

JAN BRZOZOWSKI*,
MARTA GRUSZKA**, MAŁGORZATA MAJKA**,
JUSTYNA SZYMAŃSKA**, CEZARY ULASIŃSKI**

International Return Migration and Remittances: the Regional Perspective

Introduction

The enlargement of the EU in 2004 and the consequent gradual opening of the national labor markets in the EU–15 for the citizens of EU–8¹ has led to the intensive flow of workers from the latter to the former. Among the post-accession migrants (Galasińska and Kozłowska 2009) the most visible group were Poles: at the peak of migration wave in 2007 approximately 1,3 million Polish citizens resided in the EU–15, which was 3,4% of the country’s population (Kaczmarczyk 2010). The international migration, subsequent return migration (Anacka and Fihel 2012) and their socio-economic implications attracted the attention of journalists, researchers and policy makers in Poland and in the EU. One of the most visible economic outcomes of post-accession migration were remittances. The magnitude of financial transfers from diaspora to Poland after 2004 has increased substantially, reaching 10.7 billion US dollars in 2008, which accounted for almost 3 per cent of country’s GDP (Ratha, Mohapatra and Silwal, 2009). Consequently, there is a need for in-depth studies on this topic.

The aim of our research is mostly empirical. In this paper, we study the relationship between the return migration and propensity to remit from the perspective of the source country. We formulate the following research questions: (1)

* Corresponding author: Department of European Studies, Cracow University of Economics, Rakowicka St. 27, 31–510 Kraków, Poland; jan.brzozowski@uek.krakow.pl

** Strategic Consulting Centre, Szlak St. 65/1004, 31–153 Kraków, Poland; cds@cds.krakow.pl

¹ The EU–15 countries (i.e. “old” members states, who have obtained membership in the EU before 2004) were able to maintain temporary restrictions for entry of EU–8 nationals (i.e. from Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia) on their labour markets. However, the UK, Ireland and Sweden lifted those restrictions already on the 1st May 2004 and other member states were opening their national labour markets for the entry of EU–8 nationals gradually, until the 1st May 2011.

Which factors play a role in explaining return migration decision? (2) Do return migrants inhibit a higher remittance propensity than other migrants? (3) Does return migration decision affect the amount of remittances sent by each individual?

Using a large representative household survey from Silesian voivodeship (a province in southern Poland), we carry an econometric analysis and present the most important factors that affect the individual's decision to return to the home region. Then we inspect the relationship between the return decision and remittance behavior. The results of our study show that return migrants are more prone to remit and send more funds than those migrants who remained abroad at the moment of the survey. Our findings demonstrate also that tertiary educated migrants are less likely to transfer financial assets than other migrants.

The structure of our paper is as follows: in the next section, we discuss the existent theoretical and empirical literature on the topic. Then we present historical background of Polish migration and describe the specific socio-economic context of migration from Silesian voivodeship. The knowledge of these national and regional particularities is vital in order to establish theoretical determinants of migration and return migration, which will be verified in the empirical analysis. In the third section, we provide basic definitions, describe the household survey and provide an overview of the data. We discuss the methodological issues in the fourth section, and present the results of the empirical analysis in the fifth section. The last section concludes the paper and outlines the most important policy recommendations.

1. Theoretical and empirical context

Migration and development is anything but a new topic: it has attracted the attention of scholars and policy-makers for more than 50 years (De Haas 2012). Within this area of research, two issues have gained considerable attention: remittances and return migration. Remittances might constitute an important factor in the economic growth of the sending countries which are usually low-income or developing economies (Taylor 1999). On the other hand, most scholars and policy makers agree that the most beneficial type of migration from the perspective of both the receiving and sending countries is the temporary one. This implies that after a given period of time migrants are expected to return to their home country, although this return should be voluntary (Van Houte and Davis 2008).

Those two strands of research – return (or temporary) migration and remittances – have often been mixed and combined in the economic literature. In their seminal paper, Galor and Stark (1990) show that a migrant that intends to return someday to his/her home country, should remit more than a permanent migrant. This hypothesis has recently been tested empirically by Amuedo-Dorantes and Pozo (2006) Pinger (2010), Dustmann and Mestres (2010), Sinning (2011) and Makina (2013). Most of these analyses have found that the return intentions play

a significant and a positive role both in explaining remitting propensity and also in determining the amount of remittances sent by migrants. In the case of Polish migration studies, a special attention should be paid to the research study of Krzesicki (2012). He analyzed the remitting propensity and remitting behavior of recent post-accession migrants from Poland (i.e. those individuals, who have left the country after 2004). He has found limited evidence for the relationship between the probability of transferring funds to Poland and return intentions. However, while focusing only on remittance-senders, the intention to stay permanently abroad has played a key role in explaining the amount of remittances transferred by each individual.

Still, all the aforementioned studies rely on the declared intention of the respondents. Although those intentions have been found to play a key role in explaining remitting behavior of many migrants, the problem arises in the situation when a large share of migrants from the analyzed group has vague or imprecise plans about the future return to the home country. This problem is visible in the case of recent Polish immigrants who stay in Western European countries. Some authors have coined terms such as “intentional unpredictability” (Drinkwater, Eade and Garapich 2010) or “liquid (fluid) migration” (Grabowska-Lusińska and Okólski 2009) to describe the flexibility and changing patterns of migration from Poland after 2004. In the case of such individuals a high volatility of migration plans exists, moreover many migrants intentionally “refuse to frame their migratory plans within a particular time period” (Drinkwater, Eade and Garapich 2010:79). These characteristics of Polish migratory patterns imply the need of adoption of a different approach in the study on return migration and remittance behavior.

