

Hagen-Zanker, Jessica; Siegel, Melissa

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## A critical discussion of the motivations to remit in Albania and Moldova

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**A critical discussion of the  
motivations to remit in  
Albania and Moldova**

Jessica Hagen-Zanker  
Melissa Siegel

Centre of Migration Research  
Faculty of Economic Sciences  
Warsaw University  
Banacha Street 2B  
02-097 Warsaw  
Poland  
Tel.: +48 22 659 74 11  
Fax: +48 22 822 74 05  
[www.migracje.uw.edu.pl](http://www.migracje.uw.edu.pl)  
[migration.cmr@uw.edu.pl](mailto:migration.cmr@uw.edu.pl)

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Keywords: migration, remittances, Albania, Moldova

## **A critical discussion of the motivations to remit in Albania and Moldova**

### **Abstract**

Since the 1980s, the theoretical and empirical literature on the motivations to remit has grown steadily. We review the microeconomic literature and show that the theoretical motivations to remit are overlapping while competing. We argue that in most cases this differentiation is unnecessary and makes the subsequent empirical applications weak. We apply the theories in Albania and Moldova, two countries that experience high migration and remittance flows, using household survey data. We focus on finding evidence for the theoretical motivations to remit such as altruism, loan repayment, co-insurance and the bequest motive and using a similar methodology and approach as previous empirical research. As for other empirical papers, the analysis leads to doubtful and multi-interpretable results. We argue that this problem is caused by weak operationalisation and inseparability of motives, compounded by data problems. Furthermore we argue that the decision to remit should not be looked at in isolation. It is apparent that the causes and patterns of migration in Albania and Moldova influence the remitting behaviour and most migrants migrate in order to remit. It is thus vital to link the decision to migrate with the decision to remit and to broaden the focus beyond the economic literature and consequently provide a more relevant and clearer answer to the question why remittances are sent.

## **Analiza motywacji przesyłania pieniędzy zza granicy w przypadku Albanii i Mołdowy**

### **Abstrakt**

Teorie i badania nad motywacjami przekazywania pieniędzy zza granicy rozwijają się stopniowo już od lat 80. Niniejsza praca zawiera przegląd mikroekonomicznej literatury, która zakłada, że istnieją konkurencyjne teoretyczne podejścia do motywacji przekazów pieniężnych. Twierdzimy, że w większości przypadków różnicowanie teorii nie jest potrzebne i osłabia możliwość empirycznego ich zastosowania. Stosujemy dane teorie analizując sytuację w Albanii i Mołdawii, dwóch krajach, o doświadczeniach migracji i przepływów pieniężnych, opierając się na danych z badań gospodarstw domowych. Koncentrujemy się na poszukiwaniu dowodów teoretycznych motywacji przekazywania pieniędzy, takich jak altruizm, spłata pożyczki, współ-ubezpieczenie i zapis w testamencie, wykorzystując podobną metodologię i podejście do tych stosowanych w poprzednich badaniach empirycznych. Analiza badań empirycznych prowadzi do wątpliwości i wieloznacznych wyników. Twierdzimy, iż przyczyną tego problemu jest niedostateczna operacjonalizacja, nierozłączności motywów przekazywania pieniędzy zza granicy, jak i trudności z uzyskaniem danych na ten temat. Ponadto, twierdzimy, iż decyzja o wysyłaniu pieniędzy, nie powinna być analizowana w sposób wyizolowany od innych aspektów migracji. Jest to ewidentne, że przyczyny i wzorce migracji z Albanii i Mołdawii mają wpływ na zachowania związane z przekazywaniem pieniędzy i większość migrantów po to migruje, aby móc przesłać pieniądze. Istotne jest, aby powiązać decyzje o migracji z decyzjami o przepływie pieniędzy, jak również poszerzyć spojrzenie na ten problem poza literaturę ekonomiczną, aby móc przedstawić bardziej wiarygodną i jaśniejszą odpowiedź na pytanie dlaczego migranci przekazują pieniądze.

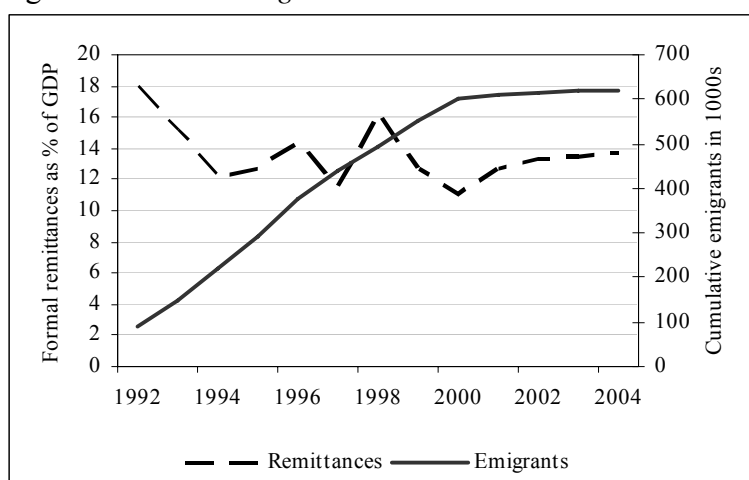
# 1 INTRODUCTION

Albania and Moldova both experienced high migration outflows and remittance inflows in recent years. In both countries remittances make up a significant fraction of GDP and are major receiving countries in the world. Both countries share a Communist past and their current economic situation is similar; they are two of the poorest countries in Europe, with weak social protection systems and weak financial sectors. They are also highly dependent on remittances for foreign exchange and poverty reduction. Remittances financed the growing trade deficit in both Albania and Moldova. Therefore, it is relevant and interesting to study the motivations to remit in these countries. We analyse remittances from the receivers' perspective, analysing the characteristics of both the remitter and remittance receiving household. In doing so, we test the motivations to remit in both countries and compare the results.

Albania has experienced dramatic, sudden and intense migration outflows since the end of the communist era in 1991 (King, 2005). Figure 1 shows the cumulative stock of emigrants. Between 600,000 and 800,000 Albanians are estimated to have migrated since 1990, mostly to Greece and Italy. According to the 2001 census, 710,000 people out of a population of 3.07 million have migrated, which constitutes 23% of the population (Vullnetari, 2007). Political factors and the desire for personal liberation and self-expression are a motivation for emigration but the desperate economic situation was an important factor from the beginning. Most of the early migrants were young and relatively well-educated, but from large and poor households (Konica, 2006). Seasonal and short term migration was especially common at the Albania-Greece border (Barjaba & King, 2005). In recent years, migrants often stay abroad for longer periods of time and bring their families over (de Zwager et al, 2005), many becoming legalised.

Figure 1 gives an overview of remittances as a percentage of Albanian GDP. Remittances have grown from \$150 million in 1992 to \$1 billion in 2004. In 2004 remittances made up 13.7% of GDP (Zwager et al, 2005), five times more than foreign direct investment and tree times more than official development aid. In 2005, approximately one in five households received remittances and 68.6% of the migrants sent remittances home to their families (de Zwager et al, 2005).

