The Impact of Remittances on Incentives:

The Case of Albania*

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Abstract

This paper examines the microeconomic impact of migrant remittances on children's school attendance and adult labor supply in Albania. Using cross-sectional data provided by the 2005 *Living Standard Measurement Survey* and a combination of empirical methodologies in order to correct for potential sample selection and endogeneity of remittance receipts, I find that remittances decrease the likelihood of attending school for children between 12 – 17 years old in recipient households and that remittances decrease the likelihood of participating in the labor force for adults between 22 – 65 years old. These results suggest that while migration and the resulting remittances have greatly contributed to increase household's income and to keep many families out of poverty, they seem to act as a disincentive factor and are not likely to be a sustainable mechanism for socio-economic development and long-term growth.

Keywords: migration, remittances, human capital, labor supply, Albania.

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I. Introduction

Migrant remittances are broadly defined as cash or in-kind transfers from labor migrants to relatives and friends in their country of origin. Remittance inflows have started to play an increasingly large role in the economies of many developing countries, especially because they constitute a very important source of income. In the recent years, the worldwide flow of these kinds of transfers has grown considerably becoming the second source of development finance in developing countries, after foreign direct investment.[1] (World Bank, 2005; Adams and Page, 2005). Moreover, the increase in worldwide migration combined with the technological advances in financial institutions have contributed to the growth of remittances by leading to a reduction in money transfers costs without the need for physical mobility of migrants.

Even though a general consensus exists on the poverty-reduction implications of remittances, it is not clear the overall consequence of this kind of aid. On the one hand, remittances can mitigate the impact of adverse shocks to an economy helping to reduce liquidity problems that are often present in developing countries. On the other hand, they can cause loss of productive labor for the home country. In particular, remittances can raise consumption of leisure through potential disincentives to work and study. Notwithstanding, remittances enable households and private businesses to support their own consumption/investment independently of the national government, they can also reduce the pressure for the authorities to create a better business environment and deal with systemic economic and social problems that forced the people to leave the country (Kireyev, 2006).

Previous research in Albania has shown that migration and remittances benefit individuals, families and communities economically by expanding liquidity constraints and reducing poverty (World Banks, 2003), but very little research examines the social impact of migration and remittances on the origin families. This paper examines the microeconomic impact of remittances on the incentives of the family members in the country of origin using data from Albania. The principal purpose is to present evidence on how recipient households in Albania behave in terms of the education of their children (schooling incentives) and labor supply (working incentives) after they receive these transfers from abroad. My hypothesis is that remittances in Albania can have adverse consequences in terms of incentives on education and labor supply. This means that remittances may affect negatively children's school attendance and adult participation in labor force. Regarding the first outcome of interest (children's school attendance), the expected logical assumption would be that remittance-receiving households would invest more in human capital than non remittance-receiving households, but this process would not always work this way if education is not considered an important priority for household members left behind because they might

[1] In the case of Albania, remittances are more important than foreign direct investment.

think that they are likely to later migrate themselves. In addition, the absence of the household head may lead to less parental inputs to education, structure and control in the household, thus negatively affecting children's school enrollment, performance and continuation of education. With respect to the second outcome of interest (adult labor supply), the assumption is that adults who belong in a remittance-receiving household would have a higher reservation wage than adults in non-receiving households, which would lead to a reduction in labor force participation and to an increase in consumption of leisure for adults in recipient households. Therefore, the empirical evidence presented in this paper suggests that the benefits of migration and remittances might be overstated.

