The Determinants of Migration and Remittances in Albania

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Abstract— *This paper uses the recent Albanian Living Standards Measurement Survey 2008 to analyze the determinants of migration and remittances in Albania. It addresses one of the main limitations of the literature on migration and remittances, namely their separate study, and analyzes the determinants of these two phenomena jointly. The analysis is focused on the household, and the migration decision process is made by the household as a whole, seeking to maximize expected future utility, which is achieved through remittances sent by the migrant. In terms of determinants of migration and remittances the study shows that migration and the receipt of remittances are selective processes strongly affected by household characteristics. We do not find evidence for the existence of a 'migration hump' with respect to per capita expenditures and/or household wealth, and the brain drain does not seem to be an issue. The probability to migrate and remit of at least one household member is found to be influenced mainly by household characteristics number of adults and number of children, gender ratio and location. Unlike many other studies we control for relative deprivation, and find evidence in favour of the relative deprivation theory of migration.*

Index Terms— Albania, Migration, Remittances, Relative deprivation, Selectivity, Social capital.
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1 INTRODUCTION

USING the data from the Albanian LSMS 2008 this study develops and estimates a model to investigate the determinants of international migration and remittances in Albania. There is a vast of research trying to explain migration flows, individual migration and remittances using different econometric approaches and explanatory variables. Our empirical analysis has the household at its focus, and for this reason we review the microeconomic literature, concentrating on the household level empirical determinants of migration and remittances. The approach followed in this study enables testing for more than one theory at a time and helps to identify some sets of common or widely used explanatory variables at the household level in order to delineate the factors that influence the decision to migrate and the receipt of remittances.

During the last decades the empirical literature on the motivations to migrate and remit has grown, but the results have often been conflicting. While these inconsistent results may be attributed to differences in the context and characteristics of the country under consideration, the empirical approach, or data availability, one common shortcoming is that they are usually based on testing particular theoretical models of migration and/or remittance receipt. Recent research has shown that none of the theories of migration alone can explain all the dynamics of migration and receipt of remittances, the motives may overlap and it is very difficult to disentangle and they are not exclusive. In the last decade a few studies on the determinants of remittances have incorporated factors to ameliorate the limitations of these theories.

The conventional approach of the empirical modelling strategies treats migration and remittance behaviour as independent decisions. Other approaches consider the decision to migrate

and send remittances back home as interrelated in different ways, which is argued to be more appropriate. Focusing exclusively at the determinants of remittances and omitting the importance of factors that influenced the migration decision may not only leave out these crucial factors, but also bias the results. Thus, linking both decisions would yield to more accurate determinants of remittances. Considering migration and remittance behaviour as interrelated decisions is also arguably more appropriate empirically. First, it allows controlling for the possibility of endogeneity of the two decisions, considering the decision to remit as an important determinant of migration itself. Second, it also enables modelling migration as a selection mechanism for remittances, correcting for the selection-bias of the estimates. This second possibility gains even more importance when differentiating between the desire and the capacity to remit. Following these arguments, and based on the similarities of the sets of variables from different conventional approach studies when explaining migration or remittances, we consider a model that explains the joint phenomena of migration and remittances at the household level.

The paper is organized as follows. Section 2 presents a literature review of the Albanian research in the field. Section 3 includes the empirical approach that will be followed, the data set, the empirical variables that will be used and their measurement. The focus of Section 4 is the estimation of the empirical model and the interpretations of the results, and the last section concludes.

2 THE DETERMINANTS OF MIGRATION AND REMITTANCES IN ALBANIA

Carletto et al. (2004) studied the determinants of temporary and permanent migration from Albania to different countries. The household characteristics include family size, age of the head of the household, demographic composition, average adult education, agricultural assets (land and livestock), la-

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bour activities and wealth proxies (previous ownership of a vehicle and the number of rooms per capita). They argue that limiting the number of assets to be included in the model would minimize the endogeneity problem. Actually, this may create another endogeneity problem, that of the omitted variable, which will also yield biased and inconsistent estimates. Their estimates suggest that most permanent migrants are young males, who come from larger households, with an older head of household and fewer smaller children. Education is not an important determinant of migration which may be attributed to the fact that most Albanians have finished secondary school.