Figure 1. *Albania emigration and remittances*



Source: IMF (2006)

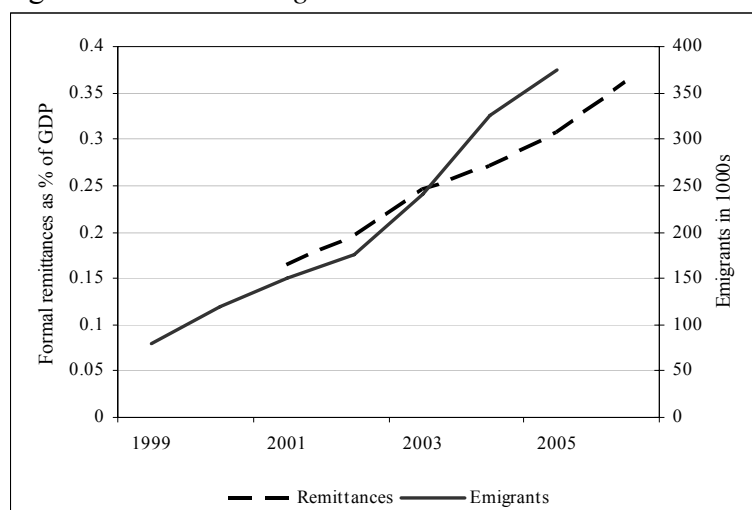
Moldova also entered transition from central planning to free markets at the beginning of the 1990s. Because of Moldova's dependence on Russia, the breakdown of the Russian economy in the early 1990s, threw Moldova into an extreme collapse that was worse than in other Soviet Republics. Therefore, migration in Moldova was mainly driven by poverty. In such serious economic conditions, much of the population tried to find employment abroad to mitigate the difficult situation at home. Figure 2 shows the migration trends of labour migrants from Moldova between 1999 and 2003. There were almost 400 thousand Moldavians living abroad by 2004. Remittances began to increase noticeably in 1998 during the regional crisis, which encouraged a continuing large-scale migration. The recovery of the economy after 1999 was primarily driven by remittances (Cornea et. al, 2005). By 2005,



emigrants accounted for about 28% of the working population and about 18% of the population of Moldova (Government of the Republic of Moldova, 2006).

Moldovan migrants keep a strong attachment to their home and remit large portions of their income. However, while in Albania family reunification in the host country is quite frequent, Moldova experiences more temporary migration of both men and women. The bulk of remitters are short-term migrants, many of whom are seasonal (working in agriculture or construction in Russia). In contrast to Albania, 70% of all remittances received are from temporary workers who stay abroad only part of the year (IMFb, 2005). By 2004 formal remittances had grown to \$700 million, constituting the equivalent of 27% of GDP (CBS-AXA, 2005), which is almost eight times more than foreign direct investment and seven times more than official development aid.

Figure 2. *Moldova emigration and remittances*



Source: Worldbank (2007) and Moldova Department of Statistics and Sociology in Cuc et al (2005)

As was shown above, remittances play an important role for both Albania and Moldova, both on the macroeconomic and microeconomic level. We investigate the motivations to remit and characteristics of remittance-receiving households. These driving forces are of major interest to policy makers wishing to attract more remittances as well as to researchers focusing on the determinants of private transfers.

This paper builds on the growing theoretical and empirical literature on the motivations to remit that explains the sending of remittances between household members with motives such as altruism, co-insurance, loan repayment and the bequest motive. In the first section, we critically review the literature, point out the main problems and illustrate them with an empirical application for Albania and Moldova. We use household survey data from Albania and Moldova for the years 2003/ 2004. Finally, we discuss which elements are missing in the current literature and suggest a way forward.

Section two critically discusses the theoretical literature on the determinants of remittances. Section three covers the methodology and data used. Section four reports, analyses and discusses the results in light of the other empirical literature on the motivations to remit and section five concludes.

## 2 LITERATURE REVIEW OF MOTIVATIONS TO REMIT

In this section we briefly review and critically discuss the current state of theoretical literature on the motivations to remit. While the decision to remit is clearly linked to the causes of migration, the majority of the economic literature on the motivations to remit focuses exclusively on remitting. The empirical literature will be discussed in section 4 together our empirical application.<sup>1</sup>

The theoretical debate on the motivations to remit was triggered by Lucas and Stark (1985) with their ground-breaking paper “Motivations to remit: Evidence from Botswana”. They investigate remittances on a household level and argue that remitting migrants are influenced by different motivations, namely “pure altruism”, “pure self-interest” and “tempered altruism or enlightened self-interest”. Any kind of contractual arrangements between the migrant and the household left behind can be in the latter category; for example, co-insurance, exchange motives and loan repayment. The theoretical motives and their effects on the level of remittances are summarised in table 1.

*Table 1. Theoretical motivations to remit*

<i>Effect of ... on level of remittances</i>	<b>Pure altruism</b>	<b>Pure self-interest</b>	<b>Co-insurance</b>	<b>Loan repayment</b>	<b>Exchange motives</b>
household income	-	+	-	+ / -	+ / -
migrant income	+	+		+	+
shock occurring to household	+		+		
risk level of migrant			+		
education level of migrant				+	+
intent to return	+				
no. of migrants in HH	-				
time	-			+, later -	

<sup>1</sup>See Hagen-Zanker & Siegel (2007) for a more extensive review of the empirical literature.

A basic motivation of a remitting migrant may be altruistic feelings towards the family left behind. In the literature this is modelled in a Becker type setting where the migrant derives positive utility from the consumption by the family. The migrant, thus, cares about poverty, shocks, etc. of the family and consequently sends remittances. In this case, there is a positive relationship between adverse conditions of the receiving household and remittances sent. Remittances should increase with migrant income (the migrant has more to share) and strength of altruism and decrease with recipient income (Funkhouser, 1995).<sup>2</sup> There is a wide academic discussion on how to measure altruism, but most authors agree that measuring altruism by only looking at the effect of giver and receiver income is controversial. It is very abstract and perhaps too rational an operationalisation of decision making and, additionally, captures other effects.

The second remitting motive discussed in the literature is self-interest. In this case, a migrant sends remittances with the aspiration to inherit, to demonstrate laudable behaviour as an investment for the future or with the intent to return home. If a migrant wants to invest at home, the household can be a trustworthy and well-informed agent. If a migrant intends to return home, he may already invest in housing, livestock etc. and will ask the family to be the agent. The migrant may also send remittances to invest in his reputation at home. Furthermore, a migrant may remit in order to be ranked highly in the (implicit) will of his family. With a bequest motive, remittances increase with the household's assets and income, the probability of inheriting (dependent on the age of parents, number of siblings, etc.), the migrant's wealth and income, and decreases with risk aversion. In the case of a bequest motive, self-interest can be distinguished from altruism using conventional explanatory variables and larger income and or wealth of the household should lead to more remittances. Finally, in a three generation setting, remittances may be sent to parents to ensure that the

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<sup>2</sup> However, income does not necessarily have a linear effect. As Cox et al (1997) demonstrate, income may have a different effect at different points of the receiving household income distribution.

remitter's own children also take care of him in old age (Cox & Stark, 1994), known as the demonstration effect.