During the last decade Albania experienced a massive international migration due to the immediate political de-isolation of the country towards the rest of the world, the deep political, economic and social crisis, the deepening of poverty from the transition and the fast demographic growth during the socialist period. This massive migration was characterized by different waves. As a consequence of this massive migration, remittances have emerged as one of the key components of households' livelihood strategies in Albania. Estimates of the Bank of Albania for the year 2002 show that in the year 1992 immigrant remittances amounted to 150 million US dollars, whereas in the year 2002 remittances reached to 606,8 million US dollars. This amount of remittances represents about 12% per cent of GDP, and is twice as much as income from exports and about 4,5 times bigger than direct foreign investment.[2] In 2005, IMF estimated that remittances represented 14% of GDP. They also correspond to about 13 percent of household income.[3]

Therefore, remittances play a central role in affecting household welfare as they have become an important instrument to expand the income and opportunity set of migrant households. The potential development impact of these remittance flows has attracted the attention of the Albanian government, international agencies, and NGOs, who are actively engaged in designing policies for the better management of the remittances (Gedeshi and Uruçi, 2003). In spite of the increased role of remittances in Albania, relatively little is known about their micro-level impact. Previous studies on Albania suggest that remittances have contributed to the alleviation of poverty and to the improvement of the living conditions through an increase in consumption for many households with international migrants (World Bank, 2007). However, it is often asserted that migration remittances in Albania are not being used "productively" and so they are not beneficial for development (De Soto et al., 2002).

[2] See Bank of Albania, (2002). The Bank of Albania calculates emigration remittances as the difference between foreign currency coming in (goods and services exports, credits, foreign investments) and foreign currency going out..

[3] See IMF (2006): "Albania: Poverty Reduction Strategy", Annual Progress Report, IMF, Washington, DC

To the best of my knowledge, this paper constitutes the first attempt to study at a micro-level the linkage between remittances and household incentives with data from the Balkans. Using the nationally representative *Albanian Living Standards Measurement Survey* (ALSMS) in 2005, which provides a cross-sectional sample of approximately 3,600 households, I study the impact of migration and remittances on children's schooling and adults labor supply through different econometric methodologies. The results support my main hypothesis: I find that remittances reduce schooling incentives and lead to less spending on education, and they also reduce incentives to work. These results suggest that remittances may be acting as a disincentive factor for households in terms of children's school attendance and adult labor supply.

The paper is organized as follows: Section II reviews the previous literature on the uses of remittances. Section III provides a brief summary of the case of Albania in terms of migration and remittance behavior. Section IV presents the data set and some descriptive statistics. Section V presents the methodology and the empirical estimation. Section VI presents the main results of the paper, and finally Section VII concludes.

II. Previous Literature

There are two types of literature on remittances. The first body of literature focuses on the motivation to remit while the second one focuses on the use of remittances. [4] The core of the recent remittances literature has shifted away from the determinants of remittances toward the implications of the remittance flows, at a macro and micro level. The previous literature on the use of remittances has found mixed effects; the different uses of remittances have led not only to positive consequences but also to negative consequences for the economies of the developing countries. This paper adds to the latter group of remittances literature by focusing on the impact of remittances on investment in children's school attendance and household labor supply in Albania.

At a macroeconomic level, Chami et al., (2005) using cross-country data find a negative impact of remittances on growth and productivity. They discuss that this happens because migration deprives the economy of the most productive workers, or because remittances have adverse effects on those staying behind, or both. On the contrary, Aggarwal and Spatafora (2005) find no effect of remittances on economic performance. Giuliano and Ruiz-Arranz (2006) show that remittances promote growth in countries with shallow financial systems but have no impact in countries with well-developed financial systems. Adams and Page (2005) use cross-country data to answer the question if international migration and remittances reduce poverty in developing countries. After instrumenting for the possible endogeneity of international migration, and

[4] Some of the studies on the motivations to remit are: Lucas and Stark (1985), Funkhouser (1994), Hoddinott (1994), Yang (2004), Sana and Massey (2005), Halliday (2006), Docquier and Rapoport (2005).

controlling for various factors, their finding suggests that both international migration and remittances reduce significantly the level, depth, and severity of poverty.

