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Daichi Shimamoto[†‡]

Abstract

In Albania, remittance has been an important factor for the country's economic growth since the collapse of the country's communist regime in the early 1990s. In this paper, I investigated why migrants send remittance to their parents household. In the analysis, I considered four remittance motivations: altruistic, exchange, insurance, and inheritance motivations. To control sample selection of migration, I apply the Heckman sample selection model. The results suggest that migrants in Albania are driven to remit owing to a combination of altruistic, exchange, and inheritance motivations. Further, migration destination influences remittance amount, which implies that not only the local labor market and exchange rate at the final destination but also migration motivation factors affect remittance amount.

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1.   Introduction

A large number of migrants, mainly motivated by economic factors, have left Albania over recent decades. After the collapse of the country's communist regime in the early 1990s, Albanians suffered poor economic outcomes (e.g., high poverty and high unemployment), and thus, the number of international migrants rapidly expanded, especially to nearby countries such as Greece and Italy. In line with this trend, migrants are increasingly sending remittances to their families in their home countries in order to soften their economic difficulties. Migrant remittance has thus risen year by year; in 2009, total remittances exceeded $1.3 billion, twice the total value of Albania's exports, seven times its inward ODA, and five times its inward FDI (World Bank 2010).

Although income shocks (e.g., unemployment, ceremonial occasions, and natural disasters) can be often unavoidable, in a poor credit market environment such as that commonly found in developing countries, it is difficult to overcome such shocks through formal financial institutions. In such an environment, intra-household income transfer thus serves as a potential channel to smoothen consumption (Rosenzweig and Stark 1989). Previous studies have found that remittances sent to developing countries allow households not only to meet their daily expenses, but also to invest in human capital such as education and health (Gobel 2013; Adams and Cuecuecha 2010). Therefore, these studies imply that remittance has the potential to contribute to long-term economic growth by investing in human capital as well as reducing poverty.

Development economists have previously attempted to explain the motivations behind migrant remittance. For example, Cox et al. (1998) investigate altruistic

motivation and exchange motivation using household survey data in Peru. In the same vein, de la Briere et al. (2002) find that migration destination is related to remittance motivation in the Dominican Republic. They show that while adult female migrants in the US are driven to remit because of insurance motivations, other migrants remit in order to receive inheritance from their parents. Based on the foregoing, the present study examines in more depth the underlying reasons why individuals remit to their families in their home countries. In particular, I investigate four of the main motivations behind migrant remittance comprehensively: altruistic motivation, exchange motivation, insurance motivation, and inheritance motivation.

Although previous studies have argued that migration is not random sample of the population (Stark and Lucus 1988; Hoddinott 1994), their estimations of the determinants of remittance have ignored the selection mechanism of migration. If this selection mechanism affects the determinants of remittance amount, an OLS estimation of these determinants should be biased[1]. Therefore, in order to avoid biased estimators, this study applies the Heckman selection model for the estimation.

The remainder of this study is organized as follows. Section 2 describes the pattern of migration and remittance in Albania. Section 3 explains the four main motivations behind migrant remittance. Section 4 discusses the empirical methods, while Section 5 presents the dataset used and summarizes the statistics. Section 6

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[1] Other studies adopt a type one Tobit model in order to estimate the determinants of remittance. However, such models (sometimes incorrectly) assume the covariates affect decision-making regarding whether individuals remit to parents and the remittance amount in an identical manner.

discusses the results and Section 7 concludes.

2.   Migrant Remittance in Albania

2.1.   Migration in Albania

The communist regime that ruled Albania from the end of World War II until 1990 prohibited migration. Given that living standards in Albania were the worst of all Eastern European countries at the fall of the regime, individuals and families soon began to migrate to urban areas or nearby countries to improve their lives. Consequently, internal and international migration increased at an explosive pace. The stabilization of the political and economic situation in 1992 steadied the flow of migration. However, in 1996, when the country's formal pyramid savings schemes (so-called Ponzi schemes with savings amounting to over half of the GDP for 1996) collapsed, the political system fell into turmoil and the flow of international migration was re-ignited. Only as the economy gradually recovered from 1998 to 2002 did the outflow of migration restabilize (Carletto et al. 2004).

In Albania, migration is a household strategy for overcoming economic difficulties (e.g., poverty, unemployment) (Azzarri and Carletto 2009). The main international destinations for migrants are neighboring countries such as Greece and Italy (Chaloff 2008), although Albanians also emigrate to other destinations such as the US, England, Australia, Canada, Turkey, France, and Macedonia (World Bank 2010). Migrants are likely to remit to their families in their home countries. From a macro standpoint, international remittances increased rapidly since the fall of communism in

1992 to 2007, but since 2008, the amount has decreased because of the global financial crisis (Figure 1[2]). Nevertheless, in 2009, total remittances still exceeded $1.3 billion (World Bank 2010). This substantial figure implies that remittance is an important source of foreign currency earnings in Albania.

The Albanian government supports the flow of out migrants through its National Strategy on Migration, which was proposed by the International Organization for Migration. The main objective of this policy is to enhance the link between migration and the development of Albania by directing remittances to invest into business activities (Chaloff 2008). In this regard, the government supports Albanian migrants by improving their treatment in their final destinations (e.g., improving their image and protecting the rights of Albanian migrants). The government also intervene the migration process (e.g., access to information on emigration possibilities, registration of migrants, and visa policy).

