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The Impact of the EU-entry Related Migration on Income Inequality in Poland

Introduction

At the beginning of transition Poland decided to start its integration with the European Community (EC). Many comments critical of a rapid transition and integration with the EC, and later with the European Union (EU), started to emerge already in the early nineties. Such opinions became more frequent with the moment when the accession became a real issue, i.e. with the start of Poland's EU-entry negotiations in 1997. The critics of the integration feared – apart from restrictions on Poland's sovereignty and loss of national identity – an increase in (income) inequality, as a consequence of the membership in the EU. However, statistical data (GUS, Eurostat, Transmonee) show that income inequality changed in an opposite direction or at least stabilized after Poland's EU-entry. Under these circumstances the question about the impact of Poland's EU-membership on income inequality seems justified.

Finding the answer to this question is very important, since it is directly related to the influence of Poland's integration with the EU on social well-being. The economic literature to date has not provided any studies on the impact of Poland's EU-accession on income inequality. In general, there exist only few studies on the relationship between the European integration or EU-extension and income inequality in EU-member countries (e.g. Beckfield, 2006; Beckfield, 2009; Fredricksen, 2012; Jimeno, Canto, et al., 2000).

The aim of this paper is to estimate the impact of remittances related to Poland's EU-entry migration on income inequality by adopting two methods of the Gini coefficient decomposition by factor components. It has to be emphasized

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that this paper is limited to a partial analysis of the influence of Polish migration on income disparities and does not exhaust the assessment of the overall influence of migration and remittances on income disparities in Poland. The study does not include a counterfactual analysis – i.e. a comparison with the non-migration scenario – nor does it investigate the impact of migration on the domestic labour market. No analysis of indirect and intertemporal effects of remittances on income inequality was carried out.

The article is organized as follows. Section 1 introduces the method used to estimate the impact of remittances on income inequality in Poland. Section 2 provides a short description of the household income data used in this study. Section 3 contains a review of literature on the relationship between emigration, remittances and income inequality. Section 4 describes general emigration and remittances trends in Poland in recent years. Section 5 presents the estimation of the impact of remittances on income disparities in Poland. The last part brings conclusions.

1. Analytical framework

The choice of the approach used to study income inequality determinants depends on the analyzed factors and on the complexity of their impact on the distribution of income. One of the methods is the decomposition of the Gini coefficient – one of the most popular income inequality measure – by certain (income, population, etc.) subgroups or income sources.

In this study two methods of income inequality decomposition (Gini coefficient) were used. The first approach was taken from the study by Stark, Taylor and Yitzhaki (1986, p. 725) – from now on called STY-decomposition – and has been widely adopted in studies on the impact of remittances on income inequality (e.g. Stark, Taylor, Yitzhaki, 1986; Stark, Taylor, Yitzhaki, 1988; Taylor, 1992; Barham, Boucher, 1998 – more examples in section 4). The STY-decomposition may be presented as follows. One of the ways of writing the Gini coefficient is the formula

$$G_0 = \frac{2\,\mathrm{cov}[y_0, F(y_0)]}{\mu_0}, \tag{1}$$

where G_0 is the Gini coefficient of total incomes in a given population, y_0 means income, μ_0 and $F(y_0)$ denote the population's mean income and cumulative distribution of total incomes in the population, respectively. Assuming that income may be divided into K components (e.g. income sources), i.e. $y_0 = \sum_{k=1}^{K} y_k$, where $y_1, \ldots, y_k$ are the income components, we can write and transform formula (1) as follows:

$$G_0 = \frac{2\sum_{k=1}^{K} \mathrm{cov}[y_k, F(y_0)]}{\mu_0} =$$
$$= \sum_{k=1}^{K} \left(\frac{\mathrm{cov}[y_k, F(y_0)]}{\mathrm{cov}[y_k, F(y_k)]} \right) \times \left(\frac{2\,\mathrm{cov}[y_k, F(y_k)]}{\mu_k} \right) \times \left(\frac{\mu_k}{\mu_0} \right) = \tag{2}$$
$$= \sum_{k=1}^{K} R_k G_k S_k,$$

where S_k is the share of component k in population's total income, G_k is the Gini coefficient corresponding to income component k, and R_k denotes the Gini correlation of component k with total income[1]

$$R_k = \frac{\mathrm{cov}[y_k, F(y_0)]}{\mathrm{cov}[y_k, F(y_k)]}. \tag{3}$$

The properties of R_k are a mixture of the properties of Pearson's and Spearman's correlation coefficients. According to Stark, Yitzhaki and Taylor (1986), all the components of equation (2) are easily-interpretable in the context of the role of remittances in inequality:
(1) the importance of remittances relative to total income (S_k),
(2) the inequality of remittances (G_k),
(3) the correlation of remittances with total income (R_k).