In terms of microeconomic behavior, most of the evidence suggests that remittance transfers between migrant workers and their relatives in the migrant's home country have been utilized to boost consumption and/or stimulate investment in economies with liquidity constraints. Some of the studies that find a positive relationship between remittances and different types of household investments are Taylor (1992), Glytsos (1993), Brown (1994), Adams (1998), Massey and Parrado (1998), Rozelle et al., (1999), McKormick and Wahba (2001), Muent et al., (2001), Dustmann and Kirchkamp (2002), Kule et al., (2002), Taylor et al., (2003), Zarate – Hoyos (2004), Woodruff and Zenteno (2007) and Yang (2007). Other studies argue that remittances are absorbed into immediate consumption so they don't finance productive investments. (Lipton, 1980; Reichert, 1981; Ahlburg, 1991; Russell, 1992; Brown and Ahlburg, 1999; Thomas – Hope, 1999; Glytsos, 2002.)

In relation to the impact of remittances on education (i.e., attendance, attainment, and expenditure), relatively little is know about the extent to which remittances lead to improve socioeconomic outcomes such as investment in human capital accumulation. The evidence of this literature is not clear since labor migration and remittances seem to have contradictory influences on children's educational progress.

Some of the studies that find a positive linkage between remittances and education are: Lu and Treiman (2007), who find evidence that remittances increase substantially the likelihood of school attendance for children in receipt households in South Africa. The authors conjecture is that children in households without remittances are in disadvantage compared to recipient households, and even worse-off than non-migrant households. Yang (2007) presents evidence of how an appreciation of migrant's currency against the Philippine currency increases children's schooling and educational expenditure and lowers children's labor supply at destination, attributing the casual relationship to the increase in household remittances. Lopez – Cordova (2005), using historical migration rates and distance to US border as instruments for the IV estimation, finds that Mexican municipalities that receive more remittances have higher literacy levels and school attendance among 6-14 year olds. Cox-Edwards and Ureta (2003) present evidence that remittances have a large and significant effect on school retention in El Salvador. Even though they find that remittances reduce school dropout hazard rates, their results are open to doubt because they do not address potential sample selectivity issues and endogeneity of remittances. Hanson and Woodruff (2003) find a positive relationship between having a family member living abroad and child education, for Mexican households. These results are consistent with remittances and emigration helping reduce credit constraints on

the financing of education. They control for potential endogeneity of having a migrant family member by using historical state migration rates and household characteristics.

Other studies report results that contradict the previous ones. Grigorian and Melkonyan (2008), using data from Armenia present evidence that remittance-receiving households spend less on the education of their children. Acosta (2006) finds that after controlling for sample selection and omitted variable biases the positive impact of remittances on investment in children's education in El Salvador vanishes and even turns negative. In the same line, McKenzie (2005) and McKenzie and Rapoport (2006) find that migration has a large negative impact on schooling attendance and attainment of 12 to 18 year-old boys and 16 to 18 year-old girls in Mexican households, using historical migration rates to instrument for current migration.

Finally, a number of papers also examine the effect of remittances on labor supply and participation decisions. One of the first papers that address this issue is Funkhouse (1992), who finds that in Nicaragua remittances increase self-employment for men and reduce labor supply for women. The increase in self-employment can be interpreted as remittances being used for entrepreneurial investment activities. Grigorian and Melkonyan (2008) find support for the disincentive effect of remittances in labor supply for the Armenian households that receive these transfers from abroad. Acosta (2006) provides evidence that in El Salvador remittances are negatively related to child labor supply and adult female labor supply, while on average adult male labor force participation remains unaffected. Amuedo-Dorantes and Pozo (2006) use data from a nationally representative survey for Mexico and find that while male labor supply does not vary with remittances, remittances affect the composition of labor as they reduce formal sector work and self-employment for men in urban areas, but they increase informal sector work in both urban and rural areas. In contrast to men, remittances reduce female labor supply especially from reductions in informal sector and non-paid work in rural areas. Yang (2007) shows that favorable exchange rate shocks at international migrant's destination increase the amount remitted to Philippine households which raises their purchasing power. As a result of the increase in remittances, these households raise hours worked in self-employment, and become more likely to start relatively capital-intensive household enterprises. Andersen et al., (2005) also show that Nicaraguans tend to reduce their labor supply in response to more remittances. Kim (2007) shows that Jamaican households that receive remittances inflows have a higher reservation wage and have reduced the supply of labor by moving out of the labor force. Görlich et al., (2007) based on household survey data from Moldova find that migrants' relatives consume more leisure and are characterized by lower labor supply. According to the authors, migration increases the probability of being inactive due to participation in higher education and because of home production.

