

ASSESSMENTS ON THE REMITTANCES DESTINATION FOR CHILDREN'S EDUCATION

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Abstract:

Our study identifies how remittances are used in migrants' families and evaluates the amount of money targeted for the education of the children "left behind". In order to carry out the analysis, we collected micro-data from a survey elaborated by the National Scientific Research Institute for Labour and Social Protection in August 2014.

The survey was addressed to 300 households and showed that in general there are different "profiles" of the respondents, of the migrants, of those who sent/brought money at home and of those with children "left behind".

Our econometric model confirmed and nuanced the findings highlighted by the survey data analysis. More precisely, the attitude of migrants with children "left behind" is more careful and financially responsible, since the share of parents who send money or return with money surpasses that of remittent migrants, in total. Moreover, remittances are mainly used for daily needs and in order to support the children "left behind" to further on focus on their education.

As a particularity of the "profile" shown from the survey, it seems that migrants who send money especially for school fees, school supplies, textbooks, etc. are in general male, with low-medium education level, committed to support children and to provide them better conditions for learning, training and development.

The econometric model confirms this "profile" (there is a smaller probability of migrant women to send money for tuition fees payment -65.5%) and it reinforces the claim on the responsible attitudes of migrant parents (families with larger numbers of children "left behind" spend more money on "education": the

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likelihood of spending remittances for school fees increases 84.7% for every more child).

Keywords: migration, remittances, education of children left behind, econometric model

JEL Classification: J61, C51

Paper type : Research paper

Labour migration is a phenomenon that occurred quite extensively over the last two decades in our country. However, the opportunity arisen from removing the barriers of the Romanian labour force movement throughout the European Union, starting with the 1st of January 2014, led to an increase in the flow of emigration and, respectively to its many consequences.

In addition, remittances have already shown anti-cyclical variations in times of crisis and indicated that external financial flows sent to households, families or countries of origin increase in times of economic difficulty, when all labour market indicators suffer higher fluctuations (Davidescu, 2013, 2014; Hudea, 2014; Lazar, 2014; Cristescu et al., 2014; Dimian et al., 2013, Stroe et al., 2011). It is therefore possible to assume that both the number of migrants and also the amount of remittances may increase during this period. Moreover, it is desirable that these amounts of money be directed for consumption in order to support the education of the children "left behind" (IOM, 2008; Horvath and Anghel, 2009; Sandu and Alexandru, 2009; Tufis, 2008).

The question that our research aims to answer is the following: *to what extent can labour migration abroad cause changes in the education of children, and namely if remittances are not only spent for consumption, but also for investment especially in children's human capital.*

By answering this question, we will be able to contribute to a more general understanding of the impact of labour migration upon the development process of our country. Through developing and applying a complex methodology that includes both quantitative and qualitative components (using data from official sources - the National Bank, the IMF, World Bank, and gathering information through a survey elaborated by the National Scientific Research Institute for Labour and Social Protection in August 2014 through a research project entitled "Migration and Education - methods for evaluating the use of remittances"), this paper aims to raise awareness on the characteristics of international migration in Romania, in general, and in particular, on the consequences of migration and remittances used for children's education.

By conducting household surveys (on migrants), by analysing the impact of migration on education of children "left behind" (using remittances for this purpose), with consequences for their future participation in the labour market, we argue in

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favour of the need to permanent knowledge and data gathering on migration and on its consequences at national, regional and local level.

It is quite obvious that for the families of those who are away, remittances represent a major source of income. The funds are then used to cover daily expenses, higher living standards (building and renovating houses, purchase of equipment and household durables), or to improve access to services (including healthcare and education) and (almost a third of total remittances) are saved or even invested.

It is known that in our country, despite the economic benefits arising from the use of remittances, labour migration has created numerous problems, including "children home alone" (in different situations, but quite a lot without the support of a responsible adult, with age-inappropriate tasks, with no support, encouragement and time to normally attend school, etc.). Regarding the number of children left home, there are differences in data in case it is officially registered or collected throughout a survey.

In order to evaluate how remittances are spent for the education of the children left behind, we relied on the results of a survey applied on a nationally representative sample of households, as presented in figure 1.