Moreover, most of the studies on return migration and remittances are carried out in the destination countries, with the visible predominance of Germany (Merkle and Zimmermann 1992; Dustman and Mestres 2010; Sinning 2011) and Australia (Ahlburg and Brown 1998; Bettin, Lucchetti and Zazzaro 2012) or both of those countries (Glystos 1997). While those economies remain among the most important host countries, focusing on one destination only gives a limited picture of the phenomenon, as migrants might have heterogeneous socio-economic characteristics, and consequently exhibit varied remitting behavior across multiple destinations. Only few papers analyze the remitting behavior of immigrants from the perspective of the sending country², including Mexico (Amuedo-Dorantes and Pozo 2006), Moldova (Pinger 2010) and Poland (Krzesicki 2012). Still, the data set used by Krzesicki includes information on a limited number of destination countries (depending on the year of survey: UK, Ireland, Netherlands and Germany), so it misses some important localizations (such as the US, Italy, Sweden, Spain and Belgium).

² Additionally, to our knowledge only one paper (Saarela and Roth 2012) analyzes the remitting behaviour from the perspective of both source (Finland) and host country (Sweden).

Consequently, our analysis contributes to the existing literature on international migration and remittances in several aspects. First, in our study we are able to directly identify return migrants, and consequently analyze the propensity to return *ex post* (when it took place) rather than *ex ante* (based on the declarations of the respondents, as in the aforementioned studies). Taking into consideration the aforementioned character of the migration in question it was the only valid approach. Second, as the empirical studies on the economic implications of Polish migration after 2004 remain very limited, our paper investigates the economic impacts of return migration from the perspective of a sending country. Based on a large, representative household survey in Silesian voivodeship in southern Poland, it analyses the impact of return migration on remitting propensity, and the effect of return migration on the amount of remittances sent.

2. Migration from Poland and Silesian voivodeship after 2004

The enlargement of the European Union in 2004 had profound impact on the migration patterns in Europe. The bulk of migrants from the Central and Eastern Europe flowed into the United Kingdom and Ireland, as those two countries and Sweden decided to completely remove restrictions of entry to the labor markets for the citizens from the new A8 member states already on the 1st May of 2004 (Burrell 2009). Among the sending countries, the most important one was Poland: during the peak of migration wave in 2007, 1.3 million Poles were residing in EU-15 states, a number that accounted for 3.4% of the country's total population (Kaczmarczyk 2010).

It is important to note that this migration differs from previously analyzed in several key aspects. The basic feature of this recent Polish migration (often described as post-accession migration) is that it is more regular than the migration outflows in 1990s, as most of migrants benefit from the mobility freedom right, as citizens of the European Union. Post-accession migration is also more long-term than circular and migrants pursue more individualistic approach to travelling abroad than those expats of the 1990s whose migration patterns reflected mostly joint household strategies (Kaczmarczyk and Okólski 2008).

However, the most important feature of migration from Poland after 2004 is its highly selective characteristic, with the relative predominance of young and better-educated post-accession migrants over the pre-accession migrants. This change stems from the reorientation of geographical destinations: in the pre-accession period the main destination country in Europe was Germany, which attracted relatively older migrants, mostly with vocational education. Post-accession migration is driven to two new important destinations: the United Kingdom and Ireland, which attract younger workers, often the ones with tertiary education (Anacka and Okólski 2010).

In relation to the topic of this research the most notable characteristic of post-accession migration are the strategies of the migrants, who do not know if and when they will return home. Some authors have even coined a term “intentional unpredictability” to describe a specific situation of recent post-accession Polish migrants, in which one “does not exclude any outcome of their mobility – either staying in Britain or returning to Poland, or moving to a different country” (Eade et al. 2008: 15).

Silesian voivodeship is located in southern Poland. It is a traditional industrial region, where the coal mining, engineering, chemical and automobile industry are the backbones of the economy. Industrial heritage has deeply influenced social norms and cultural patterns in the region: within the traditional family model in Silesia, the male is a typical breadwinner, while women play a secondary role on the labor market focusing on house-work and child care. Most of the population live in the urban areas and find employment in the industrial sector or services.

Before 2004, international migration from the Silesian voivodeship was relatively weak: the expats accounted for ca. 1.1% of regional population aged 15 and over (Kaczmarczyk 2010). However, in the post-accession period the outflow of labor force has intensified. Between 1st January 2004 and 31st April 2011, 6.9% of the households in Silesia experienced international migration of at least one of their members. Until 30th April 2011, in 43,5% of the households the migrants had already returned home. The total number of international migrants in this period was estimated at 156 thousand or 3.4% of the total region population (Szymańska et al. 2012). The characteristics of Silesian migrants and return migrants are presented in the next section.