The type of labour activities seems to be an important determinant of the destination country and migration duration; ownership of cattle is negatively associated with both temporary and permanent migration; the existence of migration networks and previous experience with migration are key determinants in the decision to migrate internationally, while community level networks are important only for temporary migration. Relative wealth is also a factor in the decision to migrate with the deprivation of a household relative to other households at the village level positively associated with the decision to migrate.

Finally, regional factors play a role in the migration decision. Households living in Tirana are less likely to migrate internationally. This is particularly true for permanent migration, in which case households living in all other regions have a greater probability of migrating than those in Tirana. Compared to Tirana, households in the rural Centre, Coast and Mountain are more likely to migrate temporarily, and households in the urban Coast and Mountain regions to migrate permanently. One possible reason could be that they are already internal migrants, but taking into account that the internal migration is strongest towards poorest peri-urban areas of Tirana, another explanation may be that many of them cannot afford to migrate internationally.

Konica and Filer (2009) use a migration survey of 1000 households carried out in 1996 to study the determinants of migration and amounts of remittances. The explanatory variables in the Probit equation of migration are the individual characteristics of the migrants, geographic indicators, and two household level variables: income and size of the households. The results indicate that large, rural, and low-income households are more likely to send someone abroad. At the individual level, young, male, single, high school graduates and the unemployed are more likely to migrate.

With regard to amounts of remittances sent to households in Albania their results indicate that remittances are positively related to the employment status of the emigrant, the presence of a spouse in Albania, the emigrant's legal status, as well as whether the emigrant had arranged a job in the foreign country prior to departure. The existence of other emigrants from the household negatively influences the amount of cash remitted, while gender and length of stay do not appear to affect remittances.

Lianos and Cavoundis (2004) also surveyed legal Albanian migrants in Greece, and found that women, married migrants, those with family left behind, and those with more relatively

deprived households are more likely to remit. The amounts of remittances are positively influenced by income, less stable employment and number of children in Albania. Germenji, Beka and Sarris (2001) carried out a study to test whether remittances sent to rural households in Albania were sent for altruism or exchange motives. Based in a survey of 200 rural households conducted in 2000, they conclude that most of the variables they control for are insignificant. The only significant variables are the pre-transfer income of household, the presence of more than one member abroad and when the decision to migrate has been seen as a need to help the families. The lack of other significant variables is possible because of the relatively low sample size, as well as limited other explanatory variables. It is not clear whether data limitations are due to questionnaire design, or due to restrictions on theories to be tested. Little variation in the explanatory variables controlling for rural household characteristics may also be a source of insignificant results.

Hagen-Zanker and Siegel (2007) carried out a comparative analysis of the determinants of remittances between Albania and Moldova. They argue that the causes and patterns of migration in Albania and Moldova influence the remitting behaviour and most migrants migrate in order to remit. Nevertheless, they suggest being careful when declaring migrant's motives to remit and drawing conclusions from a few variables that can be interpreted in different ways, because a migrant may have more than one motive in mind when remitting. Their results suggest that the geographical location, economic possibilities and family situation significantly affect the place, duration and circumstances under which someone migrates and sends remittances. With regard to the characteristics of migration their results suggest that the majority of migrants are males and remittances are sent to all income groups, but in Albania, higher amounts are sent to the poorer households. Albanian migration is longer term, and higher amounts of remittances are received.

3 MODEL SPECIFICATION, THE DATA AND VARIABLE MEASUREMENT

In light of the migration and remittance theories, the empirical approach followed in this study attempts to explain the joint probability of *permanent*[1] international migration and the receipt of remittances. In order to identify the household and community characteristics which are predictive of individual migration and remittance sending, we use the probit model, where the dependent variable is a dummy variable that takes the value one if the household receives remittances from household members abroad. Specifically, the model takes form:

$$Pr(Y=1|X)=\Phi(X'\beta)$$

where Pr denotes probability, Φ is the Cumulative Distribution Function of the standard normal distribution, β are the parameters that will be estimated by maximum likelihood and X is a vector of explanatory variables.