The data analysis allowed us not only to build a general profile of the respondents, especially of those who direct a part of the remittances to support children's school, but also to analyse the general use of remittances. The structure of the respondents is balanced in favour of females (67% of the total), mostly ageing between 30 and 59 years (67.8%). The 300 respondents belong to households with either 3 members (29.3%), 4 members (26.7) or two members (23.5). Most respondents have a medium education level, respectively vocational school (22.7%), high school (22.3%) or industrial or agricultural high school (9.3%). In terms of occupational status, at the time of the survey the respondents were 48% - employees, 18.7% - pensioners, 16.3% - domestic and 3.7% - pupils / students. In terms of life style satisfaction, out of the total respondents only 44.3% are satisfied and 4% are very satisfied, while 11.7% are not at all satisfied with their life style.

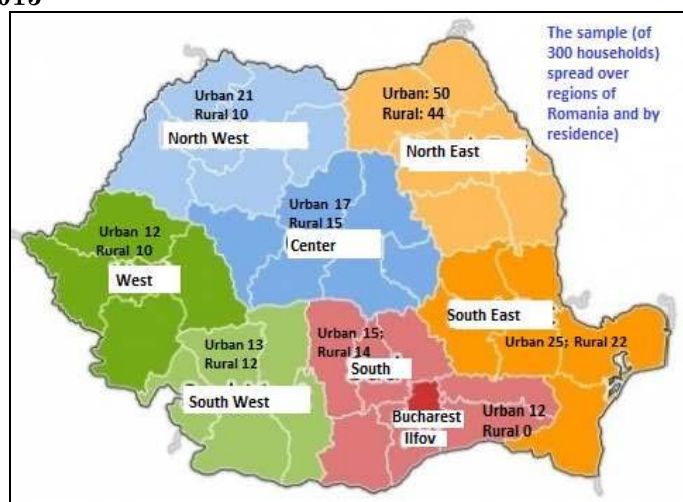


Fig. 1. The sample structure of the survey

Of all respondents, only 41.3% lived abroad, while the rest of 58.7% are members of a household in Romania from where someone else went abroad to work. 51.6% of those who have lived abroad are female and 72% are between 30 and 59 years old. They are mostly employed (49.2%) and with a medium education level (60.5%). On the other hand, out of the respondents who did not live abroad, 77.8% are female, ageing between 30 and 59 years (64.9%). In general, they have medium education level (50.1%) and are mostly employed (47.2%), retired (25.6%) or housewives (16.5%).

The main reasons for going abroad were built on pecuniary grounds, namely: 34.7% said that the money earned in Romania was not enough for living and 26.6% did not even earn enough to have a decent life. The reasons for resuming the experience of living and working abroad (successive labour leaving) was based on the ground of better living conditions abroad (44.7% of respondents who have lived abroad), while pecuniary motives were much less important (only 21.1% stated that the money earned in the country are not enough for living).

When considering the degree of satisfaction of the respondents, we noticed that the experience of living abroad led unequivocally to a higher degree of satisfaction in comparison to those who did not have this experience. Among the respondents who lived abroad in the last 10 years, 53.2% were fairly satisfied and 8.1% were very satisfied with the way they lived, while only 12.1% were not at all satisfied with their life standard.

When considering the expectations for the next year lifestyle conditions, the respondents who did not live abroad are more pessimistic than those who had the

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experience of living abroad. More precisely, the number of respondents who expect to live in worse or even a lot worse conditions over the next year is 4.3 pp higher (41.4% vs. 37.1%). In contrast, on a medium-term horizon of about 5 years, the expectations become less pessimistic and the differences reduce to 3.3 percentage points (from 36.4% to 33.1%).

It is obvious that people who lived abroad in the last 10 years are more geographically mobile and therefore are less able to agree with the statement "*I prefer a safe workplace, even if it is less well paid*" (48.4% compared to 53.4%). We also notice that the proportion of the people who did not live abroad and yet agree with the statement "*I prefer a safe workplace, even if it is less well paid*" is much higher than those who disagree with this statement (53.4% to 35.2%).

Besides that, the lack of territorial mobility can generate acceptance of illegal forms of employment. This fact can explain why people who have not lived abroad are largely in agreement with the statement "*in order to have a better paid job I might be willing to work without papers*" in comparison to the people who lived abroad (37.1% compared with 18.2%).

Moreover, 25.8% of those who lived abroad agree with the statement "*in order to have a better paid job I am willing to work in hard conditions*" in comparison to only 19.3% of those who did not live abroad. It is also interesting to note the tendency of the respondents who worked abroad towards agreeing to take a better job but for which they are overqualified (76.6% versus 44.9%) compared to the respondents who did not live abroad.