The second decomposition method of the Gini coefficient by factor components used in this study – called the alternative decomposition approach – is the following (Araar, 2006). To decompose the Gini coefficient by income components, the single-parameter Gini coefficient form is used:

$$G_\rho = 1 - \frac{\xi_\rho}{\mu}, \tag{4}$$

where ρ is an ethical parameter that expresses the level of social aversion to income inequality, μ denotes mean income, and ξ_ρ represents social welfare[2] and it equals $\xi_\rho = \sum_{k=1}^{K} \sum_{i=1}^{n} p_{i,\rho} s_{k,i} = \sum_{k=1}^{K} \xi_{k,\rho}^{\,2}$, $\xi_{k,\rho}$ being the contribution of component k to social welfare ξ_ρ and $p_{i,\rho} = \frac{i^\rho - (i-1)^\rho}{n^\rho}$ the weight attributed to the poorest households relative to the richest ones. Since the ordinary Gini coefficient is applied in this study, the parameter ρ equals 2 ($p_{i,\rho}$ then equals $\frac{2i-1}{n^2}$). Suppose that income ($y = \sum_{i=1}^{n} y_i$) may be divided into K components (e.g. income sources). Then we may transform equation (4):

[1] A detailed theoretical analysis of the formulas can be found e.g. in the paper of Lerman and Yitzhaki (1985).

[2] The social welfare function is additively separable on incomes.

$$G = 1 - \frac{\sum_{k=1}^{K}\sum_{i=1}^{n}\frac{(2i-1)}{n^2}s_{k,i}}{\mu} = 1 - \frac{\sum_{k=1}^{K}\xi_k}{\mu} = \\ = \sum_{k=1}^{K}\left(\frac{\mu_k}{\mu} - \frac{\xi_k}{\mu}\right) = \sum_{k=1}^{K}\psi_k C_k, \tag{5}$$

where $s_{k,i}$ is the level of component k for household i, ψ_k denotes the income share of component k, and C_k represents the concentration coefficient of component k.

2. Data

The empirical analysis was based on individual data coming from household budget surveys (HBS)[3]. The HBS are the basic source of information on Poles' incomes. The HBS data are collected cyclically by the Polish Central Statistical Office (CSO/GUS) and are not published. The Polish CSO publishes annual reports on incomes, expenditures and living conditions, prepared on the basis of the information from the surveys. The HBS cover about 37.5 thousand households (quite 110 thousand persons). The surveys are based on a method of monthly rotation and on the representative method which allows for the generalization of the results to the whole population of households (GUS, 2012, p. 26).

The analysis of the impact of remittances on income inequality was based on HBS data from the period 2008–2011 (the Polish CSO did not collect data on foreign income sources before 2008). Since 2005 there were no significant changes in the HBS, what means that the data for 2008–2011 are uniform.

For the purposes of this study income was defined as disposable equivalent income – with the application of the modified OECD equivalent scale. The data were adjusted using appropriate weights[4], which allow for the generalization of the results, i.e. make the data representative. The calculations were performed using Excel, Statistica 10 and DAD 4.6 – a software for distributive analysis (Jean-Yves Duclos, Abdelkrim Araar and Carl Fortin, *DAD: A Software for Distributive Analysis/Analyse Distributive* MIMAP programme, International Development Research Centre, Government of Canada, and CIRPÉE, Université Laval).

[3] The results of the empirical analysis presented in this study are the author's own calculations based on data made available by the Polish CSO. The Polish CSO is not responsible for the conclusions contained in this paper.

[4] Since 2004 the weights used by the Polish CSO have been based on the information on the household structure according to the number of persons and place of residence coming from the National Population and Housing Census 2002.