3. Basic definitions and the overview of the data

For the purpose of our empirical analysis, we defined a migrant as a person that has stayed abroad³ for a period of at least 3 months between 1 January 2004 and 31st April 2011. This implies that we are focusing on the post-accession migration and return migration only, and we do not analyze the migrants who have migrated from Silesia before 2004. This definition allows us to investigate also more temporary, short-term forms of labor mobility, which are typical of the post-accession Polish migration (Kaczmarczyk and Okólski 2008). Therefore, in our analysis we differentiate between return migrants and migrants (persons who were international migrants at the time of the survey) in order to assess the migrant’s propensity to return to the home region. We argue that modeling return migration rather than temporary one is more plausible from the perspective of the sending country and for the region of origin. In the Polish case, the issue of developing a coherent diaspora policy, aimed at fostering the return of Polish migrants was

³ A stay abroad had to be connected either with work or with education.

discussed not only during the election campaign in 2007, but also implemented by the Civic Platform government in 2008. Therefore, the identification of most important return determinants has profound political implications. By remittances we understand regular (i.e. sent each month) flows of financial capital, sent by migrant from the destination country to Poland⁴. Therefore, we exclude in our empirical analysis the savings accumulated by migrants and brought to Poland during incidental family visits and also non-regular remittances. We believe that such narrow definition of remittances is useful from political point of view, as only regular flows of capital from abroad can be channeled into development project by its beneficiaries.

Data used in our empirical analysis comes from a cross-sectional household survey, carried out in Silesian voivodeship in April 2011. In this survey, 17,600 households were randomly sampled – ca. 1% of the total number of households in the Silesia region. Out of initial 17,600 households surveyed, 1,214 households were identified to have experienced migration of at least one household member. Using CATI (computer-assisted telephone interviewing) technique, 528 interviews with return migrants and 686 interviews with migrants' family members were carried out⁵. After exclusion of incomplete or faulty questionnaires, we restricted the sample to 1,039 observations: 458 return migrants and 581 migrants, i.e. individuals who on 31st April were staying in a foreign country.

The descriptive statistics presented in Table 1 show the variables used in the empirical analysis. In the first row the overall mean (frequency) for all international migrants (both return migrants and migrants) is reported, while the means (frequencies) for return migrants and migrants are included in the second and third row, respectively. As in Pinger study (2010), the last column contains information on the assessment of the difference between the means, using *t*-test for normal variables and Pearson's chi-square test for binary variables.

Data from our sample is consistent with the general observations on post-accession migration from Poland. The individuals who left the country after 1st January 2004 are on average young and mostly male. Nearly half of them are not married, neither live in informal relationship. Clearly there is an overrepresentation of the tertiary educated, but the most numerous group are individuals with vocational education, which can be attributed to the heritage of Silesian industrial traditions. Interestingly, less than a half of leavers had regular job before migrating. A substantial share of migrants went abroad with a specific purpose to study – this group includes not only Erasmus⁶ students, but also those who

⁴ Additionally, in the empirical analysis we include the amount of remittances sent by migrants in last 12 months, denominated in US dollars.

⁵ The interview has been carried out only with one individual per household. In the case of the households who have sent more than one person abroad, the migrant with the longest migration experience has been interviewed.

⁶ Erasmus is a European Union student exchange program, which allows for short-term (usually one semester) stay of a student from one member state in another European country.

Table 1
Descriptive statistics

Variable	Means			Pearson χ^2 or <i>t</i> -test		
	Overall	Return migrants	Migrants	Comparison of means/ frequency		
<i>N</i>	1,039	458	581			
% of sample	100	44.08	55.92			
<i>Remittances</i>						
Amount remitted	1,392.3	1,994.9	902.2	T	-3.80	***
<i>Migrant characteristics</i>						
Age	34.13	34.04	34.20	T	0.25	
Gender (male=1)	54.76	59.17	51.29	chi ²	6.42	**
Single (yes=1)	44.75	50.66	40.10	chi ²	11.53	***
Number of children (<18 years)	0.60	0.52	0.66	T	2.39	**
Vocational education (yes=1)	41.10	43.01	39.59	chi ²	1.24	
Tertiary education (yes=1)	40.52	43.45	38.21	chi ²	2.92	*
Migrate after graduating/during studies (yes=1)	31.28	35.81	27.71	chi ²	7.81	***
Held regular job before migrating (yes=1)	36.57	33.41	39.07	chi ²	3.54	*
Unemployed before migrating (yes=1)	18.58	17.90	19.10	chi ²	0.24	
Use social benefits abroad (yes=1)	10.88	13.10	9.12	chi ²	4.18	**
<i>Migration information</i>						
Migrate to study (yes=1)	12.22	13.32	11.36	chi ²	0.92	
Migrate to work legally (yes=1)	78.15	75.11	80.55	chi ²	4.44	**
Migrate to work illegally (yes=1)	3.95	5.68	2.58	chi ²	6.47	**
Migrate to Germany (yes=1)	18.00	15.72	19.79	chi ²	2.88	*
Migrate to UK or Ireland (yes=1)	37.34	34.72	39.41	chi ²	2.42	
Migrate to Spain (yes=1)	2.98	4.15	2.07	chi ²	3.84	*
Length of last/current stay abroad (in months)	36.15	18.14	50.35	T	16.53	***
Migrate from Northern sub-region (yes=1)	12.42	11.14	13.43	chi ²	1.23	
Migration episodes	1.36	1.45	1.30	T	-3.44	***
<i>Household information</i>						
Household size	3.48	3.49	3.47	T	-0.22	
Number of migrants	1.33	1.27	1.38	T	2.37	**

Test for equal means: *t*-test for normal variables and Pearson- χ^2 test for binary variables.