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[1] In this study a permanent migrant is someone who stays abroad for more than 12 months.

Data for this study come from the 2008 Albanian Living Standards Measurement Survey (LSMS), a nationally-representative survey of 3,600 households carried out by the Albanian Institute of Statistics, the World Bank and the United Nations Development Programme. The dependent variable in the Probit model is a dummy variable indicating if a household has someone permanently settled abroad and who sends remittances back home. So, the first problem lies in the identification of permanent migrants. In the migration module the head of the household is asked to list all his/her children who are not living in the household and spouse if (s)he is not living in the household. Information is also collected on when they had left the household and where they were currently living. From these two questions we derive a dummy variable taking the unit value when the household has at least one member who is actually living abroad by the time of the survey, and had not returned to live in Albania yet.

The set of variables that explain the probability to receive remittances includes individual and household characteristics and community level variables. At the household level, to account for human capital the highest level of education of the head of the household is included. The effect of education levels on the probability of migration and/or remittances may be positive or negative. Age of the head of the household is measured as a binary variable and its sign (if any), on the probability of receiving remittances remains unclear and depends on the motives behind remittance sending.

With regard to age composition shares, in both stages the number of adults from 15 to 25 and 26 to 40 years and children under 15 are included in the model. The number of adults from 15 to 40 in the household is expected to positively influence migration, while the number of children under 15 is expected to be negatively related to this. Concerning the receipt of remittances, a positive effect is expected in relation to the number of children, and a negative effect for the number of adults of working age.

The size of the household and the dependency ratio are also included in the model. The dependency ratio not only takes into account the number of children in the household, but it also accounts for the number of students and other members of the household, who do not receive income from any source. Both these variables are expected to positively influence the decision to send remittances, especially if the prevailing motive behind remittance behaviour is altruism.

The more adult household members hold a full job, the lower the probability to migrate. The expectations with regard to the direction of the relationship between this variable and the probability to receive remittances are ambiguous. A positive sign may be an indicator of self-interest motives, while a negative one provides evidence in favour of altruism. To account for this possibility a variable indicating the share of adult household members holding a full-time job is included.

Different migration and remittance patterns are also expected between rural and urban households, especially for international migration, which is argued to be a more expensive venture. This latter argument indicates higher international migration propensities for members of urban households, but no differences in the international migration patterns between urban and rural areas may be expected if migration networks have been efficient in substantially lowering international migration costs. If this is the case, then differences in the probabilities of receiving remittances are clear reflection of different motives for sending remittances.

The welfare measure used in our study is an asset index based on a wide set of assets owned by the household and imputed by using the Principal Component Analysis (PCA). The asset index is in general utilized to classify household socioeconomic and wealth position in middle and low income countries where household income and expenditure data are invalid and unreliable, which supports its use as a proxy for household wealth in our model. The Albanian LSMS 2008 data enables the construction of an asset index using several assets on which the questionnaire contains information. This information includes data on ownership of durable and semi-durable assets, housing characteristics, and water supply system. In a second step, calculating a household assets' index involves assigning weight values to the indicator variables.

Measures of household wealth or asset ownership are sometimes considered to be potentially endogeneous in equations explaining migration decisions and remittance behaviour. To avoid possible endogeneity of the relative deprivation measure the same PCA procedure was applied to a set of assets that the households possessed in 1990. Before this year, Albania was under the communist regime and migration was an unknown phenomena. Thus, the variable could not influence the receipt or the amounts of household's actual remittances. In the same line, we construct a social capital index for the households.

A migration network proxy and a measure of relative deprivation are also included in the model. The construction of the network proxy draws heavily on the migration network theory. According to this theory, migrant networks are sets of interpersonal ties that connect migrants, former migrants, and non-migrants in origin and destination areas through ties of kinship, friendship, shared community origin. The migrant networks embody a kind of social capital that tends to lower the costs, risks and the extent of uncertainty involved in the process of international migration, increasing the likelihood of international movement (Massey et al., 1993) and even enabling the migration of the poor. As networks establish links between individuals in both the origin and destination areas, migrants are able to benefit from them in both areas. Existing migrants may provide information about available destinations, funds for travel, assistance in securing housing and employment and other fees to potential migrants. The variable included in the model is an interaction between percentage of migration population in the community and the number of household members 15-25 years old.

