, and 1983 Yugoslavian household surveys, shows that remittances tend to raise inequality given that the poor do not benefit from migration since only the richer households are able to access migration opportunities. Differently, Markova (2006), shows for Albania both an increase in above-average consumption and below-average poverty incidence for households remittances recipients.

Remittances can also contribute to development within migrant-sending communities through the promotion of new small-scale enterprises in the non-farm sector, as happened in several countries including Egypt (McCormick and Wahba, 2003) and Mexico (Cornelius, 1990). Indeed, based on a survey of more than 600 small firms in 44 urban areas Woodruff and Zenteno (2007) state that remittances from the US financed much of the micro-enterprise development in Mexico. Such activities are likely to be enhanced by the relaxation of credit constraints benefiting remittance-receiving households.

Viet (2008) investigates the impact of foreign remittances on household welfare, poverty and inequality in Vietnam using the Vietnam Household Living Standard Survey 2002-2004. He found that better-off households received a larger proportion of foreign remittances. As a result, although foreign remittances considerably increased income and consumption of the receiving households, their impact on poverty reduction was rather small. The evidence available from Indonesia shows that remittances acquired from international labor migration were primarily used for the acquisition of land and housing improvements (Hugo 2003) while children's education was another important use.

At the household level, remittances generally raise the standard of living of recipient families. They help to improve children's education, contribute to better health, housing and family welfare, and thus promote future human capital development. But although remittances flows accrue directly to household with migrant members, households that don't receive remittances can also benefit indirectly from these transfers. Channels by which non-migrant households indirectly gain from remittances flows work through the increase in the consumption patterns of recipient families that stimulate local production, job creation, creation of new enterprises; development of new

infrastructures etc., all mechanisms that may improve development in the community.⁷ Duryea *et al.* (2005) find that an increase in the share of households receiving remittances in a municipality led to both better health and child school attendance. In several Asian countries, including Pakistan and Thailand, families left behind by migrants used remittances to hire labour and purchase farm equipment, leading to output growth (Stahl, 1986; Kerr, 1996).

Yang and Martinez (2005) based on a survey of Filipino households find that unanticipated increases in remittances contributed not only to enhanced human capital accumulation, with less child labour and more child schooling in remittance-receiving households but also a higher rate of participation in capital-intensive enterprises. Glystos (2002) reaches a similar conclusion on the basis of a study on six of the seven Mediterranean countries where investment increases with remittances. Leon-Ledesma and Piracha (2004) obtain analogous results for Eastern European Countries in the 1990s.

3. Economic background

Our analysis focuses on households receiving remittances in Poland, the Czech Republic, Slovenia and Hungary. A short panoramic overview on the current macroeconomic situation of these countries is provided.

The four countries considered are among those Central and Eastern European countries most advanced in the transition process towards the capitalist economic system, thanks also to their different status during the *planned economy* period (Atkinson and Micklewright, 1992). Particularly, following the World Bank classification, the Czech Republic and Slovenia together with Estonia are the only three that enter the group of high income countries, whilst Hungary and Poland together with a few more ex-planned economies are part of upper-middle income countries (World Bank, 2008).

The Czech economy, after a sharp recession at the end of the 90's, has shown in the last ten years a very strong performance, with an average real GDP growth rate of 4.4% (6.5% in the last three years (ECB, 2008). Notwithstanding real wages continuous growth faster than labour productivity, the unemployment rate, even if quite high till 2006, has been decreasing in the last few years reaching 5.3% at the end of 2007. The reduction of unemployment has been made possible thanks to the strong internal demand while the still excessive unemployment is mainly due to structural reasons, i.e. mismatch between the demand and the supply of skills. Given these "good" economic results, the Czech Republic has become a net immigration country with immigrants flowing in mostly from less economic developed neighbouring transition countries, while the Czech emigrants

⁷ See also Woodruff and Zenteno, 2001; Sorensen and Pedersen, 2002.

move towards more advanced OECD economies. But the strong reduction in the welfare system that accompanied the transition (Giannetti and Nuti, 2007; Composto, 2008) and the heterogeneous impact the transition had on citizens, help to explain the still relatively high household poverty ratio as shown in table 3 of the next section. It is mostly to these households that in 2006 the 1,300 million \$ inward flow of remittances accrue.

In Hungary real GDP growth has been quite constant, around 4.3% in the period 1998-2006 but in 2007 a strong slowdown of the economy has been registered. The unemployment rate was still around 7.4% at the end of 2007. The real GDP per capita, even if one of the highest among the New European Union Member States is still very low with respect to the EU-15 average, just above 50%. Real wages have been increasing in the period between 1998 and 2007 boosting inflation and contributing to the worsening inequality of income distribution. The household poverty ratio is still over 13% (see table 3). The stock of Hungarian emigrants was at the end of 2005 equal to 4.7% of total population (10 million people), giving rise to an inward flow of remittances equal to 363 million \$ (0.3% of GDP) in 2006⁸.