The current income of the households' respondents is estimated to be insufficient by 48.4% of the people who have lived abroad and similarly, by 47.2% of the people who did not live abroad. A slight difference is also noted among the respondents who lived abroad, as 12.1% believe to be able to buy more expensive things as compared to a slightly reduced proportion of 11.9% of those who did not live abroad.

From the perspective of employment stability, we noticed that 67.7% of the respondents who lived abroad had only one job during their last departure, 16.9% had two jobs and 10.6% had more than two jobs. Moreover, most of the respondents worked in the service sector (32.3%), 18.4% in construction, 9.2% in agriculture and 3% in the health sector.

Regarding remittances, there were difficulties in collecting survey data, because the respondents avoided answering as they feared that the information will be used against them (particularly for taxation purposes). However, 62.1% of the respondents who lived abroad stated that they sent money home with different frequencies.

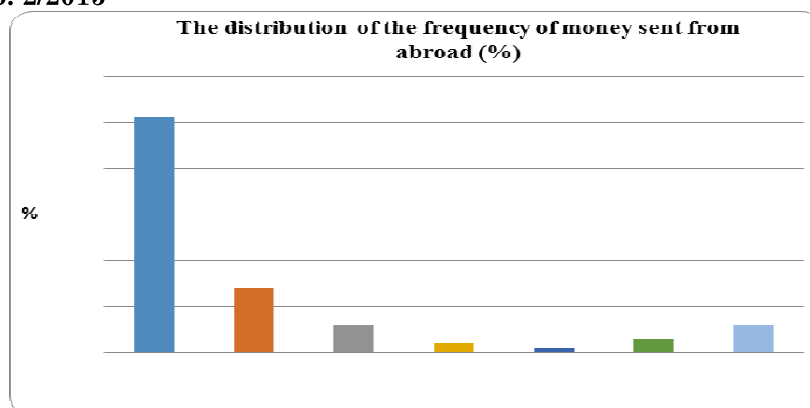


Fig. 2. The distribution of the frequency of money sent from abroad

Although the amount of remittances sent home was not a representative indicator, it yielded interesting information. For instance, according to the respondents who lived abroad, the **destination of remittances** was mostly assumed to be for everyday use (72.3%), for daily repairs or home improvements (54.2%), for debts payment (53%) and less for buying clothes and shoes (49.4%), for purchasing durable goods (31.3%), land or houses (28.9%), or for the payment of school taxes, courses and supplies (28.9%).

The general profile of the respondents who sent money to support children's education by paying school fees, courses or supplies are mostly males (58.3%), with low education (vocational school graduates or school of arts and crafts graduates 25%), employees (45.8%), worker occupations (8%) or sellers (8.2%).

In general, 89.5% of those who have lived abroad came back home with money. The main destination of the money of those who returned home are mostly spent for everyday use (71.2%) and also for purchasing clothing and footwear (47.7%), for repairs or home improvements (48.6%), for purchasing durable goods (38.7%) or for debts payment (36.9%), rather than for purchasing land or houses (20.7%) or for paying school fees, courses and supplies (15.3%).

The responses of those who have household members went to work abroad confirm in general the same route of remittances. More precisely, they say (at a rate of 75.9%), that they receive money from abroad at a monthly frequency (52.7%) or every 2 to 3 months (30.4%) and this money is generally spent mostly for everyday use (79.1%) and for paying debts (54.7%).

A **special category of respondents** was taken into consideration in our research concerning parents working abroad who left their children behind. Out of the

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respondents of our survey, 44.3% had minor children when moving abroad. Out of these, 67.3% had one child, 29.1% had two children and 3.6% had 3 children.

Among those who went abroad and left their children at home, 80% used to send money home, indicating a higher share than the proportion of the total respondents who lived abroad and sent money home (of only 62.2). This fact demonstrates a higher responsibility for the family members left behind and especially to their children (minors).

The money sent home by parents working abroad with children left home are mostly spent for daily use (75% of responses), for debts payment (56.8%), for purchasing clothing and footwear (54.5%), for making repairs or home improvements (45.4%) and are less spent for paying school fees, courses and supplies (38.6%).