The first contractual arrangement that may be the result of tempered altruism is co-insurance between households and migrants, as highlighted in the *New Economics of Labour Migration* (NELM). According to the NELM, a household member migrates to a non-correlated labour market due to market failures in the source country (for example poorly developed financial markets), entering a type of co-insurance agreement with the household left behind. These contracts are self-enforcing when mutual altruism is present or in patriarchal societies (Sana & Massey, 2005). Remittances are sent home when the household experiences shocks and to enable the household to invest in new technology. At the same time, the household also supports the migrant, e.g. by paying for the costs of migration or during spells of unemployment. Remittances consequently increase when the household's experiences a (income) shock (like for altruism), but also when the risk-level of the migrant increases. The level of development of the households' community plays an important role here. While poor economic conditions (e.g. high unemployment) may be a cause of migration, the household's community needs to have a certain level of development for investment by the household to be effective. Consequently, it is possible that fewer remittances are sent to underdeveloped communities. The NELM is the only economic theory that explicitly links the motive to remit to the decision to migrate. This is crucial since the intent to send remittances is likely to be a major consideration in the decision to migrate.<sup>3</sup>

Another type of contractual agreement between the household and family is loan repayment, for example, repaying human capital investment or the cost of migration. According to this theory, a household finances a potential migrant's education which enables him to find a

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<sup>3</sup> The omission of this link is not only a theoretical gap but is likely to also affect the empirical results because there are two sample biases amongst the group of remitters: The selectivity of migrants among the general population (ignored and not taken account of in the literature) and the selectivity of remitters amongst migrants (generally corrected in the literature).

better-paid job in the city or abroad (Poirine, 1997). During the next time period the migrant will send remittances to repay the family for the initial investment (“payback-phase”). At this stage the migrant might also become a lender, by financing other family member’s education, which increases overall remittances (“loan phase”). In practice, only paying-back can be measured and there should be a positive link between the migrant’s education level and remittances. However, this could also be interpreted as altruism or another motive due to the close link between education and income.

A final contractual arrangement is the exchange motive (Cox, 1987). Here transfers in the wider sense are paid to the household at home for services provided. The theory can also be applied to remittances, whereby remittances buy various types of services (e.g. child care), usually by temporary migrants (Rapaport and Docquier, 2005). If the migrant’s income increases, remittances increase. If the household’s income increases, thus making the services more expensive, remittances can decrease or increase depending on the migrant’s elasticity of demand. Higher unemployment in the home country should lead to fewer remittances since less money is then needed to make the household members perform their service (the opposite effect is found for altruism).

While the above motives are considered to be separate and different, they overlap (for example in the reaction to shocks) and are essentially all the same motive, namely an increase in welfare for the remitter. All motives can be included in a general individual welfare maximisation function where the individual maximises welfare that includes different elements including own income and household welfare (altruistic motive), possibly over several time periods (loan repayment, insurance or bequest motive). The fact that these motives overlap and are already difficult to measure separately in theory, makes it even more difficult to test the motives empirically, as our empirical application will show.

While the economic literature focuses on strategic motivations that were freely chosen, more social motivations, like prestige and responsibility are not considered. Furthermore, the economic literature neglects the fact that migrants may be willing, but not able to send remittances due to unexpected adverse conditions in the host country<sup>4</sup>. Moreover, family dynamics and the question of who migrates, has not been discussed much in the economic literature even though they are likely to influence remitting behaviour. When a migrant goes abroad or forms a new family abroad, the structure of the family left behind changes. Who migrates abroad affects the motives for remitting and, thereby, the amount remitted. For example, a husband might be altruistic and send as much as possible to his wife and children back home, while a son might feel it is a duty to remit occasional amounts<sup>5</sup>.

As was shown above, the theoretical literature is not able to clearly separate the different motives of remitting. This is a major obstacle from the start in the empirical applications and affects the strength of the conclusions that can be drawn, but it has inspired some authors to measure the motives more creatively. In section 4 we measure the motivations to remit in Albania and Moldova in different ways and compare and contrast our results with other empirical applications to demonstrate the difficulty of measuring the motivations to remit, when the different theories overlap and compete.

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<sup>4</sup> Al-Ali et al (2001) differentiate between the capacity and the desire of refugees to send remittances. This is an important nuance that should also be considered for economic migrants.

<sup>5</sup> A very interesting empirical application is Sana & Massey (2005) who show that sons and daughters from the Dominican Republic have very different remitting behaviour and clearly make the link between changes in family dynamics and remittances.

### **3 METHODOLOGY AND DATA**

#### **3.1 Methodology**

Early papers on the motivations to remit used Ordinary Least Squares (OLS) (for example Lucas & Stark, 1985) to model the remittance decision. We now know that using such a method leads to biased and inconsistent estimates, since a substantial fraction of the migrants does not remit. In recent papers, the main methodological distinction is made between modelling the motivations to remit as a one-stage decision (Tobit) where the decision to remit and the amount of remittances are made together or as a Heckmann two-stage approach (Probit and corrected OLS) where the model separates the decision to remit and the subsequent decision of how much to remit. The advantage of the latter approach is that it allows a regressor to differently affect the decision to remit and the level of remittances. Amuedo-Dorantes & Pozo (2006), on the other hand, argue that using a two-part selection model leads to identification problems, i.e. it is hard to say which variables would matter for one decision and not the other.

An alternative to the two-stage approach is to assume that there is only one remittances decision in which the two stages occur simultaneously. This one-stage decision can be modelled as a single equation estimated by Tobit analysis, using both remitting and non-remitting migrants. Each regressor has the same effect on the probability of being a remitter and on the level of remittances. The convenience of this approach is that it enables the identification of a set of variables that are most significant in influencing “remittance behaviour”. It can be argued that a Tobit model is over-restrictive in forcing the regressors to have the same effect on both the decision to remit and how much to remit. Hoddinott (1992) has noted, however, that in none of the theoretical literature on migration and remittances has a distinction been made between factors influencing the decision whether to remit and the



level of remittances. We, therefore, assume that the remittance decision is a one-stage process and will model it using a Tobit model.

The Tobit model is specified as in equation 1 below:

$$R_i^* = \beta' X_i + u_i \quad u_i \sim N(0, \sigma^2) \quad (1)$$

where

$$R_i = \begin{cases} R_i^* & \text{if } R_i^* > 0 \\ 0 & \text{if } R_i^* \leq 0 \end{cases}$$

$X_i$  is a vector of explanatory variables

The Tobit model is used for censored data, where the dependant variable  $R_i^*$  is latent. In the following analysis  $R_i^*$  is observed for values that are higher than zero and it captures the i-th individual's propensity to remit. It has a normal, homoskedastic distribution with a linear conditional mean.  $R_i$  is the actual observed value of remittances remitted by individual i. It can be either positive or zero and it is positive for those migrants that do remit.

A disadvantage associated with the Tobit approach is that the assumption of normally and homoskedastic distributed errors might not hold. If households have more than one remitter, remittances of both remitters partially depend on the same unobservable household characteristics and this results in error terms that are correlated across observations.<sup>6</sup> Since most households in our datasets only have one remitter we assume that this problem is negligible.

### 3.2 Data

We use data from household surveys in the migrant sending country as the basis of our empirical analysis. For Albania, we use the Living Standards Measurement Survey (LSMS) collected by Albania's statistical agency INSTAT in 2003, which is representative on a

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<sup>6</sup> For a further discussion of this problem see Gubert, 2002.

national level and has a sample of 1780 households. We compliment the household level data with information from a community questionnaire that was collected during the first wave in 2002 in the respective communities of the households surveyed. Due to the construction of the questionnaire we only have data on the remittances sent by children of the household head and spouse of the household head, but this does not result in a large bias of our results (see Appendix 1 for a more detailed discussion of the data). There are 1780 households and together they have 1110 children that are international migrants and 409 children that send remittance.

The Moldovan data is from a survey that was conducted by CBS-AXA in 2004 in cooperation with the EU Security Food Programme and the IMF in Moldova. 3668 randomly selected households were surveyed, of which 1001 reported to have a least one migrant abroad. Households with a migrant were then interviewed more in depth about migration and remittances. Remittances are counted at the individual migrant level. Despite the dataset not being perfectly representative for Moldova, the data is rich and gives a good indication of the remittance situation for the time period stated.