Poland shows a very similar economic pattern to the Czech Republic even if starting from quite different institutional and economic circumstances at the beginning of the transition (Atkinsons and Micklewright, 1992). The real GDP growth rate in the last ten years has been on average around 4% peaking to 6.5% in 2007. Thanks to the sustained internal demand, unemployment, though still high, fell from 19% in 2004 to 9.4% in 2007 (ECB, 2008). Poverty heavily affects Polish people especially given the high share of agriculture in the GDP and the strong reduction in welfare expenditure. The household poverty ratio was 18% in 2005, (Table 3).

Slovenia is the only country of the former Yugoslavia already member of EU and the first among the new member countries adopting the EURO at the beginning of 2007. A relatively small country, its economy enjoys a good environment especially after the implementations of the last administrative and economic reforms. Following economic growth, there was an increase in employment, which, since 2004 has exceeded the European average (in 2005, employment in Slovenia was 66%, as against 63.8% in the EU). Compared to the EU average, Slovenia also has a considerably high employment rate of women (61.3% in 2005)., the share of inward investment as a percentage of GDP has reached 23% in 2006. These facts help to explain why net migration flow in the country has been positive in the last few years, although remittances inflows have been quite high relative to the GDP, faring around 0.8-0.9% on average in the last eight years.

4. The Empirical Analysis

⁸ World Bank, 2008.

4.1 Data-set and methodology

Our analysis is based on the EU-SILC 2005 micro dataset (Community Statistics on Income and Living Conditions) that represents the first wave of the new harmonized panel survey for all the EU countries (including the new accession countries) about individual and household incomes and living conditions. In particular, EU-SILC survey records information regarding the personal characteristics of all members older than 16 as well as on household composition and sources of income. In addition, a reference individual is identified for each household. Cross sectional data used in the paper refer to income reference year 2005.

Among the several kinds of income that are included in the survey, regular inter-household cash transfers received are recorded. These transfers are defined as regular monetary amounts received, during the income reference period, from other households or persons; then they mainly include compulsory alimony and child support paid by the partner in case of divorce and regular cash support from households in other countries, i.e. remittances. Regular inter-household transfer's alimonies and remittances are not distinguished. However, to identify remittances, we assume that in case of households with, as reference individual, a divorced woman, these transfers are alimonies; otherwise regular inter-household transfers are imputed as remittances.

To study the impact of remittances on inequality, poverty and social exclusion, our paper focuses on a selection of Eastern European Countries, Poland, the Czech Republic, Hungary and Slovenia, that have been characterized by a wide process of labour force emigration in recent years.

Such analysis is carried out through three steps: firstly, we identify which households receive remittances; then, we compute the effect of remittances on reducing inequality and poverty risks in the origin country (comparing such effects with the role played by welfare transfers); finally, we analyze how being remittances recipients is associated to social exclusion risks, by considering the answers to two specific questions reported in EU-SILC survey.

Before presenting the results, some caveats and drawbacks about the impact of remittances on the origin country have to be pointed out. Our analysis being based on cross-sectional rather than on longitudinal data, we are not able to infer a causality nexus between remittances, households' characteristics and poverty and social-exclusion risks. In other terms, given that we do not observe a change in the status of remittances recipients over the years, but only such status (and the amount of remittances where positive) in the base year 2005, the empirical analysis could be biased by endogeneity (that prevents us from interpreting results in terms of causality; we may only discuss about correlations). Adding to that, EU-SILC reports only the amount of inter-household transfers

(from where we identify remittances) in a specific year, without specifying the length of time households had been receiving them.

However, in spite of such drawbacks from the used data-set, and in the light of shortage of studies analyzing the link between remittances and inequality, especially in a comparative perspective, our empirical analysis obtains very interesting insights of the problems. The very large sample used allows us to compare four of the biggest EU new entrants countries (see sect. 3) with respect to both the characteristics of remittances recipients and the effects of transfers on poverty and social exclusion risks⁹.

4.2 The Characteristics of Remittances Recipients

Table 1 reports summary statistics on remittances and welfare transfers. Hungary has the highest share of remittances recipients (12.8%). Nonetheless, the per household received amount is higher in Poland and Slovenia (respectively about 750 and 1,070 euros yearly).

[Table 1 about here]

In the empirical analysis the role of remittances are compared with that played by welfare transfers, i.e. family/children related allowances, housing allowances, and social exclusion benefits¹⁰. Everywhere the share of families receiving welfare transfers is much higher than the share of remittances recipients (such share is comprised between 25.1% and 45% *versus* 3.4% and 12.8% for remittances)¹¹. However, when signalling the major role played by remittances for the share of households receiving them, it has to be stressed that, among remittances of welfare recipients, only in Hungary average social benefits are (slightly) higher than remittances.

Table 2 shows the results of a logistic regression on the characteristics of remittances recipients for each country. Specifically, we estimate the following logit equation:

$$P_i = \phi(x'_i \beta) + \varepsilon_i,$$

where x_i corresponds to the vector of explanatory variables of the i -country and β represents the coefficients of these variables.