The relative deprivation index is constructed by using the household asset index 2008. The index was calculated at the household level by subtracting the median of primary sampling units, where 8 households where interviewed in the same period of time, from the household asset index. The median is preferred to average index in order to avoid the effect of possible outliers within the community. The constructed relative deprivation index and its square are included in the

choice equation given an expected inverse U-shape relationship with the propensity to migrate and the receipt of remittances. According to the altruism motive to remit discussed in section 2.1, households with a low negative relative deprivation index are expected to have higher propensities of remittance receipt, in order for them to improve their rating in comparison to other household members. The same may also be expected for households with high positive levels of relative deprivation, but in this case remittances are more likely to be sent for insurance and inheritance motives rather than altruism. The argument is in line with the results of Stark and Taylor (1991) who obtained an inverse 'U' shaped relation between their relative deprivation index and the probability of migration within and from Mexico to the United States.

A dummy variable indicating the presence in the household of at least one member that suffers from a chronic disease is also considered to be a potential explanatory variable. It may be argued that the presence of a member that suffers from a chronic disease in the household may decrease migration propensities of other members because of the special care needs. Finally, a dummy variable that takes the value one if the household has suffered a shock in the last 10 years is also included in the model.

4 THE REGRESSION RESULTS

An estimation of the instrumental variable probit was carried out in order to control for the possible endogeneity of the welfare proxy, the household asset index 2008. The results of this model indicate that this variable is not causing endogeneity, so a probit estimation is used instead. Table 1 shows the results of the estimation of the Probit model that explains the probability of international migration and the receipt of remittances. Household welfare is theoretically related to self-interest and the bequest motive for sending remittances, which are presumed to motivate migrants to remit for inheritance. So, migrants with a bequest motive should be more likely to send remittances, and even send more if they have wealthier parents. Some studies suggest investigating the possibility of a non-linear relationship between migration and welfare measures arguing that the poorest of the households are too poor to migrate because they cannot afford the costs of migration, while the richest have no incentives (Lucas, 2005). Results suggest that welfare variables may have positive (Hodinnot, 1994; de la Briere, 2002; Pleitez-Chavez, 2004; Schrieder and Knerr, 2000; Hagen-Zanker and Siegel, 2007), or negative effects (Agarwal and Horowitz, 2002; Durand et al,

1996; Osaki, 2003), while others conclude that the effects are not significant (Osaki, 2003; Holst and Schrooten, 2006).

Our results provide evidence on the insignificant relationship between these variables. We included a measure of household assets ownership and per capita consumption levels and tested for a non-linear quadratic relationship, but the results suggested that the linear and squared term of the household asset index and of the per capita consumption levels were jointly insignificant and consequently they were excluded from the model. It is worth mentioning though that the effect of the household wealth is difficult to disentangle when part of household's assets is a consequence of past remittances. In this case it is unclear if including a measure of household's wealth controls for effects of wealth alone, or past migration effects as well. For this reason, we explicitly include controls for past migration in our model, in order to have unbiased coefficients on the wealth variables. The variable on the previous migration experience has the expected positive sign and is statistically significant.

The results also indicate that the variables on the characteristics of the head of the household are highly significant, except for the male-headed households. Experience is considered a key determinant of earnings in human capital models (Sjaastad, 1962; Mincer, 1974). In the absence of data on the migration duration of the individual migrants, in household level studies experience is usually proxied by the age of the household head. It may also be argued that households with older heads are likely to produce more migrants because they have more household members between 15 and 30 years old, which may be considered as the prime age span of migration. Empirical results suggest that the age of the head of household has the expected positive sign (Adams, 2004, 2006; Osili 2007; Adams et al., 2008), although it does not always influence the decision to migrate (Osili, 2007; Adams et al., 2008). The age of the head of the household is also expected to be related to remittance receipt and the amount received. More evidence in favour of the altruism motive for remitting is consistent with households with older heads receiving more remittances. The empirical results indicate that this variable does not affect the decision to remit (de la Briere et al., 1997, 2002: Agarwal and Horowitz, 2002; Pleitez-Chavez, 2004; Pfau and Giang, 2010), which is more consistent with the investment motive for sending remittances.