3. Review of the literature

Most of the literature concerning migration and income disparities focuses either on the influence of remittances on income inequality or the impact of the inflow of migrants on income disparities in the destination country – mainly the United States. The studies on the impact of remittances on income inequality yield various conclusions, which results mostly from adopting different approaches to the analysis and/or concentrating on different stages of the migration processes, with different patterns. Thus it cannot be unambiguously determined how migration affects income inequality in home countries. This depends on the individual characteristics of the analyzed migration process and the specificity of the country (countries) under research.

Most of the empirical studies on remittances and income disparities concern small communities (e.g. Mexican villages, island countries as Fiji or Tonga, etc.) and/or where the importance of migration is significant – e.g. Stark, Taylor, Yitzhaki (1986); Stark, Taylor, Yitzhaki (1988); Taylor (1992); Taylor, Wyatt (1996); Mackenzie, Rapoport (2007); Barham, Boucher (1998); Brown, Jimenez (2007); Adams (1989); Oberai, Singh (1980); Rodrigues (1998); and Ahlburg (1996). A fragmentary analysis of the impact of remittances on income disparities in Poland in 2008 can be found in the paper by Barbone, Piętka-Kosińska, Topińska (2012).

It has to be emphasized that there are numerous effects of migration on income inequality. Apart from the direct effects of remittances on the distribution of income (Stark, Taylor, Yitzhaki, 1986), migration may also cause indirect effects (e.g. by affecting the labour market, changes in household preferences regarding the offered working time) and intertemporal effects (Taylor, 1992). This study considers only the direct impact of remittances on income inequality. Moreover, the analysis does not address the estimation of counterfactual income, i.e. the hypothetical income of migrants in the situation if they had stayed in their home country[5].

4. Main emigration and remittances trends in Poland

Poland's EU-entry has been one of the strongest migration stimuli in the contemporary history of Poland. It is estimated (Table 1) that from the 1st of May 2004 through the end of 2006 the number of emigrants increased by 1 million, which was the largest Polish emigration in peacetime (Anacka, Okólski, 2010; Fihel, Okólski, 2009). The estimates from the same sources show an increase in the number of Polish emigrants up to 2.3 million people at the end of 2007. In consec-

[5] This approach compares two income distributions – in the case of migration and in the absence of migration.

utive years – in the situation of the global economic crisis and its effects on the labour markets of numerous countries receiving migrants – a decline in the number of Poles staying abroad has been observed. Nonetheless, this number was much greater than at the moment of Poland's EU-entry. The decline in the number of Polish emigrants after 2007 resulted from both the slowdown in migration and the remigration; it concerned all of the emigrants as well as the Poles staying in other EU-countries. Table 1 shows detailed data on migration trends since 2000[6].

Table 1

Emigration trends from Poland, 2000–2011 (in thousands)

Category	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Permanent residence (total)	27	23.3	24.5	20.8	18.9	22.2	46.9	35.5	30.1	18.6	.	.
Temporary residence (total)	.	.	786	.	1000	1450	1950	2270	2210	2100	2000	2060
Temporary residence in the EU	.	.	451	.	750	1 170	1 550	1 860	1820	1 690	1607	1670
Share of temporary emigrants in Poland's population (%)	.	.	2.1	.	2.6	3.8	5.1	6.0	5.8	5.5	5.2	5.4
Share of temporary emigrants to the EU in Poland's population (%)	.	.	1.2	.	2.0	3.1	4.1	4.9	4.8	4.4	4.2	4.4

Notes: The 2002 data are from the National Population and Housing Census 2002. Until 2006 the data on temporary migration concern people staying abroad over 2 months, and from 2007 on – over 3 months. Temporary emigration includes people staying abroad for many years without notifying the Polish authorities (CSO, 2010, p. 1). Until 2006 the data on temporary migration to the EU cover 25 countries and from 2007 on – 27 countries. Permanent residence is defined as a flow of emigrants and temporary residence – as the accumulation of people.

Source: Own calculation based on CSO data: GUS, 2013, Table 1, p. 3; Kowalski, Czubkowska, Dżikija, 2011.