⁹ It has to be stressed that all results reported in this sections have been computed by using the household sample weights provided in the EU-SILC dataset. Household is the unit of analysis and, individual information used in some computations (e.g. educational attainment and sex) refer to the household reference individual. Money amounts are always reported in euro.

¹⁰ EU-SILC survey records as welfare transfers (i.e. social benefits) at the household level the ones corresponding to one of two criteria: coverage for the group in question is compulsory; it is based on the principle of social solidarity (i.e. if it is an insurance-based pension, the premium and entitlements are not proportional to the individual exposure to risk of the people protected).

¹¹ It has to be stressed that not all remittances recipients also receive welfare transfers (compare in table 1 second and fourth columns). But it has to be pointed out that some household, in order not to lose the entitlement to *means-tested* welfare benefits might not declare (also in the EU-SILC survey) to receive transfers from abroad.

In our study, the independent variables are the log of equalized household income without remittances and several dummies: being welfare transfers recipient, sex, marital status, educational attainment and professional status of the household reference individual, home ownership, and the family composition.

[Table 2 about here]

Income is everywhere negatively associated to remittances receipt, showing that remittances are mainly paid to households in the lower scale of the income distribution¹². Apart from The Czech Republic, being welfare recipient is significantly correlated with receiving remittances, while owning home is significant and negatively correlated in Hungary and Poland.

Apart from Poland, marital status affects receipt; educational attainment of the reference individual is positive and significant in the Czech Republic and Poland while his/her sex does not matter, as professional status in the Czech Republic and Hungary. In Poland and Slovenia, being workers and retired is negatively associated to receive remittances.

The picture about family composition is mixed (the reference modality is “household with an over than 65 years old responsible individual”). In Poland, single families (with or without children) are associated with remittances receipt while in Slovenia only single families with children are considered. In the Czech Republic older households are negatively associated with remittances, in Hungary there is no statistical significant association between receipt and family composition.

¹² As stressed previously, this can not be interpreted as a sure (causal) signal of the fact that remittances go to less advantaged households. To state some assertions we should know the true counterfactual pre-remittances income distribution. In fact, remittance recipients could have a lower income from other sources because they expect to receive a large money amount from their migrant-relatives.

Tab 1: Descriptive statistics about remittances and welfare transfers

	% of households receiving remittances	% of households receiving welfare transfers	% of households receiving remittances and welfare transfers	Average remittance in total population	Average remittance for recipients households	Average welfare transfer in total population	Average welfare transfer for recipients households	Average equivalised personal disposable income	Sample dimension
Poland	5.4	25.1	3.6	44.4	744.2	49.0	195.3	3,145	15,828
Czech Republic	5.0	33.0	2.3	44.1	596.7	154.7	468.4	4,747	4,351
Hungary	12.8	39.8	5.7	66.2	410.5	189.3	475.4	3,880	6,927
Slovenia	3.4	45.0	1.5	45.8	1067.6	371.7	825.4	9,122	8,277

Source: Author's calculations based on EU-SILC 2005 data

Tab. 2: Logit regression on remittances recipient's characteristics

	Czech Republic			Hungary			Poland			Slovenia		
	Coefficient	z	P value	Coefficient	z	P value	Coefficient	z	P value	Coefficient	z	P value
log_yeq_noremit	-0.808	-3.38	0.0010	-0.444	-4.83	0.0000	-0.638	-13.73	0.0000	-0.352	-2.41	0.0160
d_welfare	-0.071	-0.25	0.8050	0.634	4.99	0.0000	0.257	2.39	0.0170	0.559	2.28	0.0230
d_male	0.560	1.75	0.0800	0.005	0.05	0.9600	-0.081	-0.85	0.3950	-0.165	-0.90	0.3710
d_married	-0.875	-2.79	0.0050	-0.304	-2.50	0.0120	-0.145	-1.05	0.2930	-0.568	-2.88	0.0040
d_retired	-0.331	-0.91	0.3650	-0.077	-0.54	0.5870	-1.091	-7.64	0.0000	-0.515	-1.87	0.0620
d_worker	-0.307	-1.13	0.2570	-0.030	-0.25	0.8020	-0.231	-2.25	0.0250	-0.646	-2.88	0.0040
d_home_owner	0.056	0.31	0.7590	-0.317	-2.84	0.0050	-0.328	-3.69	0.0000	-0.288	-1.54	0.1230
d_hsingle	0.943	1.85	0.0650	-0.052	-0.32	0.7490	1.114	4.56	0.0000	0.340	0.87	0.3850
d_hnochild	1.634	3.22	0.0010	0.067	0.40	0.6890	0.442	1.77	0.0770	0.083	0.22	0.8270
d_hsinglewithchild	2.829	4.59	0.0000	-0.115	-0.45	0.6560	0.701	2.35	0.0190	1.536	3.36	0.0010
d_hchild	2.361	4.11	0.0000	0.198	1.00	0.3170	0.434	1.73	0.0830	0.385	0.94	0.3500
d_graduated	0.516	2.05	0.0400	0.154	1.20	0.2320	0.346	2.53	0.0110	0.198	0.71	0.4770
_cons	2.159	1.10	0.2710	1.721	2.29	0.0220	1.730	3.92	0.0000	0.001	0.00	0.9990