2.2. The characteristics of migrants

In this study, a migrant is defined as a child living away from home. As of 2010, the stock of migrants in Albania was 1,438,300, which corresponded to 45.4% of the national population (World Bank 2010). Table 1 presents the demographic characteristics of the migrants sampled in this study by destination. The dataset used in this study includes 20,015 individuals; of these, 15,816 of them have not migrated (non-migrants), 2370 have migrated internally, 712 have migrated to Greece, 763 have migrated to Italy, and 354 have migrated to other countries. Although there are no major

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[2] Data source: World Bank (2010)

differences in the age of international migrants, the average age of internal migrants is 36.5 years, which is the oldest among migrants. The educational level of migrants (13 years of schooling on average) is higher than that for non-migrants. The majority of international migrants tend to be men: 62.5% of migrants to Greece, 68.7% of migrants to Italy, and 59.0% of migrants to other countries. By contrast, only one-third (32.4%) of internal migrants are men. The age of the eldest son of international migrants is higher than that for non-migrants and internal migrants. Finally, no large differences between non-migrants and internal migrants are observed.

There are differences in living status between internal and international migrants. Whereas more than half of international migrants live with their partners, fewer than 3% of internal migrants do so. The high proportion of women among internal migrants suggests that Albanian women do not migrate for marriage reasons, in contrast to Indian women (Rosenzweig and Stark 1989). Approximately 10% of migrants to Greece and Italy have a partner living in the parents' household (PH) compared with fewer than 5% of internal migrants and migrants to other countries. These differences in living status between internal and international migrants might be accounted for by differences in the determinants of migration. As noted earlier, international migrants might be motivated not only for passage with family but also for alleviating financial difficulties in the home country (Azzarri and Carletto 2009). However, differences in remittance amount can be caused not only by a migrant's motivations but also by the economic conditions of the final destination (e.g., labor market and exchange rate).

2.3.   Remittance probability and amount

Remittance probability and amount depends on income distribution[3]. Table 2 indicates the probability of the migrant's PH receiving remittance across income percentiles, showing there are no large differences. Indeed, the probability that poorer households receive remittance is only slightly higher than that for other households. By contrast, remittance amount differs across income percentiles. The poorest households receive the highest remittance amounts, which implies that relatively poorer households tend to obtain greater benefits from migrant remittance.

2.4. Use of remittance

Households in developing countries can have limited access to formal financial institutions, which means that many families might face liquidity constraints. Therefore, remittance is expected to improve the welfare of the PH. Further, if a household's consumption level is above the subsistence level, remittance can allow investment. Previous studies have found that remittance and various types of household investments in developing countries are positively correlated. For example, Rozelle et al (1999) show that agricultural investment is positively correlated with remittance in rural areas of China. Similarly, entrepreneurship and small business investment have also been shown to be positively correlated in several countries (Dustmann and Kirchkamp 2002; Woodruff and Zentero 2007; Meanard 2004), while education investments are positively correlated with remittance in El Salvador and Guatemala (Edwards and Ureta 2003; Adams and Cuecuecha 2010). Table 3 also reveals a similar trend in Albania.

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[3] The presented sample consists of migrants who remit below 100,000 LEKS per month and migrants that do not remit to their PHs. This limitation aims to alleviate the effect of outliners on the calculation of average remittance amounts. The amount of 100,000 LEKS per month corresponds to the 95% percentile.

According to the World Bank's Living Standards Measurement Study for Albania (LSMS hereafter) (2003), remittance from international migrants is used not only for necessities, but also for investment into education, construction, and household businesses. Thus, remittance has the potential to improve long-term economic growth in Albania as well as smooth consumption.

3.   Motivations behind Remittance

Four remittance motivations are considered in this study, namely altruistic, insurance, exchange, and inheritance motivation, based on the theoretical model proposed by Rapport and Docquier (2006). For all four of these motivations, I assume that there are two agents: one migrant and one PH.

3.1.   Altruistic motivation

Here, I consider the case of unilateral altruism, where only migrants are altruistic. Under altruistic motivation, migrant utility is assumed to consist of two elements: own consumption and PH consumption. Therefore, altruistic migrants can gain from increasing not only their own consumption but also PH consumption. Migrants' decision-making on remittance amount thus depends on PH consumption level and their altruism degree. When PH consumption level is low, which implies that the marginal utility gain of remittance is relatively high, migrants increase remittance amounts to maximize their own utility. By contrast, when PH consumption is high, migrants remit less. Further, migrants with a high altruism degree remit more, because relatively high altruistic migrants can receive higher marginal utility gain. In other words, altruistic

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motivation predicts that remittance amount increases with migrant income and altruism degree, but decreases with PH income. However, since altruism degree and migrant income are not available in the data, PH income level and income determinants are used as determining factors for altruistic motivation.