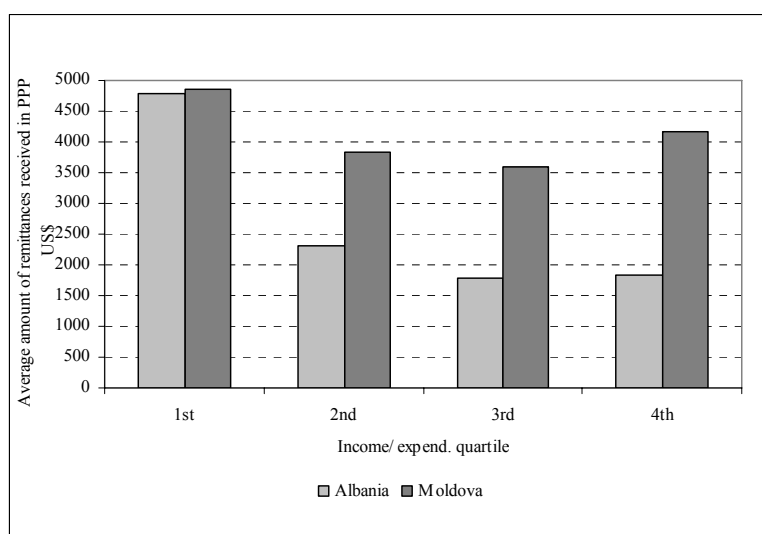
### **3.3. Descriptive statistics**

We now discuss some descriptive statistics to gain a broad overview of the characteristics of senders and receivers in our Albanian and Moldovan samples. We first look at the characteristics of the households that receive remittances and then at the characteristics of the migrants that send remittances. We only look at households that have migrants since this is the basis of our empirical analysis.

Figure 3 shows the amount of remittances received. The first quartile represents the poorest quarter of the sample population and the last quartile represents the richest quarter of the sample population. In this table we see the average amount of remittances by income/

expenditure quartile. A clear picture emerges for Albania; poorer households receive higher remittances. On average, the amount of remittances is twice as high for households in the first income quartile as for households in the third and fourth quartiles. The amount of remittances is more similar for the expenditure quartiles in Moldova, although the poorest quartile also receives the most remittances on average.

*Figure 3. Amount of remittances by income/ expenditure quartiles*



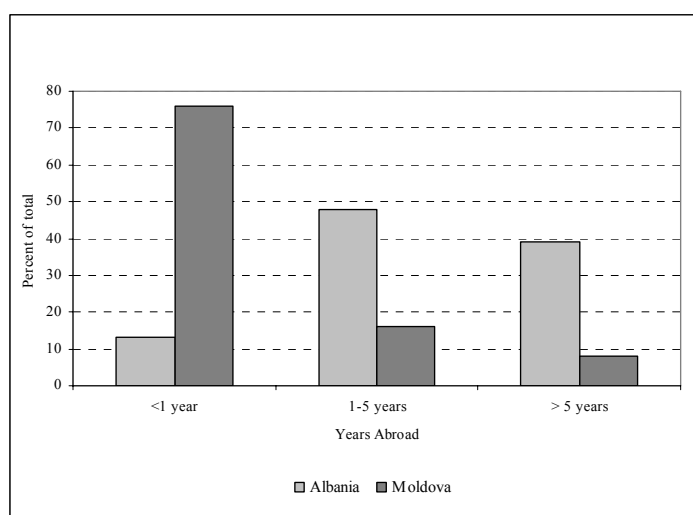
Source: Own calculations using LSMS 2003 and CBS-AXA 2004

In both Albania (74%) and Moldova (63%), male migrants make up the majority of the remitting population (largely due to the fact that it is mostly males who migrate). In Albania, men also send higher amounts of remittances on average, while in Moldova, women send higher amounts of remittances on average, even when location is controlled for. In Albania traditional gender roles mean that it is the duty of the youngest son to look after his parents, much more so than for his sisters, especially if the sisters are married (King et al, 2006). Over 60% of the remitters in both Albania and Moldova are of working age between the ages of 25 and 45 and the majority of remitters in both countries are married and predominantly migrate

to two countries: Italy and Greece for Albania<sup>7</sup> and Russia and Italy for Moldova. Moldovan migrants travel much larger distances.

In figure 4, which shows the average number of years the remitter has been abroad, we begin to see some real differences in the characteristics of remitters between the two countries. In Moldova there is a pattern of short-term seasonal migration, in which migrants regularly go to Russia and return home only to leave again the next year. Albanians, on the other hand, seem to stay abroad for longer periods of time before returning home. However, there is no conclusive evidence on return migration of Albanians.

*Figure 4. Number of years remitter has been abroad*



Source: Own calculations using LSMS 2003 and CBS-AXA 2004

We continue to assess the individual characteristics of remitters by looking at the link between education of the remitter, the number of years abroad and their most important destination countries and the average amount of remittances sent home by remitters of each group. Table 2 presents the average amount of remittances sent by each group in the two countries. The amount of remittances sent by higher educated migrants in the two countries is quite different. In Moldova, the highest average amount of remittances is sent by those

<sup>7</sup> In our dataset 45% of the remitters were in Greece, which is understated compared to the Albanian migrant population as a whole.

migrants who have completed higher education, while this is the lowest remitting group in Albania.

*Table 2. Average amount remitted during the past year by remitter characteristics in PPP US\$*

		<b>Albania</b>	<b>Moldova</b>
<i>Education level</i>	Incomplete secondary	1815	3142
	Secondary	1719	4010
	Vocational	2653	3919
	Higher	1212	5032
<i>Years abroad</i>	<1 year	1322	2916
	1-5 years	1852	3203
	>5 years	2069	1887
<i>Most important destinations</i>	Italy	1832	6374
	Greece (A) Russia (M)	1642	2435

Source: Own calculations using LSMS 2003 and CBS-AXA 2004

As shown in Table 2, it is clear that those Moldovan migrants who are away for short periods of time remit more, while the opposite is true for Albania. Both countries have two major destination countries for migration in which approximately 80 percent of the migrating population goes. Migrants from both countries that migrate to Italy remit more on average, than those going to the other important destination country, although this is much more pronounced in the case of Moldova. The Albanian remitters in Italy and Greece probably remit less than their Moldovan counterparts due to the nature of the remitters in our dataset.

The next section applies the theoretical motivations to remit in Albania and Moldova in order to give a more detailed picture of the motivations to remit in those countries and to demonstrate the problems associated with the literature.

## **4 EMPIRICAL MOTIVATIONS TO REMIT IN ALBANIA AND MOLDOVA**

As was shown in section 2, even theoretically it is difficult to distinguish between different motivations to remit. These complications are exacerbated by data limitations (only having data on either the remitter or remittance receiver) and consequently the empirical applications are often weak. Below we attempt to measure the motivations to remit in Albania and Moldova and discuss other empirical papers. Our starting point is a common model that has the same variables for both the Albanian and Moldovan datasets. For this model we measure the motivations to remit with regard to altruism versus insurance of the migrant. Due to the different nature of the two datasets, we specify two further models for just one of the countries. For Albania we use the data on a household and community level to model the bequest motive, co-insurance and to search for evidence for the NELM theory. As shown previously, the main group of remitters in Albania is the children group, so testing for the bequest motive is highly relevant. Our final model tests the loan repayment motive using only Moldovan data.