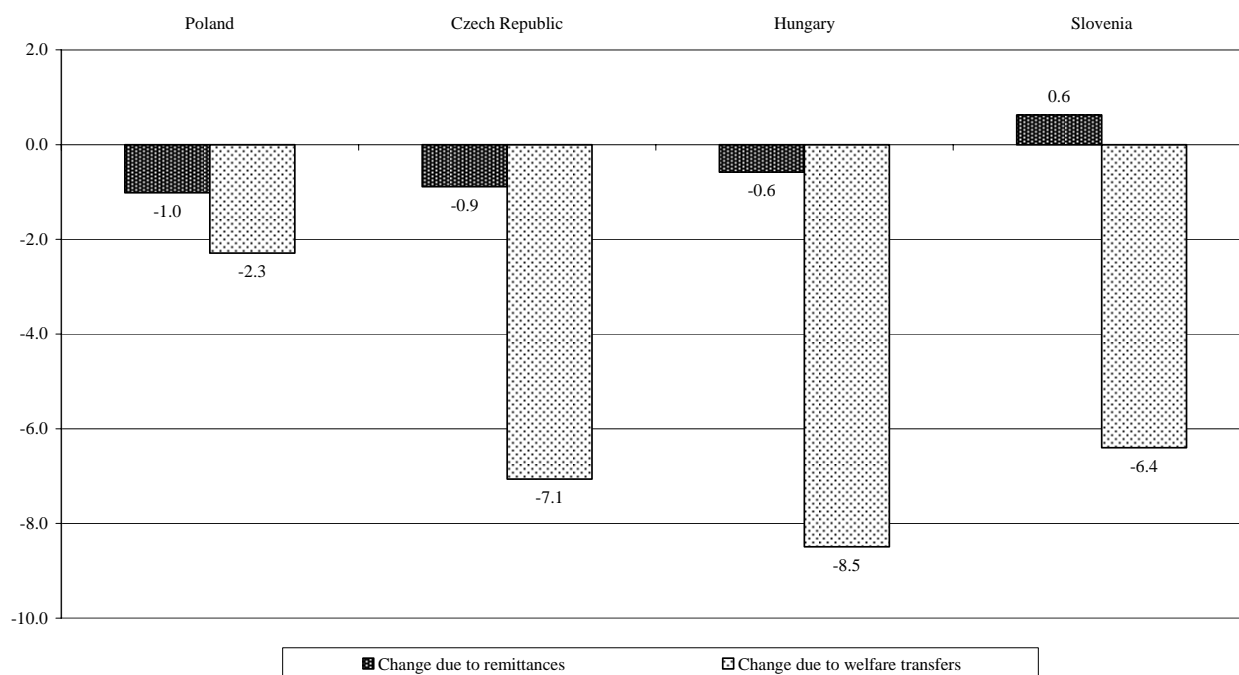
Source: Estimations based on EU-SILC 2005 data

4.3 The Effects of Remittances on Inequality and Poverty

In this section we show the effect of remittances and welfare benefit transfers on inequality and poverty indexes¹³. To address this issue we compare the values of indexes referred to household income without these components with the one imputed as “full income”. The analysis is carried out by observing the percentage change of indexes when remittances and/or welfare transfers are added to income from other sources.

Before discussing the results, it is necessary to point out that – even if in the present section we compare the inequality and poverty indexes without deeply analyzing the forces behind these outcomes – a different impact of remittances and social benefits on inequality and poverty indexes depends mainly on three factors: the share of households receiving transfers, the average amounts for recipient and the target efficiency (i.e. the share of remittances and welfare benefits directed to less advantaged people).

Fig. 1: Percentage change in Gini coefficient due to remittances or to welfare transfers.
Source: elaborations on EU-SILC 2005 data



As for the inequality (assessed by the Gini coefficient; see table 3 and figure 1) we find that, apart from Slovenia, where the Gini coefficient increases, the inclusion of income from remittances reduce the Gini coefficients. However, the magnitude of the reduction of inequality is very small,

¹³ It has to be stressed that, actually, remittances could increase inequality and poverty if they are relatively better directed to well-off individuals. In this case, in fact, the Gini coefficient increases and, through a growth in the level of median income (i.e. the base of the poverty threshold), poverty ratios and gaps could increase too.

possibly because of the low share of recipient households. At any rate also in Hungary (where the share is 12.8%) the Gini decreasing effect of remittances is very low.