Table 1. Estimation of the probability to migrate and receive remittances

	dF/dx*	Std. Err.	P>|z|
Characteristics of the head of household			
Head of household is married*	0.101	0.027	0.003
Male-headed*	0.053	0.048	0.277
Head of household under 65*	-0.097	0.036	0.004
Head of household has 8 years school	-0.092	0.025	0.000
Head of household has a vocational	-0.120	0.022	0.000
Head of household has secondary	-0.129	0.020	0.000
Head of household has university of post-	-0.120	0.021	0.000
Household characteristics			
Size of the household	-0.094	0.011	0.000
Number of members 15-25 yrs	0.097	0.038	0.010
Square of number of members 15-25 yrs	-0.014	0.016	0.357
Number of members 26-40 yrs	0.047	0.014	0.001
Square of number of members 26-40 yrs	0.001	0.000	0.038
Number of children under 15 yrs	-0.056	0.020	0.004
Square of number of children under 15	0.020	0.005	0.000
Share of members in full-time	-0.238	0.184	0.193
Gender ratio	0.096	0.046	0.036
Dependency ratio	-0.069	0.038	0.067
At least a member with a chronic	0.039	0.019	0.035
Social capital index	-0.007	0.006	0.232
Square of social capital index	0.000	0.002	0.836
Suffered a shock in the last 10 years*	0.012	0.017	0.467
Previous migration experience*	0.060	0.020	0.004
Relative deprivation Index	0.026	0.007	0.000
Square of relative deprivation index	-0.004	0.001	0.003
Migration percentage*Members 15-25	0.000	0.000	0.818
Location			
Urban*	-0.087	0.021	0.000
Coastal*	0.102	0.033	0.001
Central*	0.021	0.032	0.496
Mountain*	-0.060	0.031	0.081

Observations   =   3,599
Wald chi2(29)   =   437.37
Prob > chi2   =   0.0000
Pseudo R2   =   0.1904
Log pseudolikelihood = -1,275,582

(*) dF/dx is for discrete change of dummy variable from 0 to 1
*   z and P>|z| correspond to the test of the underlying coefficient being 0*

In difference from these studies and despite the non-linearities in the effects of age reflected through the non-linear functional form of the empirical model, we include certain age brackets rather than a continuous variable for the age of the head of the household. Our results indicate that households whose heads are married and over 65 years old have higher international migration and remittance propensities. This may be related to the fact that these households may have more adult members at the prime age span of migration and supports the altruism motive behind remittances.

Human capital variables are likely to have positive effects on migration if there are higher possibilities of employment and expected income-earning in destination areas compared to the origin. Considering the effect of the household head's education on migration, on the one hand, more educated parents or those who own a business may encourage their children to study more and seek opportunities in the country or contribute in their business. On the

other hand, relatively low returns to education in the origin compared to destination countries may increase migration propensities. Most of the empirical studies indicate a statistically significant impact of education on migration, although they provide conflicting findings with regard to the sign of the education variable. Some research suggests that migration is negatively associated with education (Mora and Taylor, 2006; Boucher et al., 2005; Borjas, 1990), while others suggest it being positively associated (Kanaiaupuni, 2000; Garip 2006; Palloni et al., 2007; Zhu and Luo, 2008). The results in our study are in line with those of the first group of these studies. We conclude that in Albania migration and remittances are less likely to happen to households with more educated heads in comparison to households whose heads have few years or no education at all, indicating that migration and remittances negatively select on education of the household heads. Similar results are found for Albania (de Coulon and Piracha, 2005; Germenji and Swinnen, 2005; Piracha and Vadean, 2010).The findings suggest that Albania is not facing a brain drain problem, which is common for countries with high migration flows. But this finding has to be taken with caution, as a household's educational attainment has been proxied by the education level of the head of the household due to lack of data.