3.2. Exchange motivation

Exchange motivation can take different forms. For example, when parents take care of a migrant's children, the migrant might remit to the PH as a type of compensation. In such a case, remittance can be conceived as the purchase of services supplied by the parents. In addition, migrants might remit to the PH to repay the costs borne by parents before their migration (e.g., transaction costs and education fees).

In contrast to altruistic motivation, exchange motivation postulates that migrant utility is composed of own consumption and parental services. When the marginal utility gain of services is positive for the migrant, it is negative for the PH because the parents have to cover the cost of the services. Therefore, if the PH utility gain from supplying the service is less than that derived from not supplying the service, no service is supplied (i.e., the entry constraint of the parents). An increase in PH income, which means a rise in the opportunity cost of parents, implies an increase in the service price and a subsequent increase in remittance amount (i.e., the entry constraint of the migrant).

In the same vein, if the utility gain from receiving the service is less than that without the service, migrants do not buy the service. A rise in migrant income, which implies fewer budget constraints for the migrant, increases the purchase of the service if

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the service is a normal good. To satisfy the entry constraint of the migrant and receive enough services from the parents, an increase in migrant income pushes up remittance amount. Therefore, under exchange motivation, an increase in migrant income also increases remittance amount.

3.3. Insurance motivation

People in developing countries, especially in rural areas, often face income volatility. For example, the weather affects agricultural production. When farmers face drought/flood, they cannot obtain any output, while their animals might catch an infectious disease. Therefore, farmers always face unpredicted and exogenous risk, which reduces income volatility. However, households face imperfect credit and risk markets, implying that it is difficult for people in rural areas to borrow money from the credit market when they face income shocks. Therefore, interfamilial arrangements or risk sharing within villages can be crucial for overcoming income volatility (Rosenzweig and Stark 1989). By contrast, although urban inhabitants do not face risks related to natural disasters, they can suffer income shocks, such as unemployment, ceremonial functions, and education expenses. In these cases, the income transfer from other people including family members that have migrated can overcome this lack of access to the credit market.

Such strategic migration can be explained by the New Economic and Labor Migration theory (Stark and Bloom 1985). According to this theory, a migrant transfers income in the form of insurance when the PH faces income shocks. Indeed, it has been widely argued that remittance is an important factor for PH income in order to smooth

consumption (Lucus and Stark 1985). If migrants do not remit to parents when the PH faces income shocks, migrants are punished by their parents. However, migrants also receive an income transfer when they face income shocks, because the insurance motivation can be conceived as an informal contract between migrants and their parents.

3.4. Inheritance motivation

Under inheritance motivation, migrants remit to parents in order to receive inheritance, which is an enforcement device for migrants. Under this motivation, remittance can be conceived as a way to obtain an inheritance entitlement. Therefore, the expected inheritance amount and possibility of inheritance are determining factors. If the inheritance amount or possibility of inheritance rises, migrants remit more.

3.5   Previous studies of the determinants of remittance

Previous studies have demonstrated correlations that are consistent with specific remittance motivations. Cox et al. (1998) developed two types of theoretical models: altruistic and exchange. By using household survey data in Peru, they find that pre-transfer PH income is significantly positively correlated with remittance amount under exchange motivation but not under altruistic motivation. Other studies support these findings for exchange motivation, showing that migrants remit to repay debts that parents incurred for the migrant, such as education or migration costs (Poirine 1997; Ilahi and Jafarey 1999).

de la Briere et al. (2002) focus on the insurance and investment motivations. Inheritance motivation is based on the age of the household head and parents' inheritable assets, which both increase remittance amount. For insurance motivation,

they use the number of lost working days, which indicates an income shock faced by parents. Based on household data on a rural area in Dominica Sierra, they find that destination, sex, and household composition affect these motivations. Further, when a sole migrant is male, the migrant is motivated by insurance factors, whereas when destination of the migrant is the US, inheritance motivation plays a larger role in remittance.

Other studies show evidence of both insurance and inheritance motivations. Hoddinott (1994) demonstrates that remittance probability and remittance amount increase with the amount of land held by parents in Kenya in line with the inheritance motivation theory. Lucus and Stark(1985) show that migrants remit to compensate for unexpected income drops (e.g., owing to drought) in Botswana (insurance motivation).

4. Estimated model

4.1. Econometric model

As early works claimed that migrants are selected individuals, some selection mechanism of migrants may work (Stark and Lucus 1988; Hoddinott 1994). As explained in Section 2.2, the observable characteristics of migrants are different to those of non-migrants. For example, migrants are likely to be more educated, which implies that individuals who have relatively high expected incomes in the final destination are likely to migrate. Therefore, without controlling for this selection mechanism, the estimation of remittance determinants may be biased. To overcome this estimation problem, I apply the Heckman selection model in the present study.