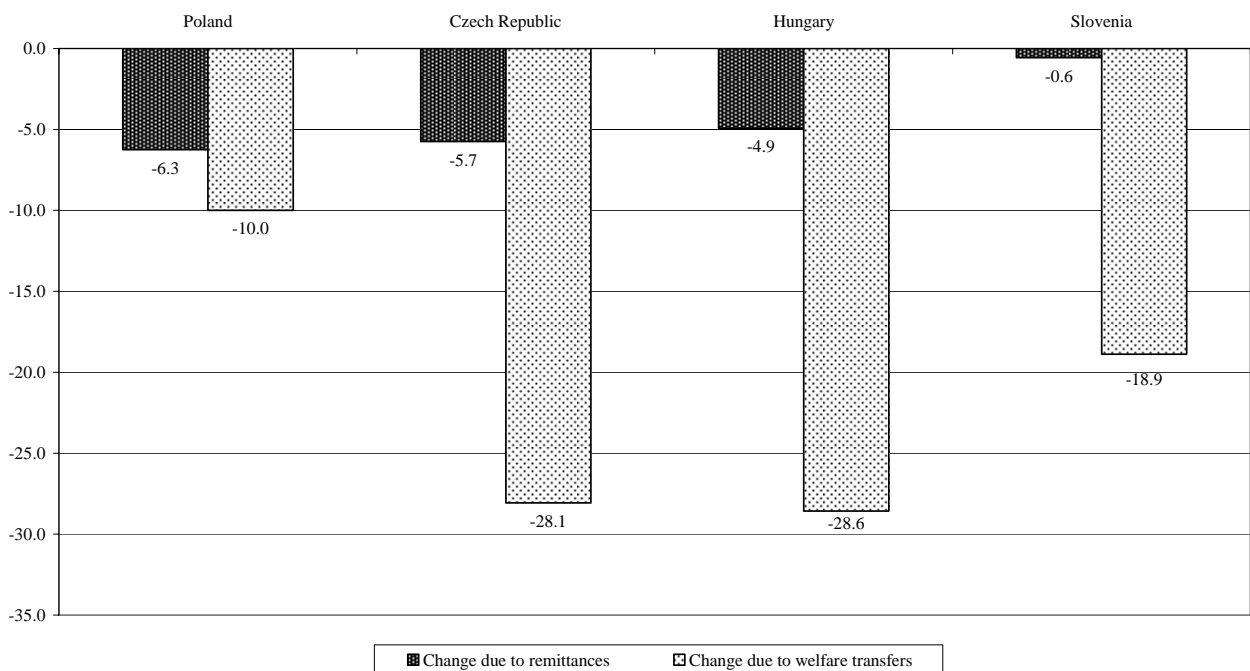
Tab. 3: Gini coefficients of income with or without remittances and welfare transfers

	Poland	Czech Republic	Hungary	Slovenia
Total income	0.3496	0.2672	0.2738	0.2574
Income without remittances	0.3532	0.2696	0.2754	0.2558
Income without welfare transfers	0.3578	0.2875	0.2992	0.2750
Income without welfare transfers and remittances	0.3603	0.2900	0.3012	0.2733

Source: Author's calculations on EU-SILC 2005 data

The reduction in the Gini coefficients brought about by welfare transfers is much higher everywhere, apart from Poland where such decrease is limited and only slightly higher than that due to remittances. This result can be interpreted in light of the higher share of recipients and to their specific targeting to households in the lower quintiles of the income distribution.

Fig. 2: Percentage change in poverty rate due to remittances or to welfare transfers.
Source: elaborations on EU-SILC 2005 data



By taking into account the effects of remittances and welfare transfers on poverty ratios computed on the whole population (see figure 2 and the penultimate column of table 4) the results obtained for Gini index are substantially confirmed (poverty threshold is 60% of median equivalised national income). The inclusion of remittances and welfare transfers reduces poverty risk, but the effect of welfare is everywhere stronger. Again, Poland is the country where remittances and social benefits

have, respectively, the largest and the smallest impact on index reduction (then, where the marginal impact of the two kinds of transfers is lower). In Slovenia - where excluding remittances from income even reduces Gini – in contrast, transfers received from abroad do not actually affect poverty ratios.

Tab. 4: Poverty ratios according to receipt of remittances and welfare transfers

		Remittances recipients	No remittances recipients	Welfare transfers recipients	No welfare transfers recipients	Total	Poverty threshold (60% of median equivalised income)
Poland	Total income	29.7	17.3	36.8	11.7	18.0	1,525
	Income without remittances	51.2	17.3	n.a.	n.a.	19.2	1,511
	Income without welfare transfers	n.a.	n.a.	44.7	11.7	20.0	1,499
	Income without welfare transfers and remittances	53.2	19.3	45.7	13.0	21.2	1,483
Czech Republic	Total income	15.6	7.8	17.4	3.7	8.2	2,371
	Income without remittances	26.0	7.8	n.a.	n.a.	8.7	2,365
	Income without welfare transfers	n.a.	n.a.	27.2	3.7	11.4	2,323
	Income without welfare transfers and remittances	28.9	11.3	28.8	3.9	12.1	2,309
Hungary	Total income	13.6	13.5	17.1	11.1	13.5	2,060
	Income without remittances	19.5	13.5	n.a.	n.a.	14.2	2,039
	Income without welfare transfers	n.a.	n.a.	30.7	11.1	18.9	1,981
	Income without welfare transfers and remittances	28.6	18.8	32.5	11.7	20.0	1,955
Slovenia	Total income	29.1	17.2	14.9	19.7	17.6	5,335
	Income without remittances	32.6	17.2	n.a.	n.a.	17.7	5,323
	Income without welfare transfers	n.a.	n.a.	24.2	19.7	21.7	5,118
	Income without welfare transfers and remittances	44.0	21.3	24.8	20.0	22.0	5,102