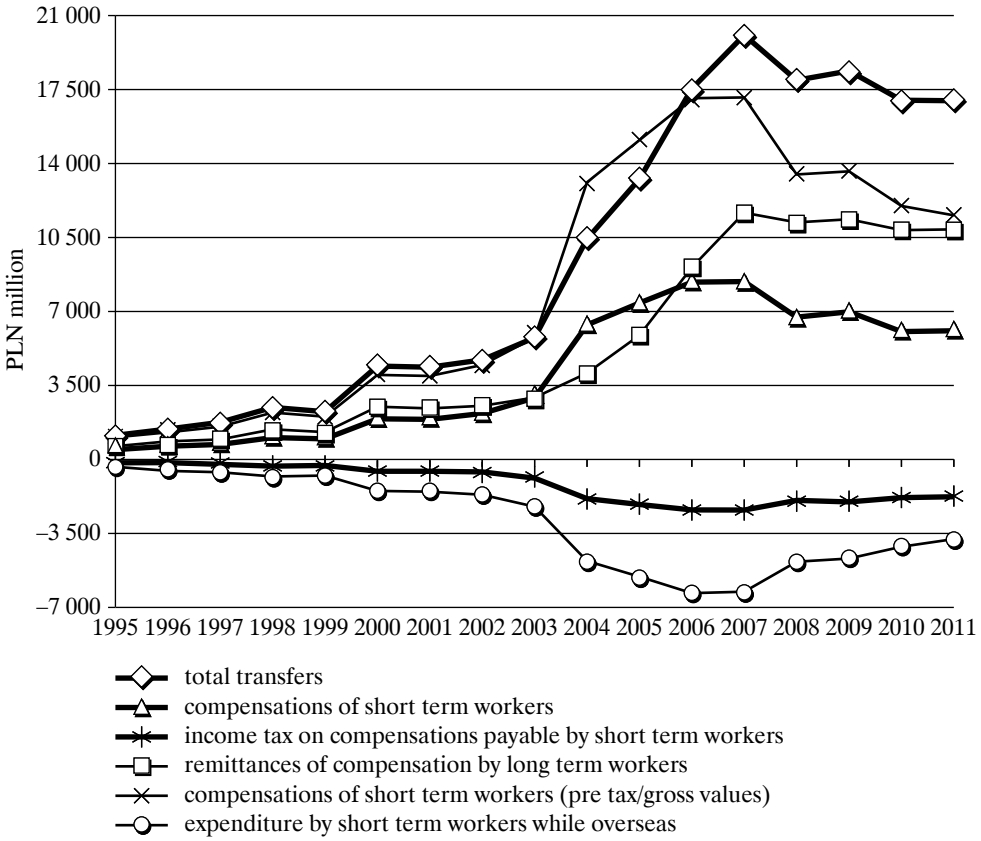
[6] The analysis of emigration entails many difficulties (e.g. the migration definition and its arbitrariness, non-registration of a significant part of emigrants, the monitoring of emigration, stream vs. accumulation of migrants, exclusion of seasonal migration in the data, etc.) which are not analyzed here. However, they are important and have to be borne in mind.

As the Polish CSO estimates show, in 2011 almost 78% of temporary emigrants (GUS, 2013, p. 2) were staying abroad over 12 months, what means that they are long-term emigrants[7]. The CSO assesses that about 80–90% and almost 73% of Polish emigrants were working abroad or were looking for a job in the period 1.05.2004–2009 and in March 2011, respectively (GUS, 2010, p. 4; GUS, 2013, p. 4).

Remittances are one of the crucial channels of the impact of emigration on income inequality in the home country. These transfers may significantly affect the income distribution and income disparities. The exact estimation of remittances is impossible; the available data do not include all of the transferred income (e.g. non-disclosed money transfers, income in kind). The data presented in Figure 1 show a decrease in remittances after 2007 – as in the case of the number of emigrants.

Figure 1

Transfer inflows to Poland, 1995–2011 (PLN million)



Source: Barbone, Piętka-Kosińska, Topińska, 2012, Table 2, p. 15.

[7] From a formal point of view, those emigrants should be classified as permanent emigrants, i.e. as foreigners.

Other important channels of the impact of emigration on income inequality are the change of the migrant profile, the change in the household composition and changes in the labour market (size of unemployment, brain drain, labour shortage, etc.). The analysis of these channels is, however, beyond the scope of this study.