*, **, *** means respectively significance at 10%, 5% and 1% level

Source: Calculations based on own survey results.

combined educational aim (for instance: language courses) with work⁷. The main destinations were the UK and Ireland: those two countries jointly attracted more than 1/3 of all migrants. The second destination was the “old” country of Polish immigration – Germany. However, it should be noted that for the whole analyzed period (1st January 2004 – 31st April 2011) Germany maintained administrative restrictions for Polish workers on the national labor market, which was not the case of Ireland and the United Kingdom. Other destinations were less important, which is demonstrated by the case of the third most popular destination – Spain. From the perspective of a sending region, an origin from the peripheral Northern subregion has been included as an explanatory variable, to account for a possible important push factor. Finally, data on the number of migrants per household confirms the general observations on post-accession migration: in most cases, the individuals were the only ones to leave abroad from the given household, indicating that the usage of a family’s migration networks has been less important⁸.

The descriptive statistics point also to important differences between two groups of international migrants: the returnees and migrants. The return migrants have sent on average 1093 US dollars per year more than the migrants who at the time of the survey were still working abroad. Thus, even before the formal empirical analysis we can observe a significant disparity in the amount of remittances sent by return migrants and migrants. Returnees significantly more often (by 10 percentage points) remain single, and consequently have considerably less children to care for than migrants. The percentage of individuals who have left abroad during studies or just before graduation is about 8 percentage higher among the group of return migrants. On the other hand, in migrants’ group the percentage of individuals who held regular job before going abroad is ca. 5.5 percentage points higher. Still – surprisingly – the differences in age means between those two groups are not significant: both returnees and migrants are rather young people, as the average age is nearly 34 years.

The most interesting from the perspective of destination country’s migration policy and welfare system is the information on the propensity to use social benefits by immigrants. Nearly 11% of them used social benefits while staying abroad. Still, when we compare return migrants and those who remained in the destination country, we see substantial differences: returnees have been more prone to take benefits than still-migrants by 4 percentage points. Consequently, those Polish expats who would have potentially constituted greater burden on the welfare system of a destination country, had already returned to Silesia.

Those migrants, who still remain abroad are more likely to choose Germany as a destination country by 4 percentage points in relation to return migrants. On the other hand, Spain was more popular destination among return migrants and the difference in means in the case of more popular destination after 2004 – the

⁷ Migrants who declared education abroad as main motivation to migrate, but worked during their stay abroad, have been included in the sample, while those who did not work have been excluded.

⁸ However, using CATI technique, we were not able to include those households from which all members have migrated abroad, probably extensively using migrant networks.

United Kingdom and Ireland – was not found significant. Most Silesians went abroad to work legally in the destination country, however substantial differences appear between the two groups. Migrants are more prone to work legally than the returnees by around 5 percentage points, while those who worked illegally are more frequent among the returnees by ca. 3 percentage points.

Obviously, the most substantial differences between the two groups can be observed in the length of stay abroad: on average, return migrants spent 18 months during last leave, while migrants at the time of the study had been staying for ca. 50 months in the destination country. The mean of migration episodes is substantially higher in the case of return migrants. Finally, in a group of migrants the mean number of leavers per household is substantially higher than in the case of returnees: this might indicate the access to family migration networks and consequent higher successful integration probability, or the family reunification process. Unfortunately, we do not have information on migrants' other close family members that live in the same destination abroad to test this hypothesis.

4. Methodological issues

In our study, we examine the determinants of return migration and the propensity to remit financial capital back to the home region. First, we econometrically investigate the return decision as a binary choice, using the probit model. The decision of an individual to stay in a foreign country or return to the home region is – as in the analysis of Pinger (2010) – a mutually exclusive choice. Consequently, we define a new variable:

$$\psi_{return} = \begin{cases} 1 & \text{if } \psi_{return}^* > 0 \\ 0 & \text{if } \psi_{return}^* \leq 0 \end{cases}, \quad (1)$$

where ψ_{return} is the unobserved latent variable, which can be described as an international migrant's propensity to return to home region. The observable variable ψ_{return} is binary and takes value 1 when the migrant returns to Silesian voivodeship and 0 when the migrant decides to remain abroad, although both of these decisions need not necessarily be the permanent ones. A migrant operates as a rational agent, seeking to maximize utility by deciding whether to return or not. This decision is influenced by a set of explaining variables, related to the individual's personal and household characteristics. The probit model to be estimated can be described in the functional form:

$$Prob(\psi_{return} = 1 | X) = \Phi(X'\beta), \quad (2)$$

where β is a vector of coefficients, X denotes a vector of explaining variables and Φ the standard normal distribution. To facilitate the interpretation, marginal effects (evaluated at the sample means) are computed.

In the second step of our empirical analysis, we investigate how return decision influences the amount of remittances sent by a prospective migrant within the last

twelve months. However, in our sample 82.3% of migrants had missing values for the variable “amount of remittances sent”, because they reported that they had not sent any remittances or that they remitted money only incidentally. Only 184 out of 1039 migrants sent persistent remittances (i.e. on regular, monthly basis). Therefore, the process of sending persistent remittances in our sample is likely to be non-random. Consequently, we should correct for the non-randomness of sending regular remittances in our regression analysis. This issue is most often addressed in the literature on remittances by applying Heckman (1976) selection model.

Our procedure is quite similar to the one used by Agarwal and Horowitz (2002). In the first stage, we model the decision to send persistent remittances with the following equation:

$$T_i = Z_i\gamma + u_i, \quad (3)$$

where Z is the vector of explaining variables (described in the empirical section), γ is the vector of coefficients and u is the error term, while T is the binary variable, defined as the migrant’s propensity to transfer money back home on regular (monthly) basis. We estimate equation 3 using probit model and the full sample (1039 observations), to correct for selection bias in the sample of remittance-senders (184 migrants). In the second stage, we model the remittance behavior of those migrants who transfer regularly:

$$R_i = W_i\sigma + v_i \quad (4)$$

where R is our dependent variable (log of remittances sent in previous 12 months), W is the vector of explaining variables, σ is the vector of coefficients and v is the disturbance.