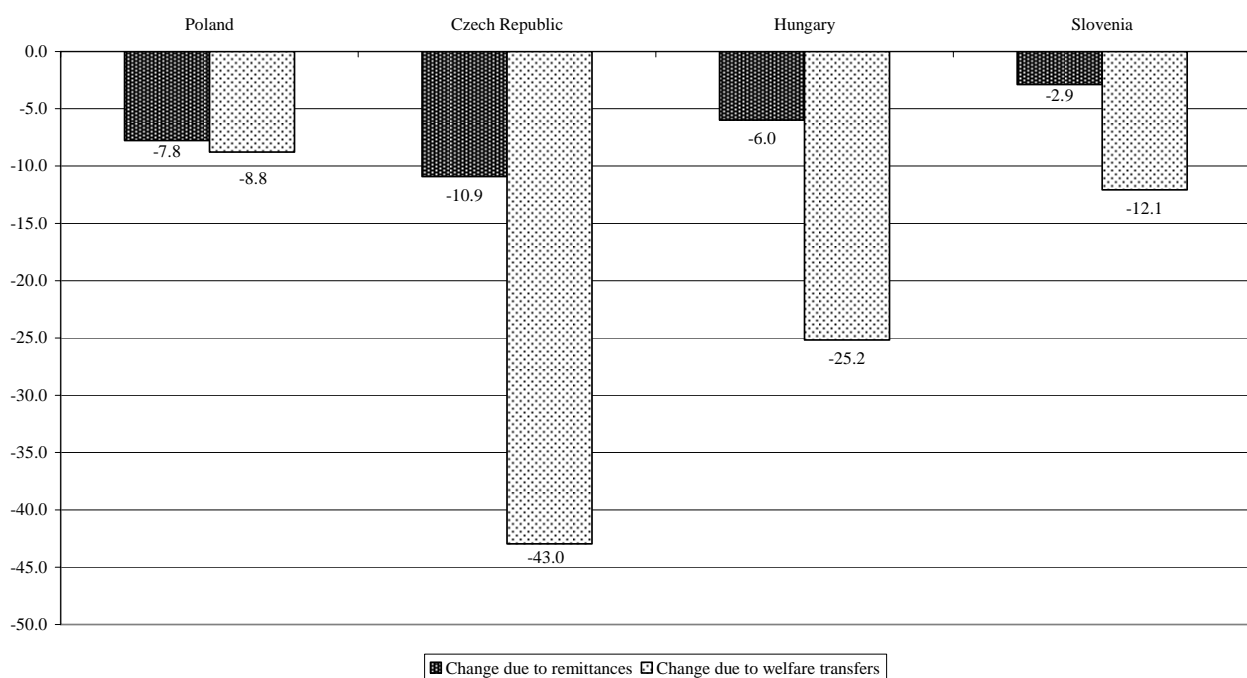
Source: Author's calculations on EU-SILC 2005 data

The columns concerning poverty risks from subgroups of population (i.e. people receiving or not social benefits and remittances) show that in all countries considered, even after having received the two transfers, recipients are still more at poverty risk than non recipients; the only partial exceptions are Slovenia (poverty ratio is lower among welfare transfer recipients than otherwise) and Hungary (poverty ratios do not depend on remittances receipt). Concerning, respectively, remittances and welfare recipients (third and fifth column), in Poland and the Czech Republic, in percentage points,

the “reducing poverty risk” effect of remittances is higher than that played by welfare transfers, while in Hungary and Slovenia the evidence is quite opposite.

Regarding poverty gaps¹⁴, the general picture is confirmed (figure 3 and penultimate column of Table 5). Remittances and welfare transfers reduce the poor average distance from the poverty threshold everywhere; remittances have a lower impact in Slovenia and, in every country, the impact of social benefits is relatively much higher, apart from Poland where, due to a smaller effect of welfare, differences between changes respectively due to remittances and welfare transfers are very slight (one percentage point).