In the first stage, I consider whether an individual migrates. Let $migrate_i^*$ be a latent variable that increases in response to a rise in the propensity that individual i migrates. The propensity depends on not only the individual characteristics that affect the expected wage in the final destination, but also household characteristics. Therefore, the selection equation can be expressed as follows:

(1) $migrate_i^* = \alpha + \beta X + u_i$

where X is a vector of covariates in the first stage; β is a vector of coefficients; and u_i is an error term. It is assumed $E(u_i) = 0$ and it is distributed as a standard normal distribution. In the case that $migrate_i^*$ is higher than 0, individual i in household j migrates; otherwise, individual i does not, as follows:

(2) $migrate_i = \begin{cases} 1 & if \quad migrate_i^* \geq 0 \\ 0 & if \quad migrate_i^* < 0 \end{cases}$

I estimate equation (9) using a probit model: $P(migrate_{ij} = 1 | X)$. Then, by using the estimated coefficients $\hat{\beta}$, I predict the inverse Mills ratio $\hat{\lambda}_i = \frac{\phi(\hat{\beta}X)}{\Phi(\hat{\beta}X)}$ for each migrant, where Φ is the cdf and ϕ is the normal pdf. Next, I estimate how much a migrant remits to the PH by using an OLS regression. The inverse Mills ratio also controls for the sample selection of migrants in the second stage:

(3) $remittance_{ij} = \xi Z + \rho \sigma_u \hat{\lambda}_i + \varepsilon_i$

where Z is a vector of covariates in the second stage; $\rho \sigma_u$ is a covariate between ε_i and u_i; and ξ is a vector of parameters. Sample selection bias can be alleviated by applying the above method.

4.2. Four remittance motivations

In the following subsections, I classify these motivations in detail. Table 4 then summarizes this classification according to the key variables.

4.2.1. Altruistic motivation

If altruism is a remittance motivation, remittance amount increases with migrant income. The reason for this rise is that a migrant receives utility gain not only from his/her own consumption but also from PH consumption, and therefore, the migrant chooses the optimal level of income transfer that maximizes his/her own utility level. However, inheritance and exchange motivations also predict the same effect of migrant income on remittance amount. Hence, to identify altruistic motivation, I assess how PH income level influences remittance amount. Since migrant utility increases with a rise in PH consumption under altruistic motivation, remittance amount might be the reason for that in contrast to the prediction made by the exchange model.

4.2.2. Exchange motivation

In this study, parental services (e.g., caring for the migrant's family) and PH income level are used to test for exchange motivation. If the migrant remits under exchange motivation, he/she increases the remittance amount in order to pay for parental services. However, other motivations predict that parental services do not affect remittance amount. Additionally, the effect of PH income on remittance amount is positive if a pure exchange model is used in contrast to under altruistic motivation.

4.2.3. Insurance motivation

Under insurance motivation, migrants remit in the face of an income shock for the PH. However, it is difficult to distinguish insurance motivation from altruistic

motivation because altruistic migrants also increase remittance amount in the case that their parents face a fall in income. Therefore, I check whether migrant income affects remittance amount. If migrant income does not affect remittance amount, the remittance can be conceived as motivated by insurance reasons.

4.2.4. Inheritance motivation

Under this motivation, the probability of receiving inheritance, expected inheritance amount, and migrant income all increase remittance amount. However, because the effect of migrant income is the same as it is for the altruistic and exchange motivations, I use the probability of receiving inheritance and expected inheritance amount to identify inheritance motivation.

4.3. Variables related to the four remittance motivations

The available data do not allow me to analyze these motivations directly, because the key variables (e.g., migrant income and altruism degree) necessary to identify altruistic motivation are unavailable. Therefore, I test the motivations based on the implication of theories. In this subsection, I describe how to test these remittance motivations as well as the key variables that are expected to affect migrant remittance.

4.3.1. Migrant income

The altruistic, exchange, and inheritance motivations predict that migrant income in the final destination increases remittance amount. However, migrant income data are not available in LSMS 2005 for Albania. Therefore, in line with the approach taken by de la Briere et al. (2002), I use socio-demographic characteristics as income determinants (i.e., age, square of age, years of schooling, sex, and duration of

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migration) instead of migrant income based on Mincer's equation.

These socio-demographic characteristics are important factors for migration. For example, individuals that have higher expected incomes in the final destination are more likely to migrate than individuals that have lower expected incomes. Hence, to consider the selection mechanism of migrants, it is necessary to control for socio-demographic variables in order to analyze migrant motivations in the first stage.

4.3.2. PH income

I use PH income level in order to identify the effect of pure altruistic motivation or pure exchange motivation on remittance amount. First, I estimate three percentiles of income per capita for the PH: 10th percentile, 25th percentile, and 50th percentile. I then define three dummy income variables: <10th percentile, 10th–25th percentile, and 25th–50th percentile. The reference group is income above the 50th percentile. PH income level is a determinant of migration in developing countries, as low-income households cannot access the credit market sufficiently. To overcome this difficulty, people emigrate and remit from the final destination. It is thus necessary to control for PH income when analyzing migration behavior.

4.3.3. Parental services

Under exchange motivation, a migrant remits to the PH by way of compensation for parental services. To consider exchange motivation, I use a dummy variable that indicates whether the spouse of the migrant lives with the migrant's parents as a proxy variable of parental services.

4.3.4. Adverse short-run shocks faced by the PH

I use a variable that indicates whether the PH suffered the unexpected death of the income earner in 2003/2004 and in 2005 as a proxy variable for any adverse short-run shock faced by the PH. However, as described in Section 4.2, because it is difficult to distinguish pure insurance motivation from pure altruistic motivation, I check whether the determinants of migrant income affect remittance amount.