In both stages of Heckman estimation, marginal effects are computed to facilitate the analysis. In the first stage the marginal effects are calculated for the probability of the dependent variable (sending the remittances on regular basis) being observed. Therefore, they show how a marginal change in independent variable affects the migrant’s propensity to send persistent remittances. In the second stage, the marginal effects are computed for the dependent variable (amount of remittances sent in previous 12 months), conditional of being observed.

5. Results of empirical analysis

In our analysis, we investigated which determinants affect the propensity of the migrant’s return to the home region. Consequently, we inspected how the return intention affects the propensity to remit and, finally, the amount of remittances sent. Table 2 includes the results of the probit estimation for the return decision. To facilitate the interpretation, the marginal effects of the model have been shown. They have been evaluated at the means of the independent variables. Therefore, the marginal effects indicate the size and direction of the impact of the explanatory variables on the dependent variable (decision to return – a binary variable).

Table 2
Marginal effects on the decision to return

Variables	1	2	3	4
<i>Migrant characteristics</i>				
Age	0.0051196*** (2.61)	0.0051216*** (2.67)	0.0057261*** (3.04)	0.0052634*** (2.83)
Male	0.0852077** (2.30)	0.0851423** (2.30)	0.0835062** (2.28)	0.0843095** (2.31)
Single	0.0428531 (1.05)	0.0464109 (1.21)	0.0410837 (1.08)	0.045083 (1.19)
No. of children (<18 years)	-0.0079966 (-0.34)			
Vocational education	0.1023024* (1.96)	0.0992292* (1.91)	0.1067852** (2.08)	0.1041572** (2.03)
Tertiary education	0.1300817*** (2.61)	0.1306615*** (2.63)	0.1297601*** (2.63)	0.1341332*** (2.73)
Migrate after graduating/ during studies	0.2256419*** (3.48)	0.2276158*** (3.52)	0.1862756*** (3.01)	0.1797543*** (2.91)
Held regular job before migrating	0.0751798 (1.33)	0.0749246 (1.33)	0.0595367 (1.07)	0.0541436 (0.98)
Unemployed before migrating	0.1197098* (1.87)	0.1223241* (1.91)	0.1108459* (1.76)	0.1065736* (1.69)
Use social benefits abroad	0.2954676*** (5.25)	0.2950596*** (5.29)	0.2858542*** (5.10)	0.2871458*** (5.14)
<i>Migration information</i>				
Migrate to study	-0.1322572 (-1.57)	-0.1332096 (-1.58)		
Migrate to work legally	-0.0446804 (-0.52)	-0.0444864 (-0.52)		
Migrate to work illegally	0.1696337 (1.31)	0.172069 (1.33)		
Migrate to Germany	-0.088737* (-1.89)	-0.0899545* (-1.92)	-0.0927007** (-1.99)	
Migrate to UK or Ireland	-0.0055462 (-0.14)	-0.0054064 (-0.14)	-0.00037439 (-0.10)	
Migrate to Spain	0.012645 (0.13)	0.0069127 (0.07)	-0.001229 (-0.01)	
Length of stay abroad	-0.0124754*** (-16.02)	-0.0124126*** (-16.10)	-0.0123011*** (-16.15)	-0.012199*** (-16.26)
Migrate from Northern subregion	-0.0850143* (-1.71)	-0.0864954* (-1.74)	-0.0859008* (-1.74)	-0.0859871* (-1.74)
Migration episodes	-0.0896809*** (-3.69)	-0.0891903*** (-3.68)	-0.0845775*** (-3.54)	-0.0847259*** (-3.56)
<i>Household information</i>				
Household size	-0.0042584 (-0.37)			
Number of migrants	0.0117756 (0.47)			
Constant	Yes	Yes	Yes	Yes
N	1,039	1,039	1,039	1,039
Log likelihood	-518.33483	-518.625	-522.84389	-524.89088
AIC	1,080.67	1,075.25	1,077.688	1,075.782
Pseudo R ²	0.2729	0.2725	0.2666	0.2637

*, **, *** means respectively significance at 10%, 5% and 1% level.

z-statistic reported in parentheses.

Table shows probability change in response to a change of the regressors at mean.

Source: Calculations based on own survey results.

The most important determinants of return migration are the migrant's age, gender and educational background, the migrant's occupation before leaving abroad, subregion of origin, destination country, length of stay abroad and the number of international leaves. The positive and highly significant coefficient for a migrant's age indicates that with every year of age, the likelihood of return increases by ca. 0.5 percent. This result is not surprising, as older migrants face bigger difficulties to assimilate and integrate abroad than the young ones. The dummy variable indicating migration just after graduating or during the studies is significantly positive. This means that a migrant who has no working experience at home region and left abroad as a student or a recent graduate, is more likely to return than other migrants by 22.6 percent.