Fig. 3: Percentage change in poverty gap due to remittances or to welfare transfers.
Source: elaborations on EU-SILC 2005 data



Observing how poverty gap changes by population subgroups according to the kind of income included (see Table 5), a mixed picture emerges. In particular, concerning total income, in Poland poverty gaps are lower for remittances recipients than for non recipients, while in the other countries it is the opposite and in the Czech Republic, Hungary and Slovenia risks to be poor are higher for social benefits recipients than for no recipients, while in Poland a significant poverty gap difference according to welfare transfers entitlement is not observed.

¹⁴ In line with the World Bank definition, poverty gap is computed as the mean distance from the poverty line of individual incomes below the poverty threshold (60% of the median income).

Tab. 5: Poverty gaps according to receipt of remittances and welfare transfers (Euro values)

		Remittances recipients	No remittances recipients	Welfare transfers recipients	No welfare transfers recipients	Total	Poverty threshold (60% of median equivalised income)
Poland	Total income	397	551	561	556	558	1,525
	Income without remittances	992	550	n.a.	n.a.	605	1,511
	Income without welfare transfers	n.a.	n.a.	657	553	612	1,499
	Income without welfare transfers and remittances	971	607	674	640	659	1,483
Czech Republic	Total income	698	555	551	611	569	2,371
	Income without remittances	1,144	551	n.a.	n.a.	639	2,365
	Income without welfare transfers	n.a.	n.a.	1,093	622	997	2,323
	Income without welfare transfers and remittances	1,496	1,013	1,143	803	1,073	2,309
Hungary	Total income	497	490	465	519	491	2,060
	Income without remittances	696	485	n.a.	n.a.	522	2,039
	Income without welfare transfers	n.a.	n.a.	741	495	656	1,981
	Income without welfare transfers and remittances	843	655	722	534	689	1,955
Slovenia	Total income	2,791	1,372	1,407	1,478	1,451	5,335
	Income without remittances	3,460	1,364	n.a.	n.a.	1,494	5,323
	Income without welfare transfers	n.a.	n.a.	1,950	1,356	1,650	5,118
	Income without welfare transfers and remittances	3,141	1,585	1,971	1,413	1,693	5,102

Source: Author's calculations on EU-SILC 2005 data

4.4 The Relationship between Remittances and Social Exclusion

To assess the “of being socially” excluded, we employ the answers to two questions specifically recorded with this aim in the EU-SILC dataset (the reference unit is the household):

- a) Are you able to face unexpected financial expenses¹⁵?
- b) Are you able to make ends meet¹⁶?

¹⁵ In each country the question specifically refers to a specific amount linked to the national poverty line. The exact wording of the question is “Could your household afford an unexpected required expense of (a specific amount country specific) with its own resources?”, where own resources mean that household cannot ask for financial help from anybody, the account has to be debited within one month and the household situation regarding potential debts does not deteriorate. Answers to the question are recorded through a dichotomised variable (yes or not).

¹⁶ The question records the household respondent's assessment of the level of difficulty experienced by the household in making ends meet, where the level is categorized by a qualitative ordinal variable with six modalities (with great difficulty, with difficulty, with some difficulty, fairly easily, easily, very easily). Taking in mind the household's total monthly income, the idea is to observe with which level of difficulty the household is able to pay its usual expenses.

Then we use household answers to previous questions as dichotomized¹⁷ variables of subjective social inclusion to be used as dependent variables of logit regressions about the association between household features and risks to feel socially excluded (dummies assume value 1 if the risk is not faced, 0 otherwise).

Among control variables, total household equivalent income and two dummies regarding whether households receive remittances and welfare transfers are included¹⁸. In addition to the independent variables previously discussed (see Table 2), also the following ones are included in this step: the age of the reference individual (taken also squared), his subjective health status, and two different modalities for educational attainment.

Tab. 6: Logit regression on being able to face unexpected financial expenses

	Czech Republic		Hungary		Poland		Slovenia	
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
loghincome~q	1.897	0.0000	1.136	0.0000	1.086	0.0000	1.217	0.0000
d_remittances	0.092	0.6020	-0.264	0.0050	-0.570	0.0000	-0.107	0.5790
d_welfare	-0.447	0.0060	-0.412	0.0000	-0.792	0.0000	-0.633	0.0000
p_age	0.008	0.6560	-0.028	0.0460	-0.067	0.0000	-0.042	0.0050
p_agesquare	0.000	0.9910	0.000	0.0020	0.001	0.0000	0.000	0.0050
d_male	0.189	0.0700	0.255	0.0010	0.341	0.0000	0.154	0.0110
d_married	0.429	0.0000	0.314	0.0010	0.177	0.0090	0.265	0.0000
d_badhealth	-0.513	0.0000	-0.735	0.0000	-0.524	0.0000	-0.717	0.0000
d_graduated	1.096	0.0000	0.986	0.0000	1.395	0.0000	1.228	0.0000
d_uppersecondary	0.447	0.0000	0.406	0.0000	0.376	0.0000	0.541	0.0000
d_retired	0.255	0.1590	0.085	0.5060	0.170	0.0190	0.231	0.0570
d_worker	0.312	0.0370	0.287	0.0060	0.558	0.0000	0.313	0.0030
d_owner	0.437	0.0000	0.252	0.0090	0.463	0.0000	0.509	0.0000
d_single	0.139	0.3600	0.056	0.6260	-0.133	0.1370	-0.018	0.8860
d_nochild	-0.216	0.1290	-0.002	0.9870	0.035	0.6700	0.047	0.6600
d_singlewithchild	0.219	0.4370	0.018	0.9340	-0.028	0.8660	0.143	0.4960
d_child	0.022	0.9160	0.331	0.0250	0.245	0.0060	0.412	0.0020
constant	-17.126	0.0000	-10.254	0.0000	-8.731	0.0000	-10.833	0.0000