5. Empirical results

As it has been mentioned earlier, the Polish CSO started to collect data (HBS) on incomes from foreign sources in 2008. Therefore, it is not possible to carry out the analysis for the years before 2008. The following income categories were identified as foreign income sources of household income: income from permanent hired work abroad, income from casual hired work abroad, income from permanent self-employment abroad, income from casual self-employment abroad, income from rental of property or land (not related to economic activity) abroad, foreign pensions, foreign allowances, other foreign social benefits, foreign unemployment benefits, alimonies from private persons from abroad, other gifts from private persons from abroad, other income from abroad.

It is obvious that not all of the income from abroad is sent back to home country by Polish emigrants. Moreover, not all of the listed categories are related to Poland's membership in the European Union. In addition, foreign income sources that contain remittances related to the EU-accession also include income not connected to the EU-entry. The HBS data do not allow to mark off precisely the remittances coming from Poles that migrated to other EU countries as a result of the EU-entry. Thus, the Gini decomposition presented in this section has been carried out for all foreign transfers as well as for foreign transfers that were classified as those most probably related to Poland's EU-accession. The following categories were selected as foreign income sources most probably related to the EU-accession: income from permanent hired work abroad, income from casual hired work abroad, income from permanent self-employment abroad, income from casual self-employment abroad, other foreign social benefits, foreign unemployment benefits, other gifts from private persons from abroad, and other income from abroad.

The elements of the STY-Gini decomposition can be found in Tables 2–5 while Tables 6–9 show the Gini decomposition results obtained according to the alternative approach, which are supplementary to the main results and allow for a comparison to the STY-method. The application of both approaches leads to similar findings and the slight difference in the outcomes is the effect of the difference in the applied calculations[8].

[8] In the case of the STY-decomposition each component of the Gini decomposition was calculated separately; this means that some approximations were made at each step of the calculations. The results of the alternative decomposition were calculated directly using the DAD 4.6. software.

The rows 2–3 of Tables 2–5 present the results of the Gini decomposition for two income sources – all of the transfers for Polish households coming from abroad and total income without those transfers. The rows 5–6 report the Gini decomposition into remittances resulting most probably from Poland's membership in the EU and the rest of income.

Simple calculations based on the results given in the third column in Table 2 show that after taking into consideration all of the foreign transfers, the Gini coefficient decreases by almost 0.008 in absolute and almost 2.5% in relative terms. The remittances most probably related to Poland's EU-membership reduce the Gini coefficient by about 0.007 and slightly above 2% in absolute and relative terms, respectively. As can be seen from Tables 2–5, foreign transfers – total as well as related to the EU-entry – to households in Poland contributed to a decrease in income inequality in Poland in 2008–2011, although the impact was not significant because of the minor role of remittances in total income (below 2%)[9]. In addition, Tables 2–5 show that there is only a slight difference between the impact of all foreign transfers and those classified as related to the EU-entry on income disparities. Between 2008 and 2010, the influence of foreign transfers on income inequality in Poland was within a range of 0.0066–0.008 in absolute and 2.05–2.54% in relative terms. However, in 2011 the contribution of foreign transfers to income inequality dropped about four times (to a range of 0.0017–0.0021 and 0.53–0.65% in absolute and relative terms, respectively). The lower impact of remittances on income disparities was the effect of a decrease in the share of foreign transfers in household income – from 1.6–1.7% to 0.4–0.5%. It can be seen that throughout the analysed period the distribution of remittances was very skewed, which is shown by the high value of the Gini coefficient for this component of income.

The alternative Gini decomposition approach (Tables 6–9) supplements the STY-method results, yet the values of the contribution of transfers to the Gini coefficient differ slightly. The Gini correlation coefficient (R_k) in the STY-approach indicated a not very high correlation between transfers as well as EU-entry related transfers and overall income. The alternative decomposition method reveals a more precise picture. The higher value of the concentration coefficient of foreign transfers in comparison to total income proves that (upper) median income groups rather than groups from the bottom of the income distribution benefited

[9] This study does not include an analysis of a marginal effect of remittances on income inequality. The marginal effect of an income source on overall income inequality can be derived from equation (2) (cf. Stark, Taylor, Yitzhaki, 1986, pp. 726 and 737–738). Such an analysis would lead to the conclusion that the marginal effect of remittances is positive, i.e. a small increase in remittances leads to a rise in overall income inequality, which may seem contradictory to the conclusions from Tables 2–5. One plausible explanation is that eliminating remittances from total income worsens the relative income position of the recipients of remittances to such an extent that it outweighs the improvement in the relative position of the remaining population (cf. Jurkatis, Strehl, 2013, pp. 6–10). This could mean that the recipients of remittances have substantially improved their income position as a result of remittances as an additional income source, but this explanation would require further research. However, as pointed out in the main text, eliminating remittances from total income causes an increase in the Gini coefficient.