### **4.1 Measuring altruism and self-insurance motives in Albania and Moldova**

In each of the following models, we have split the independent variables into migrant characteristics, household characteristics and specific variables that are used to test a number of theoretical motivations to remit. We describe the expected effects of the variables based on the theoretical motivations to remit, previous papers and the specific situations in Albania and Moldova.

In the first model, we test for altruism and insurance of the migrant. The model is outlined in equation 2 below:

$$R_i = \alpha + \beta_1 M_i + \beta_2 H_i + \beta_3 Ri_i + \varepsilon_i \quad (2)$$

Where

*Table 3. Variables and expected effects for combined model*

<b>Variable</b>	<b>Expected effect</b>
R=amount of remittances received by the household over the last 12 months	n.a.
<i>M (Migrant variables)</i>	
Age of migrant at departure	control
Gender of migrant	control
Marital status of the migrant	control
Education of migrant	control
Country of migrant destination	control
<i>H (Household variables)</i>	
Household size	+
Per capita income/ expenditures of household in splines	-
Subjective wellbeing of household	-
Remittances used for consumption	+
Other migrants in household	-
Future migrants in household	+
Household lives in urban/ rural area	control
<i>Ri (Risk variables)</i>	
Unemployment rate of country of destination	+
Duration of migration, in categories	-
Distance between Albania/ Moldova and capital of destination	+
Migrant stock	-

To test the altruism motive, we look at the following variables: household income, or expenditures, subjective wellbeing, number of other migrants in the household and the duration of migration.<sup>8</sup> The coefficient for household income and subjective wellbeing should have a negative sign for altruism, indicating more remittances for households with greater need. We use income splines with two equally-spaced cut-off levels to allow remittances to have a different effect for poorer or richer households. The coefficient for number of migrants in the household should have a negative sign since more migrants means, more people to remit, which lowers the burden on the individual remitter. If family ties have weakened, often approximated by length of time abroad, fewer remittances should be sent (“remittance-decay”). A larger household at home can be an indication of need; we thus expect a positive

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<sup>8</sup> An important control and explanatory variable would be migrant’s earnings, which we do not have. This is likely to affect our results.

relationship with remittances in the case of altruism.<sup>9</sup> If remittances are mainly used for consumption<sup>10</sup>, we take this as a sign of poverty of the household and expect it to have a positive effect on remittances, if altruism is present.

Instead of focusing on household risks that make it difficult to differentiate between altruism and co-insurance, we focus on migrant employment risks. Therefore we test whether the *migrant* insures himself by looking at the effect of employment risk variables on the amount of remittances sent.<sup>11</sup> The basic idea is that the migrant sends more remittances (i.e. a higher “insurance premium”) when the labour market situation is more risky to ensure reverse remittances in times of need or the support of the family if the migrant has to return home due to lack of work. The indirect measures of risk we use are the unemployment rate in the host country (due to non-availability of data on migrant unemployment), the duration of migration, the distance between the migrant sending and host country and stock of Albanian/ Moldovan migrants in the host country as a measurement of networks.

If the unemployment rate in the host country is higher, then it is expected that there is a higher labour market risk.<sup>12</sup> The shorter the duration of migration, the more money should be sent, as the migrant is less acquainted with the labour market and probably has not found stable employment yet. The greater the distance between the countries the higher the risk for the migrant, for example, financially, as the migration costs are higher, and the more money should be sent. A greater migrant stock should mean less risk, as networks are used by migrants to find jobs, housing, etc. Since we cannot control for migrant income, we measure the migrant’s desire to take up insurance, but not his capacity.

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<sup>9</sup> A higher number of household members can be an opportunity for the household if they are adults potentially earning an income or a risk if the members are children or elderly. Therefore, we tried different specifications also using the children or elderly ratio instead of household size, but generally household size gave us the best fit.

<sup>10</sup> We consider spending on health, education and housing as investment.

<sup>11</sup> For a similar analysis see also Amuedo-Dorantes & Pozo (2006) and Lianos & Cavoundis (2004).

<sup>12</sup> The most popular migration destination countries of Albanian and Moldovan migrants do not include illegal migrants in unemployment insurance schemes.



*Table 4. Results of Tobit regression for combined model*

	Albania	Moldova
Dependant variable: Amount of remittances per migrant sent over past year		
No. of uncensored observations	427	201
P-value log likelihood ratio	0.00	0.19
McKelvey & Zavoina's R <sup>2</sup>	0.16	0.13
	Marginal effect & standard error	Marginal effect & standard error
<i>Migrant variables</i>		
Age	7.98 (17.58)	2.26 (7.54)
Gender (base female)	114.04 (290.02)	174.43 (156.12)
Marital status (base married)	-800.17*** (306.60)	256.75* (142.91)
Education (secondary) (base less than secondary)	486.93* (294.71)	154.14 (209.18)
Education (vocational)	784.58** (341.08)	155.08 (222.60)
Education (higher)	-52.94 (523.64)	1415.36 (1440.96)
Destination (Russia)	0.00 (0.00)	41.45 (254.02)
<i>Household variables</i>		
Household size	-21.18 (64.41)	-73.93 (58.13)
Income or expenditure per capita (below K1) <sup>1</sup>	734.15 (1530.73)	-23.33 (747.87)
Income or expenditure per capita (below K2)	-387.50* (228.16)	-165.31 (130.30)
Income or expenditure per capita (above K2)	-405.07 (318.52)	-13.92 (158.00)
Subjective wellbeing (fully satisfied) (base not satisfied)	-90.23 (1411.01)	332.99 (325.63)
Subjective wellbeing (rather satisfied)	1065.04*** (373.75)	408.23 (334.27)
Subjective wellbeing (less satisfied)	-82.23 (267.19)	253.74* (146.23)
Remittances used for consumption	-1454.84*** (307.74)	91.08 (135.73)
Other migrants	-97.13 (86.01)	-79.48 (125.39)
Future migrants	457.31 (299.91)	-60.16 (151.65)
Urban	520.12** (255.67)	82.66 (147.18)
<i>Risk variables</i>		
Unemployment	796.95** (314.38)	-29.73 (121.99)
Migration duration (1-5 years) (base less than 1 year)	221.23 (405.52)	-154.12 (189.93)
Migration duration (>5 years)	750.75* (426.82)	-459.31* (243.20)
Distance (log)	234.66 (599.90)	-815.88* (459.70)

Migrant stock	0.00 (0.00)	-0.01* (0.01)
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<sup>1</sup> The income/ expenditure splines are equally spaced over the range of income/ expenditures per capita, with two cut-off points.

\* significant at 10% level

\*\* significant at 5% level

\*\*\* significant at 1% level

Most papers find some evidence for altruism, as defined by the theory. As predicted theoretically (see table 1) most papers find a positive relationship for the effect of the migrant's income on remittances<sup>13</sup> and a negative relationship for the effect of the household's income on remittances<sup>14</sup>. For Albania we also find a positive and significant coefficient for the lowest income spline. However, subjective wellbeing gives the opposite picture. This could be an indication that the poorest households cannot even afford to migrate and remit. *Vocational education* is also significant for Albanian remitters and the coefficients have a positive effect. This is because more highly educated migrants (as compared to the base group with primary education) have a higher earnings capacity and this confirms standard economic theory.