Source: Estimations based on EU-SILC 2005 data

Concerning the ability to face unexpected expenses (see Table 6), it has to be noticed that income is, as expected, always associated with a lower risk, while in Hungary and Poland being recipients of remittances increase the probability to be at risk and it is not significantly associated to such proxy of social exclusion in the other two countries. Receiving welfare transfer is, instead, always negatively linked to the capacity to afford unexpected expenses. Bad health is everywhere linked to higher risk, while family composition is usually not significant. Older households (identified by the respondent age) are more at risk, while families that own home and with male, married and

¹⁷ We aggregate records about ability to make ends meet in a dummy variable, that assumes value 0 if individuals are able with difficulty of great difficulty, value 1 otherwise.

¹⁸ In the logit regressions information about the amount of remittances and welfare transfers are not considered; only the reciprocity status is used as dummy variable.

graduated respondents are generally less at risk. Being a worker decrease risk, being retired does not reduce it.

The results of the logit regression concerning the second proxy of social exclusion risk analyzed, i.e. the ability to make ends meet (see Table 7), show that , as for the previous indicator, income is associated to less (subjective) risk and being welfare (everywhere) and remittances (in Hungary and Poland) recipients decrease the capacity of households to meet their ends. Besides, risks increase with age and bad health and decrease with educational attainment, worker and marriage status and (in Poland and the Czech Rep.) home ownership. Again, as regards the family composition there is not a clear picture; most of the variables are not statistically significant.

Tab. 7: Logit regression on being able to make ends meet

	Czech Republic		Hungary		Poland		Slovenia	
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
loghincome~q	1.912	0.0000	1.025	0.0000	1.289	0.0000	1.266	0.0000
d_remittances	0.123	-0.5230	-0.241	-0.0340	-0.247	-0.0630	-0.229	-0.2950
d_welfare	-0.401	-0.0100	-0.415	-0.0010	-0.804	0.0000	-0.714	0.0000
p_age	-0.110	0.0000	-0.097	0.0000	-0.145	0.0000	-0.112	0.0000
p_agesquare	0.001	0.0000	0.001	0.0000	0.001	0.0000	0.001	0.0000
d_male	0.174	-0.1170	0.384	0.0000	0.218	0.0000	-0.030	-0.6430
d_married	0.190	-0.1540	0.373	-0.0020	0.276	-0.0020	0.298	0.0000
d_badhealth	-0.676	0.0000	-0.943	0.0000	-0.626	0.0000	-0.891	0.0000
d_graduated	0.364	-0.0300	1.008	0.0000	1.074	0.0000	1.131	0.0000
d_uppersecondary	0.034	-0.7930	0.319	-0.0010	0.415	0.0000	0.387	0.0000
d_retired	0.248	-0.2680	-0.228	-0.1510	0.157	-0.1140	0.164	-0.2690
d_worker	0.533	-0.0070	-0.075	-0.5710	0.481	0.0000	0.295	-0.0270
d_owner	0.204	-0.0230	-0.107	-0.3490	0.198	0.0000	0.009	-0.9260
d_single	0.283	-0.0760	0.691	0.0000	0.273	-0.0150	0.078	-0.5700
d_nochild	-0.032	-0.8270	0.067	-0.6210	-0.133	-0.1860	-0.265	-0.0150
d_singlewithchild	-0.229	-0.4700	0.220	-0.4030	-0.112	-0.5850	-0.037	-0.8810
d_child	-0.101	-0.6120	0.058	-0.7480	-0.065	-0.5520	0.115	-0.4050
constant	-15.209	0.0000	-8.009	0.0000	-9.259	0.0000	-10.121	0.0000

Source: Estimations based on EU-SILC 2005 data

Conclusions

Notwithstanding, the limitation of data, we obtained interesting results. In particular, the analysis has shown that remittances are statistically significant in terms of poverty reduction. Furthermore, its poverty-reducing effects appear to be generally smaller in magnitude than welfare transfers. Remittances and welfare transfers impacts differ across the countries considered. These findings strengthen previous evidence on the relative importance of the country's institutions and socioeconomic conditions in exploring the effects of remittances in reducing inequality and social exclusion. A deeper investigation of what remittances mean to the recipient households can be attained by looking more closely at national, regional and local policies that can possibly affect and be affected by migration and remittances allocation.

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