Table 2

Composition of 2008 income inequality (STY-decomposition)

Income source	Share in total household income (S_k)	Gini coefficient for income source (G_k)	Gini correlation with total income rank (R_k)	Contribution to the Gini coefficient of total income ($S_kG_kR_k$)	% share to the Gini coefficient of total income ($[S_kG_kR_k]\times 100/G_0$)
TRANS	0.0173296	0.9859349	0.4531975	0.0077433	2.4470015
INC-TRANS	0.9828915	0.3233772	0.9715054	0.3087878	97.5819539
INC	1	0.3164395	1	0.3164395	100
TRANSEU	0.0158121	0.9874642	0.4580852	0.0071525	2.2602952
INC-TRANSEU	0.9843821	0.3227897	0.9737602	0.3094108	97.778815
INC	1	0.3164395	1	0.3164395	100

Note: TRANS – sum of all foreign transfers; TRANSEU – sum of transfers most probably related to Poland's EU-membership; INC-TRANS – available income without TRANS; INC-TRANSEU – income without TRANSEU; INC – income. The shares of the income sources in total income sum up approximately to 1, as the result of the applied calculation method (see footnote 8).

Source: Own calculation based on HBS data.

Table 3

Composition of 2009 income inequality (STY-decomposition)

Income source	Share in total household income (S_k)	Gini coefficient for income source (G_k)	Gini correlation with total income rank (R_k)	Contribution to the Gini coefficient of total income ($S_kG_kR_k$)	% share to the Gini coefficient of total income ($[S_kG_kR_k]\times 100/G_0$)
TRANS	0.0170413	0.9876266	0.4741661	0.0079804	2.5420477
INC-TRANS	0.9832305	0.3196916	0.9729426	0.3058256	97.4162089
INC	1.0000000	0.3139371	1.0000000	0.3139371	100
TRANSEU	0.0156080	0.9887535	0.4831811	0.0074567	2.3752147
INC-TRANSEU	0.9845893	0.3191063	0.9753514	0.3064444	97.6133093
INC	1.0000000	0.3139371	1.0000000	0.3139371	100

Note: See Table 2.

Source: Own calculation based on HBS data.

Table 4

Composition of 2010 income inequality (STY-decomposition)

Income source	Share in total household income (S_k)	Gini coefficient for income source (G_k)	Gini correlation with total income rank (R_k)	Contribution to the Gini coefficient of total income ($S_kG_kR_k$)	% share to the Gini coefficient of total income ($[S_kG_kR_k]\times 100/G_0$)
TRANS	0.0164051	0.9868915	0.4456073	0.0072144	2.2492344
INC-TRANS	0.9839834	0.3269955	0.9748790	0.3136753	97.7946743
INC	1	0.3207489	1	0.3207489	100
TRANSEU	0.0151915	0.9877944	0.4372001	0.0065607	2.0454212
INC-TRANSEU	0.9851851	0.3266598	0.9767638	0.3143425	98.0026944
INC	1	0.3207489	1	0.3207489	100

Note: See Table 2.

Source: Own calculation based on HBS data.

Table 5

Composition of 2011 income inequality (STY-decomposition)

Income source	Share in total household income (S_k)	Gini coefficient for income source (G_k)	Gini correlation with total income rank (R_k)	Contribution to the Gini coefficient of total income ($S_kG_kR_k$)	% share to the Gini coefficient of total income ($[S_kG_kR_k]\times 100/G_0$)
TRANS	0.0049592	0.9954676	0.4176744	0.0020619	0.6503205
INC-TRANS	0.9951338	0.3190238	0.9922157	0.3150000	99.3493329
INC	1	0.3170631	1	0.3170631	100
TRANSEU	0.0040216	0.9963805	0.4231020	0.0016954	0.5347224
INC-TRANSEU	0.9960309	0.3185574	0.9938727	0.3153489	99.4593509
INC	1	0.3170631	1	0.3170631	100

Note: See Table 2.