The coefficient for gender is significant: being a male increases the likelihood of return by around 8.5 percent. Although the migration from Poland and Silesian voivodeship is highly masculinized, males are also more prone to return, as the unemployment among females is considerably higher⁹. Surprisingly, family status – being single and the number of children per migrant – seems to have no influence on the decision to return. Still the age effect has been significant, which already should have been correlated positively with the number of children and marital status, since older individuals on average have more children and are more likely to be married than the younger ones. Moreover, we do not have information on the closest family members which remain abroad with a migrant: it seems probable that the older migrants who decided to remain abroad, have already taken their families to the destination country.

Both coefficients indicating education levels are significant and positive, however the one indicating tertiary education is highly significant and higher than in the case of vocational education. Tertiary education increases the likelihood of return by ca. 13 percent. This result can be explained by increased economical perspectives of skilled return migrants in Silesian voivodeship, but also by the fact that many tertiary educated Polish migrants are affected by brain waste problem. The work below formal qualifications abroad means that the possibilities of the upward mobility in the destination country might be limited for immigrants, inducing them to return to the source country.

Surprisingly, the sign of the binary variable “unemployed before migrating” is significantly positive. While the fact of being unemployed can be an important push factor for leaving the source region, it can hardly be imagined as a pull factor for return. Yet, this phenomenon can be explained by the strategy of many returnees: after an intense period of work abroad, many of them ‘take a break’ and register as unemployed. Being unemployed in Poland gives them access to public health security system, and most of the unemployed return migrants do not seek employment in this period, using their savings to finance daily expenses at home.

⁹ Moreover, women are on average younger than men in our sample, therefore they are more likely to stay longer abroad.

The most interesting from the perspective of public authorities both in Poland and in destination countries is the coefficient for the usage of social benefits abroad, which is positive and highly significant. Using social benefits in the destination country is connected to an increase in the likelihood of return by 29.5 percent. The explanation of this result is rather straightforward, as most of the migrants left Silesian voivodeship in search of employment. The crisis that has hit many destination countries (especially Ireland) since 2008 left many immigrants unemployed, but entitled to social security benefits. However, the exploitation of destination country's welfare system does not seem to be the goal of Silesian migrants. Instead, they decided to return to their home region.

The origin subregion and the destination country matters for the decision to return. A migrant originating from the Northern subregion is less likely to return by around 8.5 percent. The Northern subregion is the poorest administrative unit in Silesian voivodeship, having the lowest wages and the highest rate of unemployment. Therefore, it is not surprising that migrants from this area are not willing to return, as the economic perspectives at home are tiny. The coefficient for the binary variable “migrate to Germany” has the expected, negative sign and is significant. Germany is the traditional destination for Polish migrants, with well-established migration networks. Migrants who leave Silesia for Germany, are less likely to return by ca. 8.9 percent, as they receive considerable assistance in integration from their families who are already there.

The most important determinants of return migration are the length of stay abroad and the number of international leaves. An additional month spent in the destination country reduces the likelihood of return by 1.2 percent. A further migration episode decreases the likelihood of return by around 9 percent. This result is hardly surprising, as it confirms the most common slogan in migration studies: “nothing is more permanent than temporary migration”.

The results of our analysis are consistent across various model specifications. Four different specifications have been inspected to perform the robustness check, with the first specification in Table 2 meaning the full model. In the second specification, we have dropped the variables “number of children per migrant”, “household size” (in persons) and “number of migrants” (sent by each household), because the lack of information on migrants' families at the destination might have biased the results. Still, the significance and sign of all coefficients has remained unchanged. The results have been also unaffected after the exclusion of migration plan variables (specification 3) and additional elimination of migration destination variables (specification 4).

In the second step of our research, we analyze the impact of the decision to return on the amount of remittances sent by a prospective migrant within the last twelve months. To deal with the problem of sample selection, we use Heckman (1976) method, estimating two-stage equations. In the first stage (selection equation), we inspect the determinants of a decision to remit persistent remittances, using the full sample (1039 observations). In the second stage, we analyze the determinants which affect the amount of remittances sent by each migrant, using

the restricted sample (184 observations). To facilitate the interpretation, marginal effects have been computed for both of the equations.

The results of our empirical analysis of remittance behavior are shown in Table 3. In the case of the selection equation, the most important determinants of sending persistent (i.e. on regular, monthly basis) remittances are: the fact of being a return migrant, age, gender, the fact of being single, level of education, stay abroad for a period of 6 months or more, legal work abroad, number of international leaves, and the number of migrants sent from a given household. The coefficient for return migrant is highly significant (significance at 1% level) and positive. However, the impact of return migration on sending persistent remittances is not as strong as we have expected: being a returnee increases the likelihood of sending regular transfers to Silesian voivodeship by 6.8 percent. The age variable is significantly positive, a result which goes in line with the previous studies on remittance behavior (cf. Dustman and Mestres 2010). The coefficient for gender is also significant: being a male rises the likelihood of sending remittances by 5.2 percent, which is consistent with the traditional breadwinner model of the Silesian family.

The fact of being single and tertiary education have both significant and negative effect on sending persistent remittances. These results are also according to our expectations, as the migrants who are not in formal or informal relationship have less responsibilities than those who are married or have partners. Being single decreases the propensity to remit by 5.2 percent. On the other hand, various studies indicated that tertiary educated migrants are less prone to transfer financial assets back home than other migrants (Faini 2007). In our case, tertiary education reduces the likelihood of sending persistent remittances by 7.5 percent, which is a strong effect.