4.3.5. Parents' assets

To test inheritance motivation, I use the number of rooms in the PH as a proxy variable for parents' assets. Parents' assets increase remittance amount if the migrant remits to parent owing to the inheritance motivation. As explained in Section 3.4, if parents hold considerable assets, which means that their inheritance is highly valued, then their children remit to receive bequests. If this is the case, migrants increase remittance amount in line with the inheritance value.

4.3.6. Probability of receiving inheritance

Under inheritance motivation, I include variables related to the probability of receiving an inheritance from parents. In this study, I use a dummy variable for the elder son, which indicates that the individual is more likely to receive an inheritance. In addition, age of the household head is included in the estimated equation; because the probability of death increases with age, the probability of receiving an inheritance rises with the age of the household head.

4.4. Other variables

4.4.1. Destination country dummy

Wage in the final destination is determined by the characteristics of the migrant

as well as the local labor market. Additionally, migrants might decide on remittance amount by taking account of the relevant exchange rate. In these ways, destination influences remittance amount. To control for the heterogeneity of the destination, I add a destination dummy (Greece dummy, Italy dummy, and other countries dummy)[4]. The reference destination is internal migration.

4.4.2. Characteristics of the household head

The characteristics of the household head are expected to affect migrant remittance not only because the household head has more decision-making power in a household, but also because such characteristics affect the family's economic situation. To control for these effects, socio-demographic variables (sex, years of schooling, and age) were included in the estimated equations.

4.4.3. Household characteristics (household size, rate of labor force[5], and rate of chronic illness[6])

If the household runs a self-owned business (including agriculture), an increase in the number of household members diminishes the marginal return on production labor. Therefore, allocating a family member to work in another business is optimal for households. In addition, household characteristics also affect the income source for the PH. To consider these effects, I control for the number of household members and the rate of labor as explanatory variables in the estimated equation. In addition, to control

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[4] Other countries include other countries in Europe as well as the US.

[5] The rate of labor force is defined as the proportion of household members aged 15–65 years.

[6] The rate of chronic illness is defined as the proportion of family members who suffer from a chronic illness or disability that has lasted more than three months (including severe depression).

for the health conditions in the household, the rate of chronic illness is added as an explanatory variable.

4.4.4. Community characteristics

In the Heckman selection model, at least one variable that is excluded from the second equation is needed for identification. In this study, community characteristics are used as the excluded variables. In a community that displays significant migration, people can access information on the destination through the network of migrants. This migration network thus reduces the psychological and physical cost of migration for people in the community (McKenzie and Rapoport, 2010; Moraga 2013). Further, in crime-ridden areas, people are expected to move to find a safer living environment. Hence, whether a community is crime-plagued also affects the migration decision.

Excluded variables are required so that there is no correlation with the error term in the second equation. In the case of the excluded variables, however, migrant movement in the community is unlikely to affect remittance amount, because migrants decide this amount based on their relations with the PH not with the community.

5.   Data

This study analyzes data derived from the LSMS 2005 for Albania. This survey was collected by the Institute of Statistics in May and early July with the technical assistance of the World Bank; the agricultural survey was undertaken in October. The purpose of the survey is to measure living conditions and poverty levels.

These data consist of four elements: a household questionnaire, a diary for

recording household food consumption, a community questionnaire, and a price questionnaire. The household questionnaire includes information on the core LSMS models[7] as well as additional modules on migration, fertility, subjective poverty, agriculture, non-farm enterprises, and social capital (World Bank 2006). In particular, the questionnaire asks households about children living away, socio-demographic characteristics, destinations, duration of migration, and remittance amounts. These data allow me to analyze remittance motivations by considering the characteristics of both children who migrate and their parents. In addition, the community questionnaire includes information on social order and migration in the community for analyzing the relationship between community characteristics and migration behavior.

The sampling method of the LSMS 2005 for Albania is related to that used in the LSMS 2002 for Albania, namely a two-stage cluster sampling approach (World Bank 2006). First, 455 census enumeration areas (EAs) were collected[78] based on area location ("Mountain area," "Coastal area," and "Central area") and rate of development ("Urban area (big towns)," "Other Urban areas," and "Rural areas"). The nation's capital Tirana was considered to be a separate stratum.

The second stage sample selection followed the 455 sample EAs selected in the first stage. The second stage samples were chosen based on a systematic sampling

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[7] The core LSMS modules include the following information: metadata, household rosters, dwelling and utilities, education, health, employment, transfers and social assistance, other income sources, and consumption.

[8] The sample of 450 EAs in the 2005 LSMS is different to that in the 2002 LSMS (see World Bank 2006).

method. In each EA, 12 households were initially selected. After selection, eight households were chosen as the base samples, while the remaining samples were the substitutes. The analysis of the study is based on individual units. The data include individuals that belong to the same household in order to control for not only individual characteristics but also head/family characteristics.