Source: Own calculation based on HBS data.

Table 6

Composition of 2008 income inequality (alternative approach)

Income source	Concentration coefficient	Share in total income	Relative contribution to the Gini coefficient of total income	Absolute contribution to the Gini coefficient of total income	Gini coefficient of total income
TRANS	0.461	0.017	0.025	0.008	0.316
INC-TRANS	0.314	0.983	0.975	0.308	
TRANSEU	0.466	0.016	0.023	0.007	0.316
INC-TRANSEU	0.314	0.984	0.977	0.309	

Note: TRANS – sum of all foreign transfers; TRANSEU – sum of transfers most probably related to Poland's EU-membership; INC-TRANS – income without TRANS; INC-TRANSEU – income without TRANSEU. The concentration coefficient shows the cumulative share of an income source. The measure ranges from –1, when the entire income source is received by the poorest income groups, through 0, when the income from the income source is evenly distributed, to 1, when the entire income source is received by the richest. The positive (negative) value of the concentration coefficient indicates that a given income source is positively (negatively) correlated with overall income.

Source: Own calculation based on HBS data.

Table 7

Composition of 2009 income inequality (alternative approach)

Income source	Concentration coefficient	Share in total income	Relative contribution to the Gini coefficient of total income	Absolute contribution to the Gini coefficient of total income	Gini coefficient of total income
TRANS	0.490	0.017	0.027	0.008	0.314
INC-TRANS	0.311	0.983	0.973	0.306	
TRANSEU	0.494	0.016	0.025	0.008	0.314
INC-TRANSEU	0.311	0.984	0.975	0.306	

Note: See Table 6.

Source: Own calculation based on HBS data.

Table 8

Composition of 2010 income inequality (alternative approach)

Income source*	Concentration coefficient**	Share in total income	Relative contribution to the Gini coefficient of total income	Absolute contribution to the Gini coefficient of total income	Gini coefficient of total income
TRANS	0.460	0.016	0.024	0.008	0.321
INC-TRANS	0.318	0.984	0.976	0.313	
TRANSEU	0.453	0.015	0.021	0.007	0.321
INC-TRANSEU	0.319	0.985	0.979	0.314	

Note: See table 6.

Source: Own calculation based on HBS data.

Table 9

Composition of 2011 income inequality (alternative approach)

Income source*	Concentration coefficient**	Share in total income	Relative contribution to the Gini coefficient of total income	Absolute contribution to the Gini coefficient of total income	Gini coefficient of total income
TRANS	0.430	0.005	0.007	0.002	0.317
INC-TRANS	0.316	0.995	0.993	0.315	
TRANSEU	0.433	0.004	0.005	0.002	0.317
INC-TRANSEU	0.317	0.996	0.995	0.315	

Note: See table 6.

Source: Own calculation based on HBS data.

from remittances[10]. Nevertheless, remittances contributed to a decrease in income inequality in Poland.

Conclusions

The analysis of the direct effect of remittances related to Poland's EU-entry migration presented in this study provides evidence that foreign transfers had a decreasing effect on household income inequality in Poland throughout the analysed period, i.e. 2008–2011. However, this influence is not to be assessed as very significant, especially in 2011.

It must be pointed out that this study suffers from several limitations. Because of many problems with data collection on emigrants and remittances the impact of foreign transfers on income inequality might be underestimated. The underestimation of remittances in the HBS data may result from the following. First, the surveyed households may not report their incomes (or a part of them) obtained from abroad. Second, a significant part of the households that refuse to participate in the survey may benefit from foreign income sources. Moreover, official data on Polish remittances may be understated, since a part of the income transferred from abroad is income in kind, e.g. cars, clothing (Fihel, Okólski, 2009), and some part of the money income transferred may be undisclosed. This means that the actual income from foreign sources – money-income as well as non-money-income – probably play a much larger role in overall income in comparison to the official data. Thus there are some indications that the contribution of remittances to lower income dispersion inequality in Poland is more significant as shown in this study.