In order to be able to remit, migrants have to spend a certain amount of time at the destination. Therefore, the coefficient of binary variable “length of stay abroad for 6 months or more” is significant and positive: it increases the propensity to remit by 7.5 percent. However, the strongest determinant of sending persistent remittances is legal status of work. Having legal work at the destination increases the likelihood of regular transfers by 10.5 percent. This result does not necessarily mean that migrants who work illegally do not remit, but rather that this group use informal channels for transfers. Moreover, those migrants might transfer some assets, but not necessarily on a regular basis.

An additional migration episode increases the propensity to remit by 3.1 percent – this result should be interpreted as an “experience premium”, as individuals with former migration practice might find it easier to find a job abroad. On the other hand, the fact of having an additional household member who is a migrant affects negatively the likelihood to remit, although this effect is weak.

In the case of the outcome equation, the most important determinant of remittance behavior is the return migrant status: being a returnee increases the amount of remittances sent each month by nearly 60 percent. This effect is in line with the previous studies, but much stronger than in the analyses of Pinger (2009) and Sinning (2011), where the intention to return increased the sum of transfers by 30 to

Table 3
Marginal effect on sending remittances and on the amount of remittances sent

Variables	Dependent variable	
	Decision to remit persistent remittances (selection)	Amount of remittances sent (outcome)
Return migrant	0.0679697*** (2.97)	0.5962766*** (3.71)
<i>Migrant characteristics</i>		
Age	0.0062095*** (5.75)	0.0273738*** (4.00)
Male	0.0551788** (2.39)	0.4140201** (2.30)
Single	-0.0518245** (-2.12)	-0.1195885 (-0.67)
No. of children(<18 years)	0.015807 (1.31)	0.1075699 (1.45)
Vocational education	0.0492307 (1.59)	0.0663481 (0.33)
Tertiary education	-0.0750886** (-2.53)	-0.1645692 (-0.69)
<i>Migration information</i>		
Length of stay abroad		0.040397*** (5.03)
Length of stay abroad ^ 2		-0.0003532*** (-4.10)
Length of stay 6m	0.0753264*** (3.52)	0.2971583* (1.93)
Migrate to work legally	0.1048228*** (5.00)	0.4323078** (2.57)
Migration episodes	0.0310633** (2.23)	0.1019088** (2.09)
Number of migrants in household	-0.00344173** (-2.25)	-0.2574381** (-2.53)
Constant	Yes	Yes
N	1,039	1,039
Censored observations		855
Uncensored observations		184
Log likelihood	-628.5551	
rho		-0.7217984
Pseudo R ²	0.2061	

*, **, *** means respectively significance at 10%, 5% and 1% level.

z-statistic reported in parentheses.

Table shows probability change in response to a change of the regressors at mean.

Source: Calculations based on own survey results.

40 percent. Our results are closer to the results obtained by Dustman and Mestres (2010): in their study return intentions have increased the migrant's propensity to remit by 13.4 percent (in our study – by 6.8 percent), but the return migrants from Germany used to send 111.4 percent more than those who remained abroad.

Other independent variables that are important for the decision on the amount of remittances sent are: age, gender, the fact of being single, length of stay abroad, legal work abroad, number of international leaves, and the number of migrants sent from a given household. Being male rises the transferred sum by 41.4 percent, while legal employment increases remittances by 43.2 percent. Interestingly, the level of education does not have a significant impact on the amount transferred.

The relationship between duration of migration and remittances is nonlinear, following a concave pattern: other things held constant, after ca. 60 months of stay abroad the amount of transfers falls. This is in line with our expectations, as after a longer period of time migrants should start integration and assimilation processes, cutting gradually links with the home country.

An additional migration episode increases the amount of remittances by 10.2 percent. This is not surprising, as experienced migrants should remit more. On the other hand, an additional migrant in a given household decreases the amount of remittances sent by each migrant by 25.7 percent.

Conclusions

In this paper, we investigated the determinants of return migration from the perspective of the sending region – Silesian voivodeship in southern Poland. Consequently, we analyzed the impact of return intentions on remittances behavior. We have found that the key factors that affect the return of migrants are: age, gender, educational background, the fact of leaving the country just after graduation or during studies, usage of social benefits, length of stay abroad and number of international leaves. When inspecting the propensity to remit on a regular basis, the return migrant status turned out to be a significant, but not the strongest determinant. However, the fact of being a return migrant increased the amount of remittances by nearly 60 percent, which is a very strong effect. Therefore, while inspecting the impact of return intentions on remittance behavior, one should analyze separately two distinct processes: first, the effect of return plans on the decision to remit and second, the effect of return plans on the sum transferred. The results of our analysis show clearly that the return intentions (measured ex post, as the return migration actually takes place) have a significant impact on both processes. Therefore, limiting the analysis to the estimation of the impact of return intentions on the amount of remittances sent – using tobit model to deal with the problem of many zeros at dependent variable – might lead to biased results.

Based on these results, we can formulate the most important policy implications, both at the regional and at the national level. From the perspective of Silesian voivodeship, it is important that this region is able to attract the most

skilled, tertiary educated returnees. Among the return migrants there is an over-representation of single males that do not have children. This allows us to formulate the hypothesis that those individuals are returning to Silesia to find a partner and form new families. The fact that the returnees with tertiary education are less likely to transfer funds, does not necessarily mean that they do not contribute to the economic development of their home region. They might return with new working experiences, skills, they also accumulated cultural and social capital. Finally, they have returned with additional savings¹⁰ that can be spent productively in Silesia. Still, in the case of the underdeveloped, Northern subregion it is visible that lack of economic perspectives reduces the likelihood of return migration. Moreover, the source of concern for the regional labor offices should be the group of returnees that used to be unemployed before migration. As our data shows, those return migrants often resume the unemployment status and their successful activation on the labor market might be extremely difficult.