III. International Migration and Remittances in Albania

During the mid-20th century, Albania experienced one of the most oppressive and isolated communist regimes in the World. The communist regime under Enver Hoxha, leader of the Albanian Party of Labor from 1941 until his death in 1985, launched a radical reform program that destroyed the power of the landowners, nationalized all industry, banks and commercial properties, and created a state controlled socialist society. Economic and political contacts with other countries, even communist ones, decreased to minimum as Albania broke foreign relations first with the Soviet bloc in 1961, and then with China in 1977. Free movement of population was a non-existent concept because attempted emigration was regarded as an act of treason, punished by death or lengthy imprisonment (King and Vullnetari, 2003). The collapse of the central planning system in both European countries and those of the former Soviet Union provided citizens of post-communist countries with greater opportunities to migrate abroad. The breakdown of the Iron Curtain was anticipated to be a mass exodus but it did not materialize because the migratory flows were smaller than originally expected (Layard et al., 1992). Nevertheless, given that emigration had been denied for so long, Albania has been one of the few exceptions to this general pattern.

In the early 1990s, a combination of the long repressed desire to move outside the borders and the exacerbation of economic problems that characterized the latter years of the communist regime generated a huge phenomenon of emigration with a particular peak in 1997 – 1998 after the Pyramid Scheme collapse. By the end of the decade over one fifth of the Albanian population (around 600,000 – 700,000 Albanians which is 20% of the population) were estimated to be living abroad, which according to UNECE (2003), represents one of the largest outflows relative to population of any post-communist economy. [5] This massive migration flow was headed mostly towards Greece and Italy, but also towards USA, Canada, and Western European countries in general. The Albanian emigration can be seen as a strategy of pure economic survival for those individuals and households who had suffered most in the chaotic transition from communism and who were deprived of income-earning opportunities and social support structures (De Soto et al., 2002; Kule et al., 2002).

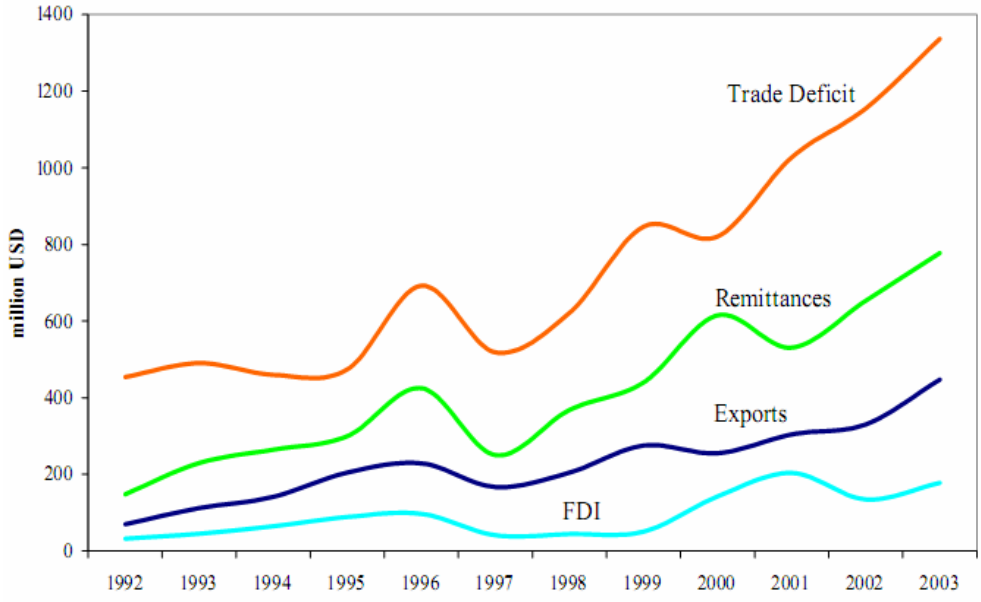
The Albanian transition process has been characterized by very scarce job opportunities and a general underdevelopment of the country. Several studies have analyzed the characteristics of Albanian international migrants. At the beginning of the exodus, migration was characterized by a brain drain process. Those who were most likely to migrate were the young, disproportionately male, better educated and their preferred destinations were Italy and Greece. (Kule et al., 2002, Carletto et al., 2004) During the last years, in respect of education, the