Although our findings suggest that an apparently small amount of money is allocated for children's education, we may assume that daily living needs, purchase of clothing, footwear, as well as home repairs and durable goods purchase have effects on supporting the education process of the children of those working abroad. Of those who went to work abroad and had minor children, 89% had returned home with money, showing once again more responsibility as compared to the average of only 37% of the total respondents of the survey who have returned home with money saved.

The amount of money saved by the parents who returned home was particularly directed to support daily living expenses (71.4%), but with a notable high amount also saved for investment (purchase land or houses, purchase agricultural tools or investment in a business), probably thinking to secure the future of the whole family. The allocation of money for paying school fees or supplies was, however, of only 20.4%, as these costs might in general be considered as current expenses and not some occasional costs that for instance have to be paid at the return of the parents who went to work abroad. In general, we believe that the attitude of those who are working abroad and have minor children left home is more carrying and responsible. Moreover they seem to be proportionately more numerous among those who send money home or come home with money.

Regarding the use of money sent or brought home, the need to cover daily expenses, debts and purchase of durable goods, as well as repairs or home improvements is considered therefore to be a priority. We believe that remittances used mainly for improving daily lifestyle can also imply that the family members left home live under better conditions and that children can normally continue their studies without having to work or to carry out adult duties (such as cleaning, washing, etc. using appliances bought through remittances). Of course, it is desirable to assume that a healthy concern should imply sending money specifically for the payment of school fees, or for purchasing supplies, courses / books, etc. in order to support the education of the children left behind. This would normally be the case for older children who are students in secondary education in a private system or who might benefit from extra-curricular classes, tutoring for exams, admissions, etc. Our investigation has

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unequivocally shown that parents who work abroad or who come back home are generally determined to support their children by improving their lifestyle and their opportunities for future professional development through education.

Further on in our study, we were **concerned in modelling the dependencies between remittances and its destination for children's education**. For that we used the survey data and designed an econometric model to capture the extent to which remittances support the education of children. Unfortunately, the reduced number of available observations has limited our possibilities to capture the phenomenon in a more complex manner and affected to some extent the quality of the estimates. Even so, we were able to build a valid econometric model in order to capture the factors' influences upon remittances allocation towards school fees.

Since the dependent variable used in the model is of a binary nature (taking the value 1 if remittances have focused on the payment of school taxes, courses or supplies, and the value 0 if remittances did not have this purpose) the estimation of a classic regression model was inappropriate, but implied a non-linear approach (Agresti, 2010; Long and Freese, 2006).

Thus, starting from a back-word looking approach, we tried to build a logistic model based on the following explanatory variables: the respondent's age, gender, education level, number of children, total number of members in the household, the extent to which remittances were spent towards ensuring daily living costs or clothes and shoes.

The general model is presented in figure 3.

```

Logistic regression                Number of obs   =       42
                                   LR chi2(6)        =       6.44
                                   Prob > chi2        =       0.3753
Log likelihood = -25.123527        Pseudo R2       =       0.1137
  
```

q16_7	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
p0_qc	.0208736	.0417097	0.50	0.617	-.060876	.1026232
p0_qd	-.7673343	.7440664	-1.03	0.302	-2.225678	.6910091
q17_cati	1.231864	.66428	1.85	0.064	-.0701008	2.533829
qa	-.2328905	.329314	-0.71	0.479	-.878334	.412553
q16_1	.1973158	.9284321	0.21	0.832	-1.622378	2.017009
q16_3	.372235	.7553569	0.49	0.622	-1.108237	1.852707
_cons	-1.410072	2.931294	-0.48	0.630	-7.155303	4.335159

Fig. 3. The output of the initial logistic model

Unfortunately, the coefficients were not all statistically significant according to the z test, and thus a new estimation was required. Following a sequential approach, we obtained the following logistic model as shown in fig. 4.

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Logistic regression                               Number of obs   =         42
                                                    LR chi2(2)      =         4.94
                                                    Prob > chi2     =        0.0848
Log likelihood = -25.877808                       Pseudo R2      =        0.0871
    
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q16_7	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
p0_qd	-.8361748	.6721506	-1.24	0.213	-2.153566	.481216
q17_cati	1.1286	.6231336	1.81	0.070	-.0927197	2.349919
_cons	-.7380577	1.312997	-0.56	0.574	-3.311484	1.835368

Fig. 4. The output of the final logistic model

The results show that only two explanatory variables, namely gender and the number of children of the respondent were found to be statistically significant. Based on the model we found that the "chances" to send money back home in order to pay for children's school taxes, courses or supplies grow as the number of children in the household increases. Moreover, when considering gender issues, the results suggest that the chances of a woman that went to work abroad to send money back home for schooling and education are smaller as compared to a men working abroad.