Household demographic characteristics are also hypothesized to affect the probability of migration and the receipt of remittances. The household size (Gubhaju and de Jong, 2009; Phuong et al., 2008), and the age composition shares are usually included in the model with the expectation that households with many young adults are more likely to sent someone abroad because of surplus labour (Phuong et al., 2008). The number of children of different age groups and the dependency ratio are among the most commonly used variables (Katz, 2000; Garip, 2006; del Rey Poveda, 2007; Acosta et al., 2007; Zhu and Luo, 2008; Rainer and Siedler, 2008). The number of children is expected to negatively affect the migration decision, especially in small size households. If there are more adult females in the household then the propensities to migrate increase as only a few of them usually care for the children or elderly. To control for this some studies include the gender ratio (Katz, 2000; Garip, 2006). The household size and/or the dependency ratio may be also related with remittances sent for altruism. More members in the household and especially more children may mean that the migrant feels responsible for their wellbeing and thus remits more. Most authors find a positive effect of the household size in estimations of the probability and level of remittances (Itzigsohn, 1995; Osili, 2007), and a negative effect of the dependency ratio as expected (Agarwal and Horowitz, 2002; Osaki, 2003). Others report insignificant effects of these variables (Durand et al., 1996; Sela, 2004; Craciun, 2006; Hagen-Zanker and Siegel, 2007).

The results in table 1 indicate that the size of the household has an unexpected negative effect on the probability to migrate and receive remittances. The number of adult members aged 15-25 years has a U-shaped relationship and the number of adults 26 to 40 has a positive nonlinear relationship as expected. The number of children under 15 years also has a significant U-shaped relationship with migration and remittance receipt. The gender ratio has a positive and significant relationship with migration and remittances, while the dependency ratio which accounts for the presence of children, students and adults who do not receive any income is negative, but insignificant.

Several measures of employment are also included in models of migration propensities. Some of these measures include the share of household members working in wage employment (Phuong et al., 2008; Zhu and Luo, 2008), or occupational status (Rainer and Siedler, 2008; Pfau and Giang, 2010). Estimates suggest that these variables have negative effects on migration as expected. With regard to the determinants of remittances, Pfau and Giang (2010) control for the head of the household's employment status and the results suggest that the head of households tend not to work when they receive international remittances. They argue that either they become lazy and less likely to work, or they are unable to work and for this reason they receive more remittances. The results in table 1 indicate that the share of adults holding a full time job has the expected negative sign, but its effect is insignificant on the probability to migrate and receive remittances.

The explicit variables used to measure the importance of social capital as embedded in the theory of migration networks (Massey et al., 1993) vary between among studies. Such diversity may originate from the data availability, different cultures, contexts, and models, as well as from the broadness of the concept itself. To account for migration networks del Rey Poveda (2007), Richter and Taylor (2007), and Palloni et al. (2007) include a variable indicating the household's history of migration. Garip (2006) uses the percentage of community's households receiving remittances, and the frequency of visits paid by the migrants in the last 10 years, which is also expected to affect remittances. Less frequent visits may weaken the ties to the home country and household, lowering the importance of altruism (Niimi et al., 2008). We control for the effect of two kinds of social capital, in the home and in the host country. The impact of the social capital owned by the household in the home country and the impact of the proxy of migration networks are not statistically significant, i.e. in Albania the social capital does not influence international migration or the receipt of remittances.

When studying the determinants of remittances many researchers have in focus the co-insurance motive. This is measured by including a household shock in the model, such as illness, or number of lost working days. For example, de la Briere et al. (1997, 2002) conclude that they lead to a lower probability of migration and higher probability of remittances. Considering the impact of a shock suffered by the household in the last ten years, a dummy variable constructed accounting for different types of shock, the results suggest that in Albania suffering a shock has a statistically insignificant impact on the propensities to migrate and receive remittances. The presence of at least one household member suffering from a chronic disease is also included in the model and the results suggest that this variable positively influences the probability to send someone abroad and receive remittances which supports the co-insurance motive behind migration.