Table 3 shows the descriptive statistics, which include the mean and standard deviation of each variable. As discussed in Section 2.2, migrant characteristics are different to those of non-migrants. In terms of demographic characteristics, 46.3% of migrants are men compared with 50% for non-migrants. The average age of migrants (non-migrants) is 34.3 (32.0) years old and the average years of schooling is 11.0 and 7.3 years, respectively. Altogether, 20.8% of migrants are the eldest son, which is higher than the rate for non-migrants, while 26.6% of migrants live with a partner, whereas 5.6% of the migrants' partners live in the PH. Finally, 56.4% of migrants are internal, compared with 18.2% for Greece, 17.0% for Italy, and 8.4% for other countries.

In regard to the head of the household, there are large differences between the migrant and non-migrant samples; the average age of the household head for the sample of migrants is 63.9 years, which is older than that for the sample of non-migrants (51.7 years). Further, 83.1% (92.5%) of the heads in the sample of migrants (non-migrants) are men. Finally, the average years of schooling for migrants and non-migrants are 7.5 and 9.8 years, respectively.

Household size in the migrant sample is 8.1 persons per household, which is

larger than that for the sample of non-migrants (6.4 persons per household). The rate of labor force for migrants is 84.2%, which is larger compared with non-migrants, while the rate of chronic illness in the sample of non-migrants (85%) is considerably higher than that in the sample of migrants (51.4%).

With respect to PH income level, there are also differences between both samples. The probability that poorer PHs have a child that migrates is relatively high. Regarding the adverse short-run shocks faced by PHs, the probability of the unexpected death of the income earner is similar for both samples, as is the community characteristics related to public order. However, the community characteristics regarding migration differ for both samples.

6.   Results

As explained earlier, the Heckman selection model is used herein in order to control for sample selection bias. Therefore, migration determinants are estimated in the first stage of the model. Afterwards, using the information estimated in the first stage, this model estimates the determinants of remittance amount. In this section, I present the results from the first-stage and second-stage estimations.

6.1. Migration determinants

To control for the selection of migrants, the probability of migration is estimated in the first stage. Table 4 shows the mean marginal effect in the first stage estimated by the probit model. It is found that the probability of migrating is significantly affected by individual characteristics (age, square of age, male dummy, years of schooling, and

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eldest son dummy) related to the wage in the final destination. In particular, the relationship between age and probability shows an inverted U-shape, demonstrating that 32.6-year-olds are most likely to migrate. In other words, high-skilled individuals are more likely to migrate (see also Lanzona 1998). The female dummy variable increases the probability of migrating by 1.7% at the 1% significance level. As discussed in Section 2.2, the high rate of internal migration for women (67.6%) affects this result. Years of schooling also increase the probability by 0.4% at the 1% significance level.

The characteristics of the head of household (age and years of schooling) are significant at the 1% level; while the probability increases with the age of the head, the age of the head decreases with the probability. This finding implies that family background may affect migration behavior (Lanzona 1998). In particular, elderly heads that have lower education are most likely to have at least one child that migrates.

Moreover, except the rate of chronic illness, family characteristics (household size and rate of labor force) do not change the probability significantly. The rate of chronic illness decreases the probability of migration because when family members are needed to care for one another, they are less likely to migrate. In addition, the number of rooms does not affect the probability significantly; therefore, parents' assets are not a determining factor for migration.

All the dummy variables of PH income increase the probability significantly, implying that PH income level is an important determinant of migration. However, the probability of migrating does not change significantly with the income shocks faced by the PH. In fact, migration rarely occurs after an income shock.

The community characteristics related to migration increase the probability significantly. Since people can access information on the final destination easily, migration costs are lower than those in other communities, suggesting that the migrant network is an important factor (see Moraga 2013; McKenzie and Rapport 2010). However, public order in the community does not affect the probability significantly.

6.2. Remittance motivations

Table 6 presents the results of the second-stage estimation. The inverse Mills ratio positively increases the probability of migrating, which means that the selection mechanism of migrants is shown to be an important factor in determining remittance amount. In the following subsections, I discuss the four studied remittance motivations in detail.

6.2.1. Altruistic motivation

As discussed in Section 6.1, the characteristics of migrants (age, square of age, sex, years of schooling, and duration of migration) significantly affect remittance amount. Additionally, the dummy variables indicate that PH income level significantly affects remittance amount. This result implies that relatively poor households receive more remittance; however, the lowest-income households (i.e., below the 10th percentile of income) do not receive more remittance. These results are consistent with the prediction of altruistic motivation. Therefore, these findings declare that migrants from Albania are driven by altruistic motivation when remitting to their parents in contrast to the results of Cox et al. (1998), which show an inverse relationship between pre-transfer income and transfer amounts received.

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6.2.2. Exchange motivation

The dummy variable for whether the partner of the migrant lives in the PH significantly increases remittance amount. When the partner of the migrant lives in the PH, the migrant's parents take care of the partner as a service, thereby increasing remittance amount (i.e., exchange motivation). By contrast, remittance amount decreases significantly when the partner lives with the migrant. In that case, the migrant does not need to remit as a form of compensation of the service. Moreover, since migrants have to care for their partners, a proportion of their incomes in the final destination is used for that.

6.2.3. Insurance motivation

The unexpected death of the income earner in the PH in 2005 significantly increases remittance amount. This finding implies that migrants remit to compensate for the lack of income caused by this sudden death. However, migrants significantly decrease remittance amount when the PH suffer the unexpected death of the income earner in 2003/2004. This finding implies that the unexpected death in 2003/2004 lowers the expenditure necessary for living in the PH.