[5] UNECE *Economic Survey of Europe* (2003) (see Table 5.2.4).

most educated (i.e., university educated) appear less at risk of migration than those with either secondary or vocational education. There is also some evidence that university educated females have relatively high risk of migration (Castaldo et al., 2004). Early migrants constituted a social network at destination that helped subsequent emigration during the 1990s.

One of the consequences of the Albanian emigration during the last fifteen years of transition is migrant remittances. Most Albanian migrants maintain strong relations with their relatives back home and remit incomes earned abroad. It is widely acknowledged that migrant remittances have become a crucial element in the modern-socioeconomic life and a key component of household's livelihood strategies in Albania (Carleto et al., 2004; King and Vullnetari, 2003; Gedeshi and Uruçi, 2003). The latest official estimates reported by the Bank of Albania reveal that Albanian remittances have increased since 1999, reaching $1,028 million dollars in 2004, twice the size of foreign exchange revenues from exports, three times higher than foreign direct investment and they represent about 13,5% of GDP. This number has increased in the last years and is estimated to be around 21,7% of GDP in 2006 (Bank of Albania, 2005).

Graph 1: Albania: Remittances, Trade Deficit and FDI (1992 – 2003)[6]



Only part of remittances of the Albanian emigrants are transferred through formal channels, which include the banking system, several specialized international agencies for money transfer like Western Union and Money Gram, and the Albanian post office. However, the main route of remittance transfers to Albania continuous to be the informal channel, especially from Greece and Italy, because of the geographic vicinity, the underdevelopment of the Albanian banking system and the culture of trust that people have to the banking system.

[6] Source: INSTAT and IFS database.

The informal channel is mainly done by the emigrant himself or by the large network of relatives and friends they have.[7]

After demonstrating the importance of these inflow transfers an important question that should be answered is: How do Albanian migrants and their families back home use the considerable sums of remittances which flow back to the country of origin, and what are the impacts of these capital flows on individual, household and community development? A qualitative poverty assessment study conducted by the World Bank in the year 2003 found that household receiving remittances are characterized by lower poverty incidence. Emigration and remittances are the main factor distinguishing a poor family from a non poor family. Despite the fact that remittances constitute an important means of poverty reduction for households, they can create a culture of dependence which is bad for the long run growth and development of Albania (Gedeshi et al., 2003). The existing studies show that the first priority for remittances in Albania is to purchase food and basic needs for the family and to improve the quality of accommodation and facilities. After the improvement of the basic living conditions of the household, other priorities range from investment in building or house repairs to the purchase of durable goods and medical expenses. Some evidence also suggests that remittances are being used to finance small business projects mainly in small retail and hospitality family businesses, such as shops, bars, restaurants and tourist hotels. There is some investment in agricultural improvements as well. (Nicholosn, 2001; Gedeshi et al., 2003; De Soto et al., 2002; Kule et al., 2002, Papapaganos and Sanfey, 2001; Castaldo and Reilly, 2007).

Notwithstanding the increased role of the remittances in the Albanian economy, the micro-level incentive effect of remittances on receiving households, such as schooling or working incentives, has not been subject to empirical research. Incentives are a very important feature for the economic development of a country. Many economic analyses suggest that differences between many societies (and between different organizations within a society) are due to the differences in incentive structures. A number of growth studies suggest that the accumulation of human capital is the most determinant factor for economic growth and development (Mankiw et al., 1992). As well as human capital, the labor force participation is another important factor that accounts for the development of a country. In this context, the main purpose of this paper will be to investigate the impact of remittances on schooling and working incentives.