Regarding the validity of the logit model, the following tests were made that led to the acceptance as a valid econometric model:

- The Mc Fadden Pseudo R^2 is of 8.7%, which although is desirable to be as close to 1, when estimating binary models the values are in general modest.
- The LR chi2(1), which has the null hypothesis that all coefficients associated with the explanatory variables are simultaneously null. Since the low probability of the test (0.024) rejects the null hypothesis, we conclude that the logistic model is, in general, valid.
- The Goodness of fit test indicates that the logistic model has high predictive ability, as confirmed by the high value of the probability of 91.9% (fig. 5).

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Logistic model for q16_7, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

(There are only 5 distinct quantiles because of ties)

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number of observations =      42
number of groups      =       5
Hosmer-Lemeshow chi2(3) =     0.50
Prob > chi2           =     0.9190
```

Fig. 5. The output of the Goodness of fit test

➤ The coefficients of the explanatory variables are statistically significant according to the statistic of the z test (for a significance level of 10% for variable describing the number of children in the household and one of a much higher level of about 21% for the variable describing the respondent's gender).

➤ The predictive ability test of the logistic model (fig. 6) confirms that the model is valid, with a probability of prediction of 66.7%.

Logistic model for q16_7

Classified	True		Total
	D	~D	
+	6	3	9
-	11	22	33
Total	17	25	42

Classified + if predicted Pr(D) >= .5
True D defined as q16_7 != 0

Sensitivity	Pr(+ D)	35.29%
Specificity	Pr(- ~D)	88.00%
Positive predictive value	Pr(D +)	66.67%
Negative predictive value	Pr(~D -)	66.67%
False + rate for true ~D	Pr(+ ~D)	12.00%
False - rate for true D	Pr(- D)	64.71%
False + rate for classified +	Pr(~D +)	33.33%
False - rate for classified -	Pr(D -)	33.33%
Correctly classified		66.67%

Fig. 6. The predictive ability test of the logistic model

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In order to interpret the results obtained from the logistic model, we must bear in mind that since this is not a linear regression model the coefficients interpretations require a distinct approach. More precisely, the odds ratio must be determined out of the exponential model and the results are resented in the following table:

logit (N=42): Percentage Change in Odds

Odds of: 1 vs 0

q16_7	b	z	P> z	%	%StdX	SDofX
p0_qd	-0.83617	-1.244	0.213	-56.7	-34.5	0.5055
q17_cati	1.12860	1.811	0.070	209.1	84.7	0.5437

Fig. 7. The odds ratio of the logistic model

Our findings suggest that the chances of a man who went to work abroad, to send money for schooling and children’s education in general are 65.5% higher than for a woman who went abroad to work.

In addition, families with higher number of children left behind (respectively at every new born baby in the family) have with 84.7% higher chances to spend remittances on school fees, courses or supplies than those families with fewer children.

It can be argued that the econometric model confirmed and nuanced our previous findings of our analysis of the data collected through survey. The attitude of those who are working abroad and who have minor children left at home is more carrying and responsible (they are proportionately more numerous among those who use to send money home or to come home with money).

Although remittances are mostly used for daily needs, the family members left home may benefit from it and enjoy better lifestyle conditions, while the children left home can normally continue their studies and devote to their education process normally.

According to our study, the general profile of the respondents who send money to support children's education by paying school fees, courses or supplies is mostly described as male (58.3%) with low education (25%), but highly determined to support his children in having better conditions to achieve professional development.

The econometric model confirms this “profile” (there is a smaller probability of *migrant women* to send money for tuition fees payment -65.5%) and it reinforces the claim on the responsible attitudes of migrant parents (families with larger numbers of children “left behind” spend more money on "education": *the likelihood of spending remittances for school fees increases with 84.7% for every more child*).

Our study exceeded theoretical and empirical research through specific data collection and analysis on the topic of remittances and education based on our own

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methodology to evaluate the final impact of parents' migration on the education of children left behind. Our findings could be of great importance in learning more on migration and its consequences, especially on the education of the children left behind.

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