As described in Section 2.4, if a migrant is driven to remit by the insurance motivation, his/her income does not increase remittance amount. As explained above, income determinants affect remittance amount. Hence, remittance can be driven by altruistic motivation but not by insurance motivation.

6.2.4. Inheritance motivation

The eldest son dummy increases remittance amount by 32% at the 5%

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significance level, lending support to the probability of receiving inheritance increasing remittance amount. However, the age of household head decreases this amount by 2.8% at the 1% significance level. This result might be caused by the other elements that fluctuate with the age of the household head (e.g., family background). The number of rooms in the PH increases remittance amount by 10.4% at the 1% significance level, implying that inheritance value increases remittance amount (i.e., inheritance motivation). This finding is consistent with those of previous studies (see Stark and Lucus 1988).

6.3 Other findings

As expected, the country-specific dummy variables increase remittance amount at the 1% significance level, which suggests that international migrants remit more in comparison with internal migrants. Thus, remittance amount is affected by the conditions in the final destination (e.g., labor market and currency exchange) as well as differences in migration motivations (de la Briere et al. 2002). Therefore, the destination is an influencing factor of remittance amount.

Similarly, the age and years of schooling of the household head decrease remittance amount by 3.4% at the 1% significance level, while the rate of labor in the PH also decreases this amount significantly. Since Albanian migrants are driven to remit by altruistic motivation, they lower remittance amount when PH income level is high. Since the rate of labor increases with PH income, migrants remit less (i.e., altruistic motivation). However, the rate of chronic illness significantly decreases remittance amount.

7. Conclusion

In Albania, remittance has been increasing since the collapse of the communist regime in the early 1990s and has become an important factor for the country's economic growth. In this paper, I investigated remittance motivations by applying the Heckman selection model to assess migration behavior. The presented analysis is based on data derived from the World Bank's LSMS 2005 for Albania.

I considered four remittance motivations: altruistic, exchange, insurance, and inheritance motivations. To identify the effect of pure altruistic and pure exchange motivation, I assessed the effect of the Parent's Household income level on remittance and found that poorer households receive more remittance, in line with the theory of altruistic motivation. However, since parental services increase remittance amount, exchange motivation also drives remittance behavior in Albania. In addition, both the probability of receiving inheritance and inheritance value increase remittance amount, which concurs with inheritance motivation. Since not only income shocks but also other factors affect remittance amount, altruistic motivation rather than insurance motivation is an appropriate explanation for remittance behavior in this regard. These results suggest that migrants in Albania are driven to remit owing to a combination of altruistic, exchange, and inheritance motivations. Further, migration destination influences remittance amount, which implies that not only the local labor market and currency rate at the final destination but also migration motivation factors affect remittance amount.

In the estimation of migration behavior, I find that individuals that expect to receive higher wages in their final destinations are prone to migrate. The characteristics

of the household head also affect this behavior. This finding implies that the decision to migrate is made not only by the individual but also by the Parent's household. In particular, if a family member suffers from a chronic illness, the individual in question would not migrate.

In terms of policy implications from the study, the results suggest that Albanian migrants remit owing to a combination of altruistic, exchange, and inheritance motivations. In poor credit market environments characterized by financial constraints, remittance allows the Parent's household to smooth consumption. For example, when a family faces an income shock, it may not be necessary to lower consumption level if the family receives migrant remittance. In addition, remittance is also used for investment into business activities as well as education in Albania. To summarize, remittance contributes to economic activity in Albania, and thus, the Albanian government should continue to implement policies that stimulate the flow of international migration and encourage migrant remittance.

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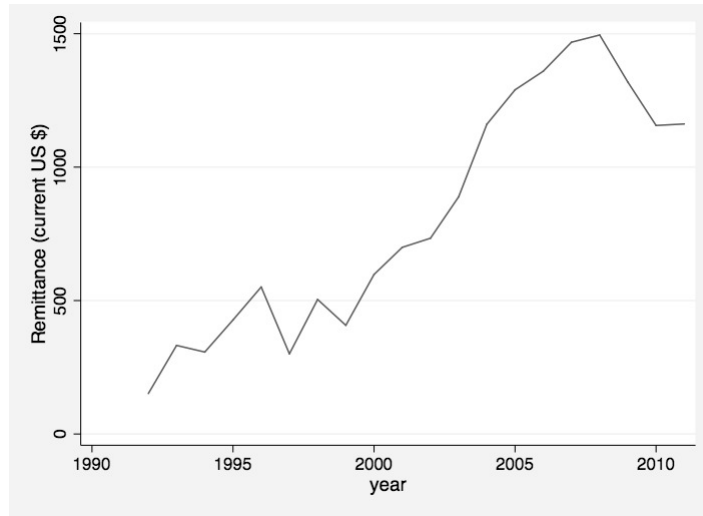
Definition: Personal transfers consist of all current transfers in cash or in kind made or