Still, the results of income and subjective wellbeing do not exclude other motives. However, another variable that is often tested is the presence of other migrants in the household. More migrants in the household means that the migrant is not solely responsible for the wellbeing of the household and most papers do find this negative relationship<sup>15</sup>. We also find a negative though insignificant coefficient for both countries. Nevertheless, the value of such a result is doubtful as it can also be interpreted completely differently, as evidence for the bequest motive, see section 4.2 below.

The significant variable *married* for Albania confirms what descriptive statistics already showed: married Albanian remitters remit less to their parents, as they also support their own

<sup>13</sup> The sole exception is Lianos & Cavoundis (2004).

<sup>14</sup> Exceptions are Lucas & Stark (1985) and Itzingsohn (1995).

<sup>15</sup> The following authors found positive relationships: Germenji et al (2001), Hoddinott (1994) and Pleitez-Chavez (2004)

families. In Moldova, married remitters remit more, as they migrate in order to remit to their wives and children back home. Other papers also find that married migrants remit more, while migrants whose spouses have joined remit less. Apart from these common sense conclusions, it would be interesting to measure changes in family dynamics, for example, the change in behaviour towards parents when a child gets married. Due to the scarcity of panel data this type of remitting behaviour has not been studied.

More solid evidence for altruism is that most migrants are more likely to send remittances and send more if the household head is older and most authors also find a positive link between the dependency ratio and the level of remittances and the simultaneous estimation of the probability and level of remittances. The dependency ratio type variables were not significant in our models nor is household size. Instead, we tried another variable to measure altruism, whether remittances are used for consumption. For Albania, if remittances are used for consumption, which implies a sign of poverty of the household, fewer remittances are received. The effect is different than expected because a large portion of the population is using remittances for consumption across all income levels, showing the dependency of Albania on remittances.

In Albania, internal migration is often a stepping stone for international migration, so it is not surprising that households living in urban areas receive more remittances. Length of stay is often used to measure (weakening) altruism. We find a positive effect for Albania and negative effect for Moldova. Most papers do not find evidence for remittance decay<sup>16</sup>, which shows that migrants generally keep links to their families and communities. Again, this non-surprising result can be interpreted in terms of more self-interested theories, for example, as investment at home due to future plans to return.

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<sup>16</sup> The exceptions are: Banerjee (1984) and Funkhouser (1995)

To succeed in measuring self-insurance only, Amuedo-Dorantes & Pozo (2006) look at the risk level of the migrant only. The first measure of the migrant's risk level that we use is *length of stay*. As mentioned above, length of stay generally has a positive effect on remittances. This means that lower risk is accompanied with more remittances (so more insurance), which is some evidence against remittances as insurance in the Albanian case. However, for Moldova we find the opposite effect and while the risk variables are mostly significant, the evidence for the insurance motive is contradictory. Although few papers find a significant relationship for other measures of migrant risk (e.g. legal employment), almost all of those that did, find a positive relationship.<sup>17</sup> This means that migrants sent more remittances as insurance. For Albania, we find that the risk variables are jointly significant and that a higher risk of unemployment has a positive and large effect. Lianos & Cavoundis (2004) also find that Albanian migrants in more unstable employment remit higher amounts.

We have shown that using a straight-forward economic current approach it is difficult to measure altruism as a separate motive because it overlaps with other motives and most authors have not been able to find good operators. It is possible to distinguish self-insurance, however, if good proxies for migrant risk are found, as these variables have opposite effects to altruism. We were unable to find good proxies for migrant risk, as our remittance receiving household database has little information on the remittance senders. This is a problem many authors face and that aggravates the theoretical problems.

#### **4.2 Measuring the bequest and co-insurance motive in Albania**

Next we use data on a household and community level to test for the bequest motive, co-insurance and the NELM theory in Albania. The model is described in equation 4.

$$R_i = \alpha + \beta_1 B_i + \beta_2 C_i + \beta_3 N_i + \varepsilon_i \quad (4)$$

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<sup>17</sup> Only Durand et al (1996) and Konica (2006) find that those migrants with stable jobs are more likely to remit.

Where

*Table 5. Variables and expected effects for Albania model*

<b>Variable</b>	<b>Expected effect</b>
R=amount of remittances received by the household over the last 12 months	n.a.
<i>M (Migrant variables)</i>	
Age of migrant at departure	control
Gender of migrant	control
Marital status of the migrant	control
Education of migrant	control
<i>B (Bequest/ household variables)</i>	
Per capita income of household	-/+
Other migrants in household	-/+
Age of household head	+
Wealth index	+
House inherited	+
House recently constructed	
Number of children in household	control
<i>C (Co-insurance variables)</i>	
Adverse general household shocks	+
Adverse health shock experienced by household head or spouse	+
Whether household is borrowing money	-
<i>N (NELM variables)</i>	
Household lives in urban/ rural area	control
Community infrastructure index	+
Credit possibility index	+
Informal credit is a source of borrowing in this community	+
Lack of employment opportunities in community	+

To measure the bequest motive, we look at the income of the household, if there are other migrants in the household, the age of the household head, the wealth of the household and whether the house was inherited by the current household. According to the theoretical literature, if the coefficient of income of the household has a positive sign this could show evidence for the bequest motive, since there is more to gain in inheritance. If remittances increase with the wealth of the household, then there is additional evidence for the bequest motive. If there are other migrants in the household, then sending more remittances could be a sign of trying harder to win the bequest; if the coefficient is negative, then it could be a sign of altruism or the fact that the migrant does not think they will inherit, so they do not send

more remittances. If the higher age of the household head coincides with higher remittances, this could be evidence for the bequest motive, because the probability of the death is higher (Brown, 1997).

Many of the variables trying to measure the bequest motive are abstract and far-fetched. Therefore, we include some more specific variables. If the house has been inherited in previous generations, then the migrant can assume that this will happen again, which would mean greater remittances. Some migrants build houses for their parents, which they expect to inherit, therefore, we also included a dummy for newly constructed house.

To test co-insurance of a household, we look at adverse shocks to the household (e.g. loss of crops), health shocks experienced by the household head and or spouse during the past month and whether the household has loans. If either of the coefficients for the variables for shocks have a positive sign, then there is evidence for insurance or altruism. If the coefficient for the borrowing money variable is negative then the household has other means to insure in case of a shock, so co-insurance (i.e. remittances) is not necessary. If the sign is positive it could be an indication of altruism, as the loan could be a sign of household need.

To test the more general hypothesis of the NELM, we use the variables community infrastructure, formal and informal credit possibilities, the population of the community, employment possibilities in the community and whether or not the household is in a rural or urban community, thus following the approaches of Durand et al (1996) and Sana & Massey (2005) as much as possible. If the coefficient of community infrastructure has a positive sign, this is evidence of the NELM, since there needs to be a basic infrastructure if the household wants to invest. If it is negative, then it shows altruism because of need. If the coefficient of formal credit possibility has a negative sign this is evidence against NELM. There are possibilities to obtain money elsewhere, so there is less need for a co-insurance arrangement.

If the coefficient of informal credit has a positive sign, then this shows an underdeveloped financial sector, i.e. there is need for co-insurance and evidence for the NELM. If the coefficient of population of the community has a negative sign, it is also evidence for the NELM. As in a larger community, there are more opportunities for investments and jobs other than through migration so fewer remittances will be sent as part of a co-insurance arrangement. The sign for the coefficient for lack of employment possibilities should be positive for NELM and altruism. As can be seen from the above explanation, NELM variables mostly test investment possibility variables; so NELM also tests for the investment motive in some respect.