From the perspective of the sending country, it seems clear that a policy aimed at attracting the return of Polish diaspora members is important. Such policy not only contributes to the alleviating of the country's ageing population problems, but also – as our analysis demonstrates – implies a rise in the remittances inflow to Poland. Such transfers of foreign capital are especially important at the time of the current economic slowdown.

Our study also offers important information for the policy makers in the main destination countries for Polish migration. As many migrants have lost their jobs due to the economic crisis in Western Europe, the mounting concerns that foreigners will constitute a serious burden on the national welfare systems are not sustained by the results of our research. It turns out that the migrants who are entitled to social benefits are more eager to return to Poland. Besides, after the return they do not use social benefits from the destination countries anymore.

Finally, we would draw a reader's attention to potential improvements in future research on remitting behavior and return intentions. An important factor that needs to be considered is the potential impact of failed migration, i.e. situation when a migrant is unable to find a job or the gains from migration is smaller than expected, on return probability and, consequently, on the remitting propensity. The failed migration hypothesis so far has been tested empirically by Saarela and Rooth (2012), who have found that inability of finding job abroad increases the propensity to return by ca. 23%. In our sample, this effect has also been investigated but we found it insignificant, probably due to a tiny share of migrants who reported “migration failure” (less than 5%). Therefore, a problem of honesty of respondents while reporting unpleasant migration experiences needs a closer methodological attention in migration studies, as it might play a key role in explaining both the determinants of return migration and remitting decisions.

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¹⁰ In our data set, there is a clear differentiation between current transfers from abroad, defined as remittances, and savings which are brought by each individual upon the return.

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REEMIGRACJA I PRZEKAZY PIENIĘŻNE: UJĘCIE REGIONALNE

Streszczenie

W artykule tym autorzy analizują empiryczne determinanty decyzji emigrantów zarobkowych dotyczących powrotu do kraju oraz przesyłanych przez nich przekazów pieniężnych z perspektywy macierzystego regionu. Inaczej niż w poprzednich tego typu badaniach autorzy przebadali bezpośrednio osoby, które rzeczywiście powróciły do kraju, a nie te, które deklarują jedynie chęć powrotu, jak to było we wcześniejszych badaniach. Na podstawie badania ankietowego obejmującego dużą i reprezentatywną grupę gospodarstw domowych z województwa śląskiego (okręgu położonego w Polsce południowej) autorzy identyfikują najważniejsze czynniki wpływające na indywidualne decyzje emigrantów o powrocie do kraju i na ich zachowania w zakresie przesyłanych do kraju przekazów pieniężnych. Następnie badają zależność pomiędzy decyzją o powrocie a przekazami pieniężnymi do kraju. Wyniki badania pokazują, że osoby, które powracają do kraju, przysyłają do domu więcej pieniędzy niż osoby pozostające za granicą w chwili przeprowadzania

ankiety. Wyniki pokazują też, że osoby z wyższym wykształceniem przesyłają do kraju mniej pieniędzy niż osoby z wykształceniem podstawowym i średnim.

Słowa kluczowe: migracja międzynarodowa, reemigracja, przekazy pieniężne

JEL: F22, F24

INTERNATIONAL RETURN MIGRATION AND REMITTANCES: THE REGIONAL PERSPECTIVE

Summary

In this paper, the authors analyze empirically the determinants of return migration and the linkage between return migration and remittance behavior from the perspective of migrant source region. The study brings a new perspective to this topic, as the authors have directly identified return migrants and do not rely on the declared intentions to return, as in the previous studies. Using a large representative household survey from Silesian voivodeship (a province in southern Poland), the authors identify the most important factors that affect the individual's decision to return to the home region. Then they inspect the relationship between the return decision and remittance behavior. The results of the study show that return migrants are more prone to remit and send more funds than those migrants who remained abroad at the moment of the survey. The findings demonstrate also that tertiary educated migrants are less likely to transfer financial assets than other migrants.

Key words: international migration, return migration, remittances

JEL: F22, F24

РЕЭМИГРАЦИЯ И ДЕНЕЖНЫЕ ТРАНСФЕРТЫ: РЕГИОНАЛЬНЫЙ ПОДХОД

Резюме

В статье авторы анализируют эмпирические детерминанты, влияющие на решения трудовых эмигрантов, касающихся возвращения на родину и передаваемых ими денежных трансфертов, с точки зрения их родного региона. Иначе, чем в предыдущих такого типа исследованиях, авторы работали с людьми, которые действительно вернулись на родину, а не с теми, которые только заявляют о желании вернуться, как это было в более ранних исследованиях. На основе анкетного исследования, охватывающего большую и представительную группу домашних хозяйств из силезского воеводства (региона расположенного на юге Польши), авторы выявили самые важные факторы, влияющие на индивидуальные решения эмигрантов относительно возвращения на родину и на их поведение касательно передаваемых на родину денежных трансфертов. Затем авторы исследуют зависимость между решением вернуться на родину и денежными трансфертами. Исследования показывают, что люди, которые решили вернуться, посылают домой больше денег, чем те, которые решили остаться за рубежом. Результаты показывают также, что люди с высшим образованием передают на родину меньше денег, чем люди с неполным средним и средним образованием.

Ключевые слова: международная миграция, реэмиграция, денежные трансферты

JEL: F22, F24