Moreover, it would be worthwhile showing the impact of the Polish emigration on income distribution on the basis of a counterfactual analysis, i.e. a comparison of the actual situation with the hypothetical situation of absence of emigration. A simple comparison of the distribution of income with and before remittances – as carried out in this study – may lead to an underestimation of the real impact of emigration and remittances on income inequality in Poland.

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[10] As already explained in footnote 9, this conclusion concerns rather the income distribution taken ex-post, i.e. after adding remittances. This means that the recipients of remittances are located in the (upper) median income groups after getting remittances, which may be not true when eliminating remittances from the income distribution (those households change their relative position in the income distribution). In particular – as mentioned – the relative income position of those households may have been significantly much worse before getting remittances. Proving this hypothesis would however require a counterfactual analysis.

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WPŁYW EMIGRACJI ZWIĄZANEJ Z PRZYSTĄPIENIEM DO UNII EUROPEJSKIEJ NA ZRÓŻNICOWANIE DOCHODÓW W POLSCE

Streszczenie

Celem artykułu jest próba oszacowania bezpośrednich efektów przekazów pieniężnych emigrantów związanych z akcesją Polski do Unii Europejskiej na zróżnicowanie dochodów (dochody gospodarstw domowych w przeliczeniu na jednostkę ekwiwalentną) w Polsce w latach 2008–2011. W badaniu wykorzystano dwie metody dekompozycji współczynnika Giniego ze względu na źródła dochodów oraz dane na temat dochodów pochodzące z badań budżetów gospodarstw domowych.

Dekompozycja współczynnika Giniego pozwoliła m.in. na zbadanie roli przekazów pieniężnych emigrantów w kształtowaniu zróżnicowania dochodów w Polsce, tj. oszacowanie zarówno względnego, jak i absolutnego wkładu tych transferów w nierówności dochodów. Wykazano, że przekazy emigrantów przyczyniły się do zmniejszenia zróżnicowania dochodów w Polsce w latach 2008–2011. Jednak wpływ przekazów emigrantów na nierówności dochodów był raczej niewielki, zwłaszcza w 2011 r.

Słowa kluczowe: współczynnik Giniego, nierówności, przekazy pieniężne emigrantów

THE IMPACT OF THE EU-ENTRY RELATED MIGRATION ON INCOME INEQUALITY IN POLAND

Summary

This paper attempts to investigate the direct effects of remittances related to the EU-entry migration on income inequality (household equivalised disposable income) in Po-

land in 2008-2011. The analysis was carried out by applying two methods of the Gini coefficient decomposition by income sources. The analysis is based on household budget surveys data on income.

The Gini decomposition allowed – among other things – to gain insight into the role of foreign transfers in shaping income inequality in Poland, i.e. estimate the relative and the absolute contribution of remittances to income disparities. The analysis showed that remittances contributed to a reduction in income inequality in Poland between 2008 and 2011, but the impact of remittances on income disparities was not very significant, especially in 2011.

Key words: Gini coefficient, inequality, remittances

ВЛИЯНИЕ ЭКОНОМИЧЕСКОЙ МИГРАЦИИ В ЕВРОПЕЙСКИЙ СОЮЗ НА НЕРАВЕНСТВО ДОХОДОВ В ПОЛЬШЕ

Резюме

В статье делается попытка оценить прямые эффекты денежных переводов эмигрантов, связанные со вступлением Польши в Европейский союз, на дифференциацию доходов в Польше в 2008-2011 гг. Доходы домашних хозяйств принимались в пересчете на эквивалентную единицу. В исследовании были использованы два метода декомпозиции коэффициента Джини в зависимости от источников доходов, а также данные о доходах, полученные в результате исследований бюджетов домашних хозяйств.

Декомпозиция коэффициента Джини позволила, в частности, исследовать роль денежных переводов в формировании дифференциации доходов в Польше, т.е. оценить как относительный, так и абсолютный вклад этих трансфертов в неравенство доходов. Было доказано, что переводы эмигрантов способствовали сокращению дифференциации доходов в Польше в 2008-2011 гг. Однако влияние денежных переводов эмигрантов на неравенство доходов трудно назвать значительным, особенно в 2011 г.

Ключевые слова: коэффициент Джини, неравенство, денежные переводы эмигрантов