This study proposed the inclusion of a relative deprivation index and theoretically argued about its non-linear relationship with migration and remittances. According to the altruism motive to remit discussed earlier, households with a low negative relative deprivation index are expected to have higher propensities of migration and remittance receipt, in order for them to improve their rating in comparison to other household members. The same may also be expected for households with high positive levels of relative deprivation, but in this case remittances are more likely to be sent for insurance and inheritance motives rather than altruism. The em-

pirical results indicate that it has the expected significant inverted U-shaped relationship with migration and remittances.

Finally, dummy variables for urban area and regional dummies are included to control for other geographical differences affecting the incentive to migrate. The geographical location of receivers can also account for part of the variation in remittance patterns that is unexplained by household or individual factors, because it may act as a proxy for other socio-economic factors and norms at the community level. We control for the effect of the rural/urban location and three regional dummies to estimate the specific effect of the receiving community's development level. The results indicate that households in the urban areas have significantly lower migration and remittance receipt propensities in comparison to the rural households. Furthermore, compared to Tirana, migration and remittance propensities are higher among households in the Coastal region, but there is no difference in the migration and remittance propensities with the Mountain and Central regions. These results are in line with those found in other studies (Funkhouser, 1995; Hagen-Zanker and Siegel, 2007; Lerch and Wanner, 2006; Niimi et al., 2008; Pfau and Giang, 2010).

5 CONCLUDING REMARKS

This analysis has examined the determinants of migration and remittances at the household level in Albania using a representative survey of 3,599 households. The relationship between household income and migration is insignificant. The results of the probit regression including per capita consumption and a measure of household asset index to control for household wealth indicate that the relationship is insignificant. These results hold even when controlling for non-linear quadratic relationship between these variables and the propensities to migrate and receive remittances. In difference from other studies, we provide no evidence of the "migration hump".

The age and marital status of the head of the household are significant, while gender is not significant. The human capital variables have significant effects, showing that households with more educated heads have lower migration and remittance propensities. This result indicates that Albania is not facing a brain drain problem, but this finding has to be taken with caution, because the highest education level of the head of the household is a proxy for the migrant's education level. This result is in line with the ones found in other studies of migration determinants in Albania (de Coulon and Piracha, 2005; Germenji and Swinnen, 2005; Piracha and Vadean, 2010).

The household characteristics, such as size, number of adults 15 to 40 and number of children are statistically significant, supporting the household approach. The results also suggest that the gender ratio has a positive and significant relationship with migration and remittances. Kotorri (2010) controls for a different gender ratio and finds a negative influence of the gender composition on the household migration behaviour in Kosovo. The presence of at least one household member suffering from a chronic disease has important positive influence on the probability to send someone abroad and receive remittances, which supports the co-insurance motive behind migration. A shock suffered by the household has a

statistically insignificant impact on the propensities to migrate and receive remittances.

The share of adults holding a full-time job is not significant. We also attempted to include other employment variables in the model, but the results were consistent among specifications, indicating that the labour supply surplus has no effect on international migration and the receipt of remittances. This result is different from those of other studies reviewed here. Variables introduced to capture the effect of social capita on migration do not show any significant influence.

The majority of the studies on the determinants of migration and remittances do not include any measure of relative deprivation. The relative deprivation plays an important role in determining migration and remittances. The constructed relative deprivation index and its square are included in the equation given an expected inverse U-shape relationship with the propensity to migrate and the receipt of remittances. The results obtained confirm the expectations and are in line with the results of Stark and Taylor (1991) who obtained an inverse 'U' shaped relation between their relative deprivation index and the probability of migration within and from Mexico to the United States. When modelling temporary and permanent migration in Albania, Carletto et al. (2004) control for the effect of relative deprivation by using a different index, but their results are different.

As expected, households living in urban areas have a lower probability of migration and remittance receipt. Other studies also control for regional characteristics and find support in favour of their importance. Compared to Tirana, households in the Central region have higher probability of migration and remittances.

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