*Table 6. Results of Tobit regression for Albania model*

Dependant variable: Amount of remittances per migrant sent over past year	
No. of uncensored observations	352
Log likelihood ratio	0.00
Adjusted R <sup>2</sup>	0.23
	Marginal effect & standard error
<i>Migrant variables</i>	
Age	-1.45 (6.48)
Gender (base female)	156.26* (86.28)
Marital status (base married)	-634.28*** (103.88)
Education (secondary) (base less than secondary)	-54.14 (99.56)
Education (vocational)	148.93 (108.17)
Education (higher)	-70.39 (171.34)
<i>Bequest/ household variables</i>	
Income	46.53 (53.50)
Age household head	200.98 (248.03)
Wealth index	17.24** (7.22)
House inherited	-105.27 (113.00)
Constructed house	428.09*** (125.43)
Number of migrants in household	-10.07 (91.87)

Number elderly	-92.58 (69.93)
<i>Co-insurance variables</i>	
General household shocks	-174.98 (196.64)
Health shocks	-17.01 (77.72)
Borrowing money	-450.52** (196.64)
<i>NELM variables</i>	
Urban	-206.18 (220.80)
Community infrastructure index	-321.81 (283.18)
Credit possibility index	6.40 (89.42)
Informal credit	-21.61 (96.00)
Lack employment	78.34 (88.67)

\* significant at 10% level

\*\* significant at 5% level

\*\*\* significant at 1% level

In theory, migrants with a bequest motive should be more likely to send remittances and send greater sums of remittances if their parents are wealthy (e.g. they own land) and have a higher income.<sup>18</sup> Lucas & Stark (1985) do find evidence for the bequest motive: sons in Botswana remit more to families that have larger herds and if the household has a larger income (as predicted by the theory). In our regression the household bequest variables are highly significant as a group. The positive and significant sign of *income* and the positive, but not significant sign of *wealth* give some initial indication of a bequest motive. The highly significant and positive sign for *other migrants* in the household also indicates a bequest motive according to the literature. If there are other migrants in the household a migrant has to compete harder for the bequest and thus remits more. As Brown (1997) argued, the positive and highly significant sign for *age of household head* could also indicate a bequest motive. The older the household head is, the closer he is to death and the sooner a potential inheritance. A migrant, thus, remits more to be on favourable terms with the household head.

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<sup>18</sup> Some papers do find this relationship (Lucas & Stark (1985), de la Briere et al (1997), Hoddinott (1994), Pleitez-Chavez (2004), Schrieder & Knerr (2000)), but others do not (Durand et al (1996), Gemenji et al (2001), Holst & Schrooten (2006), Lucas & Stark (1985), Osaki (2003), Schrieder & Knerr (2000) ).



This could also be a sign of altruism because the household head is elderly and needs more support.

Brown (1997) finds that those migrants that intend to return home send more remittances, for example as investment in their assets at home. In Albania, the youngest son and his wife have the duty to look after his parents and inherit the house when they die. This might explain why *house inherited* is not significant but *newly constructed house* is. The positive and large marginal effect could indeed be sign of a bequest motive.<sup>19</sup>

Whether remittances are sent as part of a co-insurance contract between migrants and households can be measured by analysing the effect of household shocks and migrant (income, employment and living) risk on remittances. According to most studies that included household shocks, shocks of the household (e.g. illness) lead to a higher probability of remittances and larger sums of remittances.<sup>20</sup> Unfortunately, this cannot be distinguished from altruistic behaviour. In our regression the co-insurance variables are not significant as a group and only the variable *if the household has borrowed money* is significant and negative. This means that the household has other means to insure in case of a shock, so co-insurance (i.e. remittances) is not necessary.<sup>21</sup>

Durand et al (1996) find that migrants are more likely to remit to economically dynamic and entrepreneurial communities, which suggests that remittances are sent as co-insurance under the right conditions. Since the migration and remitting decision are highly linked, we expected the NELM to be highly significant since they also influence the migration decision. However, none of the NELM variables are significant, also not using different specifications, many do not have the expected signs and they are also not significant as a group.

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<sup>19</sup> A dummy for the youngest son is not significant.

<sup>20</sup> Only Halliday (2004) finds that for an earthquake shock, less remittances are sent, unlike for an agricultural shock. He attributes this to the fact that households cope with the earthquake by retaining family members at home to help with rebuilding.

<sup>21</sup> As a similar test of other types on insurance we included social security income in an earlier regression but it was not significant.

Again we find that most variables used to measure the different motives are too general and therefore multi-interpretable. Only the NELM accounts for the origin community development and more research should be done in this direction as it influences both the decision to migrate and the decision to remit, which are interlinked for economic migrants.

#### 4.3 Measuring loan repayment in Moldova

In the final analysis we use only Moldovan data and test for another theoretical motive to remit, namely loan repayment. We estimate the following model:

$$R_i = \alpha + \beta_1 M_i + \beta_2 H_i + \beta_3 L_i + \varepsilon_i \quad (5)$$

Where

*Table 7 . Variables and expected effects for Moldova model*

Variable	Expected effect
R=amount of remittances received by the household over the last 12 months	n.a.
<i>M (Migrant variables)</i>	
Age of migrant at departure	control
Gender of migrant	control
Marital status of the migrant	control
Country of migrant destination	control
Duration of migration, in categories	control
<i>H (Household variables)</i>	
Household size	+
Per capita expenditures of household	-
Subjective wellbeing of household	-
Other migrants in household	-
Household lives in urban/ rural area	control
<i>L (Loan repayment variables)</i>	
Education of migrant	+
Education of household head	+
Motivation to remit debt	+
Cost of migration	+
Return of money borrowed for migration	-

Loan repayment here refers to the repaying of education or the repayment of the financing of migration. The main variables we consider when testing this motive are: education of the household head, education of the migrant, whether debt is the motivation to remit, the cost of

migration, and whether the money borrowed for migration was returned. The higher the education of the household head, the better the enforcement of loan repayment (see Hoddinott, 1992). If the migrant is highly educated, then the remittances sent by the migrant should be higher due to the greater cost of his education (Poirine, 1997). One of the motivations to remit can be to pay back a loan. If the money borrowed for migration has been returned already, it should have a negative effect on the level of remittances.

*Table 8. Results of Tobit regression for Moldova model*

Dependant variable: Amount of remittances per migrant sent over past year	
No. of uncensored observations	235
Log likelihood ratio	0.00
Adjusted R <sup>2</sup>	0.25
	Marginal effect & standard error
<i>Migrant variables</i>	
Age	1.99 (8.04)
Gender (base female)	63.44 (162.77)
Marital status (base married)	113.76 (153.48)
Education (secondary) (base less than secondary)	-117.76 (248.75)
Education (vocational)	-170.62 (282.89)
Education (higher)	-329.34 (313.27)
Destination country (Russia) (base other)	-501.82 (314.80)
Destination country (Europe)	80.06 (328.08)
Distance (log)	66.43 (275.82)
Months abroad	2.22 (6.44)
<i>Household variables</i>	
Expenditure per capita (below K1) <sup>1</sup>	1389.02* (715.63)
Expenditure per capita (below K2)	-482.11*** (123.83)
Expenditure per capita (above K2)	123.77 (189.70)
Subjective wellbeing (fully satisfied) (base not satisfied)	-299.01 (502.25)
Subjective wellbeing (rather satisfied)	115.46 (409.27)
Subjective wellbeing (less satisfied)	361.98** (165.92)

Other migrants	-21.35 (131.11)
Household size	-22.25 (66.18)
<i>Loan repayment variables</i>	
Education household head (secondary) (base less than secondary)	275.75 (190.14)
Education household head (vocational)	439.69** (212.33)
Education household head (higher)	534.08** (261.04)
Motive to remit (debt)	0.04 (0.10)
Migration cost	229.65 (153.85)
Returned money borrowed	516.22** (225.59)

<sup>1</sup> The expenditure splines are equally spaced over the range of expenditures per capita, with two cut-off points.