 received by resident households

Figure 1. Flow of remittance from abroad

Table 1. Differences in the characteristics of migrants

| Variables | Non-migrant | | Internal migration | | Destination | | | | | |
| | | | | | Greece | | Italy | | Other countries | |
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
age	31.9912	21.0469	36.5215	9.4710	31.9972	8.6074	30.8113	8.3560	31.0254	8.1496
years of schooling	7.3385	5.2721	10.6713	4.0709	10.7360	3.5780	10.9083	3.5208	13.0254	4.5290
male	0.5013	0.5000	0.3241	0.4681	0.6250	0.4845	0.6868	0.4641	0.5904	0.4925
eldest son	0.1309	0.3373	0.1540	0.3610	0.2626	0.4404	0.3028	0.4598	0.2458	0.4311
whether partner lives with migrant			0.0232	0.1506	0.6096	0.4882	0.5321	0.4993	0.5876	0.4930
whether partner lives with migrant's parents			0.0300	0.1705	0.1039	0.3054	0.1009	0.3014	0.0339	0.1812
remittance (LEKS)			95	1300	977	1935	1286	2344	1166	2087
Sample size	15816		2370		712		763		354	

Note: Author's calculations from the LSMS 2005 for Albania.

Table 2. Relationship between the Parent's Household income and remittance amount

	total	Percentile of income								
		<10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100
Probability of receiving remittance (%)	24%	25%	28%	25%	22%	23%	21%	24%	25%	22%	22%
Amount of remittance (LEKS)	1298	2301	1902	2928	1008	1098	725	1025	1541	1054	1239
Income (LEKS)	385260	38468.8	78994.8	109234	135283	171456	209492	254222	337381	420692	2481918

Source: Author's calculations from the LSMS 2005 for Albania.

Note: The sample consists of households that have at least one child who has migrated. However, migrants who remit above 100,000 LEKS were removed from the sample in order to alleviate the effects of outliers.

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Table 3. Usage of remittance

	Urban Area	Rural Area
puchase of food and basic necessities	78%	77%
investment in construction /purchase a durable good	23%	37%
eductaional expenses/ child Support	10%	7%
investment in HH enterprise	4%	10%
other	40%	32%

Note: Definition of remittance: Personal transfers consist of all current transfers in cash or in kind made or received by resident households

Table 4. Classification of variables

Variable	Altrusim	Exchange	Insurance	Inheritance
Income of migrant	+	+		+
Income level of parent	−	+		
Service that parent supplies		+		
Adverse short-run shock that parent faces in parent's income	+		+	
Asset that parent owns				+
Probability of receiving inheritance				+

Table 5. Relationship between the Parent's Household income and remittance amount

	All housheold		Samples of migrant		Samples of non-migrant	
	mean	Std. Dev.	mean	Std. Dev.	mean	Std. Dev.
How much did a emigrate remit? (log)			1.6595	3.0749		
Characteristics of individual						
age	32.4658	19.2195	34.2534	9.3928	31.9912	21.0469
squared of age/100	14.2340	14.8867	12.6150	6.9263	14.6638	16.3352
years of schooling	8.0907	5.2375	10.9238	3.9887	7.3385	5.2721
male	0.4934	0.5000	0.4634	0.4987	0.5013	0.5000
eldest son	0.1469	0.3540	0.2072	0.4053	0.1309	0.3373
duration of migration			10.7473	7.9974		
whether partner lives with migrant			0.2627	0.4401		
whether partner lives with home family			0.0557	0.2294		
Destination(comparison group: internal migration)						
whether member emigrates to Italy			0.1817	0.3857		
whether member emigrates to Greece			0.1696	0.3753		
whether member emigrates to other countries			0.0843	0.2779		
Characteristics of Head						
age	53.8424	13.5387	63.9100	10.6514	51.1695	12.9535
male	0.9049	0.2934	0.8307	0.3751	0.9246	0.2641
years of schooling	9.3422	4.9616	7.5139	5.1494	9.8276	4.7950
Characteristics of Household						
size of household	6.7512	2.7155	8.1488	2.8452	6.3802	2.5547
rate of labor force	0.7395	0.2089	0.8419	0.1403	0.7123	0.2156
rate of chronic illness	0.7845	0.2392	0.5181	0.1917	0.8553	0.1970
numbers of rooms	2.5076	1.1047	2.5601	1.0250	2.4936	1.1245
Income shock						
unexpected death of income earner in 2003 or 2004	0.0099	0.0992	0.0071	0.0842	0.0107	0.1028
unexpected death of income earner in 2005	0.0028	0.0528	0.0024	0.0487	0.0029	0.0539
Income per capita						
income<10 percentile	0.0951	0.2933	0.1558	0.3627	0.0790	0.2697
10 percentile<income<25 percentile	0.1304	0.3368	0.2070	0.4052	0.1101	0.3130
25 percentile<income<50 percentile	0.2617	0.4396	0.3189	0.4661	0.2465	0.4310
Characteristics of Community						
whether there are any problem related to gangs	0.0292	0.1684	0.0288	0.1673	0.0293	0.1688
whether people leave the community temporarily a lot/ occasionally	0.7745	0.4179	0.7816	0.4132	0.7726	0.4192
Sample Size	20015		4199		15816	

Source: Author's calculations from the LSMS 2005 for Albania.