\* significant at 10% level

\*\* significant at 5% level

\*\*\* significant at 1% level

Loan repayment can be measured by looking at migration costs and the education level of the migrant. Migrants with a higher education level could be sending remittances to repay the investment their parents have made in their education. Even from a sociological perspective this motive seems justified, as the contract may be implicit and based on a feeling of duty. However, this variable could also measure income effects. Almost all authors find a positive relationship between the migrant's education level and remittances<sup>22</sup> and we find a non-significant relationship for Moldova, but due to the weak operationalisation the evidence for the education loan repayment motive is not convincing.

It is possible that those migrants that received help from their family in financing migration send more remittances as a loan repayment. This is confirmed by all empirical studies that find a significant relationship. The loan repayment variables in our analysis are jointly significant. The household head having a higher education level has a positive, very significant and large marginal effect on the amount of remittances sent. It is thought that household heads with a higher education level are better able to enforce loan repayment

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<sup>22</sup> Only two papers find a negative relationship between the migrant's education level and the *probability* of sending remittances: Durand et al (1996) and Osaki (2003).

(Hoddinott, 1992), thus the higher remittances. The significant and positive variable *returned loan* has a different effect than expected. Remittances are measured over the whole past year, but we do not know at what point in time the loan was returned, so it is possible that remittances still capture the effect of repaying the loan. Overall we do not have strong evidence for loan repayment.

## 5 CONCLUSIONS

We have shown that migration and remittances are important for both Albania and Moldova, but that they differ in terms of migration and remitting patterns. Males are the majority of migrants in both countries and remittances are sent to all income groups. In Albania, higher amounts are sent to the poorer households. Albanian men send higher amounts of remittances, probably due to cultural practice, while in Moldova women send higher amounts, even if the location is controlled for. In Albania, migration is longer term, especially compared to Moldova, where migration is often seasonal and in the direction of Russia.

To investigate the different motives to remit more closely, we applied three different econometric models, following the theoretical and empirical literature on the motivations to remit. While we are able to find evidence for some motivation, the aim to repay loans in Moldova and the bequest motive in Albania, the analysis resulted in inconclusive results, very much in line with the literature.

It is clear that the causes and patterns of migration in Albania and Moldova influence the remitting behaviour. Geographical location, economic possibilities and family situations determine where, for long and under which circumstances a migrant can migrate and send remittances. It is exactly the effect of the selectivity of migrants on remittance behaviour that needs to be studied further. Migrating and remitting are joint decisions in many cases and looking at the motivations to remit exclusively biases the results and leaves out vital explanatory factors. Furthermore, we need to differentiate between the desire and the capacity to remit.

The literature finds some significant individual and household characteristics that influence remitting patterns. Migrant age, sex, marital status, education, household income, wellbeing and migration patterns are influential in determining the amount of remittances received.

While there is agreement on some (common sense) remitting motives, e.g. altruism towards spouses, many of the results remain ambiguous due to a number of methodological problems. First, the decision to remit is often linked to the decision to migrate, which comes with its own methodological problems, e.g. selection bias. This is completely neglected in the motivations to remit literature. Furthermore, due to the overlapping theories and data limitations, most authors were not able to find solid variables to measure the different motives. Consequently, in most cases the results are weak and multi-interpretable.

We have shown that one needs to be careful in declaring migrant's motives to remit and to draw conclusions from a few variables that can be interpreted in different ways. It is not possible to give a satisfying answer to this question on a general level and even on a country-specific level problems arise, as it is difficult to test these motives empirically. Not only do the definitions of the motivations to remit overlap, but in real life behaviour the dichotomy altruism versus self-interest is not as sharply defined as in theory. Furthermore, a migrant might have more than one motive in mind. We, therefore, need to revise economic theories of motivations to remit to include the social context and acknowledge the full complexity of a migrant's decision to remit.

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## **Appendix 1: Detailed description of the data**

### Further information on data collection and remittances

The Albanian Living Standards Measurement Survey is part of a panel that is available for the years 2002-2004. The survey contains the standard components of household and individual characteristics, as well as more detailed information on credit and the migration history of individuals in the household and some data on remittances. The community questionnaire was administered to knowledgeable and important people in each community (e.g. the mayor) and has data on basic economic characteristics of the community, as well as on problems that affect the community.

Data on all the remittances received by the household would be ideal for our study, but unfortunately this information is not available for Albania. The 2002 survey has information on transfers that household members received from relatives living elsewhere, in Albania and abroad. Transfers include remittances, but also other payments, for example alimony. In addition we have very little supplementary information on the donors. Therefore we cannot use the 2002 data. The 2003 survey has information on remittances received. It has detailed information on the remittances that are sent by children of the household head and spouse that no longer live at home and some less detailed data on remittances sent by siblings, cousins, nephews and nieces and grandchildren of the household head and spouse. This means that remittances sent by spouses of the household head are not included. However, most of the transfers received by households in 2002 were sent by children (53%) and siblings (16%) while spouses (5%) and non-relatives (1%) only contribute a relatively small fraction of total transfers received (Albania LSMS, 2002). Furthermore spouses contribute smaller amounts of transfers on average. We, therefore, conclude that the bias in using the 2003 data is negligible. Other surveys also confirm that most important remittance receivers are parents of migrants (see for example de Zwager et al, 2005 who use a specific migration survey).

We analyze remittances both on a household level and on an individual level. On the household level we examine all remittances received by the household from all remitting children. On the individual level we only examine remittances sent by one migrant of the family. In both cases remittances are normalised to a 12 month period to ensure comparability to the Moldovan data. We exclude remitting children under the age of 16 since they might have completely different migration motives.

For the Moldovan survey 1006 cases of the 1299 were studied with a more in depth survey. Also accompanying the quantitative surveys were qualitative studies including interviews and focus groups. Once missing values are accounted for and the data is cleaned, the number of households shrinks to 929. The database includes 348 variables with information about migration (current and future) and remittances (sent and received) as well as household and migrant characteristics. If a family had more than one member abroad, then the family member who had more recently returned was used for the survey and priority was given to those migrants who remit. The rest of the migrants were only registered<sup>23</sup>.

### Further information on income and expenditures

For the Albanian dataset we only have individual labour income and social assistance received. We summed these per household to get household income. Business, capital and farm income are thus missing from the income variable and labour income is often under-reported in household surveys. Our descriptive statistics confirm that household income/

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<sup>23</sup> For a good overview of the methodology used for the interviews see Crăciun, 2006.

quartile is indeed far too low. We assume that there is a proportional measurement error and nevertheless use it as a proxy for the true transitory household income. For Moldova we use household expenditures which better measure household's true consumption smoothing abilities and are a more valid measure of permanent income.

We tested both income and expenditures for endogeneity with remittances, using the number of children and elderly people in the household, household size, age and education level of the household and a urban/ rural dummy and found no endogeneity. We also tested migrant intent of household members using the same variables and found no endogeneity.