IV. The Data

The data used in this paper come from the 2005 cross-sectional household survey also referred as "The Living Standard Measurement Survey" (LSMS) in Albania.

[7] To calculate the volume of annual remittance inflows, Bank of Albania collects information from money transfer companies and banking institutions and conducts a household survey to estimate informal remittances.

This survey was undertaken by the Albanian National Institute of Statistics (INSTAT) with the technical assistance of the World Bank. The ALSMS is a nationally representative demographic survey for the whole Albania, as well as at regional and at the urban/rural level. The survey contains a wide range of information on several aspects related to the living conditions of the people of Albania and acquired data at the individual, household and community level. It contains detailed information on individuals' demographic and socioeconomic characteristics, migration status, remittances, and also household earnings and expenditures (e.g. construction, investment, non-durable consumption, food, education, health care, and housing) among others. The survey was based on a two-stage sampling cluster design and includes 3,638 households and 17,302 individuals. The country was divided into four regions (strata), Tirana, Coastal, Central and Mountain. This households belong to 36 districts in the country, with all regions nearly equally represented. [8]

As the focus of the present research is the impact of remittances on school attendance and labor supply, the key variables of interest are remittances, schooling, and employment status, and the unit of analysis is the individual.

In the module of migration, the ALSMS asks several questions concerning migration, including whether a household has received remittances either in money or in-kind from other household members (internal or international migrants) during last year, and for some cases it also includes the amount of remittances received. [9] The sub-sample including the amount of remittances is very small and it's easy to doubt the reliability of such information, so it will not be used for the analysis because it could be an important source of measurement error. A limitation of this study regarding remittances is that there is no information on how remittances were spent. As my interest is to study the impact of international migrant remittances I restrict the sample only to households which have an international migrant (excluding all households with internal migrants). The remittances in-kind will not be used for the analysis.

In the module of education, the survey contains information on the highest level of education for all household members and current enrollment status of each household member age 6-24. As the first key dependent variable of interest for this analysis is school attendance my main measure of schooling is based on whether a school-age child is currently enrolled in school. To analyze this, I restrict the analysis to a sample of 2,200 children age 12 to 17 of which 14% live in a household that receives remittances. As Albania's education system provides for eight years of compulsory schooling (grades 1-8, the elementary school), I do not include ages from 6 to 11 in my sample because in this age range the number of dropouts is almost null. I focus the study to children age 12 to 17, the ages at

[8] See Figure 1, Map A, and Map B.

[9] Remittances in kind are mainly in the form of clothing or household appliances.

which children will be receiving their post-primary education which is not compulsory, and the age range at which children start leaving school to engage in housework or other kind of labors.

In the module of labor, the survey contains information on the employment status and labor force participation for all members of the household 15 years old and over. As the second key dependent variable of interest for this analysis is adult labor supply my main measure for this variable is whether the household member has worked for someone in the previous week. I then restrict my analysis to a sample of 8,400 individuals aged 22 to 65 of which 17% live in a house that receives remittances and I examine the impact of remittances on labor force participation among these individuals.

One of the most important limitations of this data is that we can not follow the households and therefore the individuals across time. A panel structure would have been ideal to help solve the potential selection problem by including households' fixed effects and, in this way, exploit the variability of remittances within a household across time. Unfortunately, the data is available only at the cross-sectional level, so I need to control for sample selection using alternative techniques.

IV. 1. Descriptive Statistics

Given the concentration of migrants' origin in certain districts, households that receive remittances are also more likely to be in certain districts. This means that remittances follow closely international migration patterns. Table 1 shows the proportion of households that have an international member abroad and the proportion of households that received remittances in 2004. According to the data, approximately 30% of total Albanian households have a family member abroad, which is one in three households having an international migrant, and approximately 20% of total Albanian households receive remittances. The fact that 20% of the households receive remittances from abroad indicates that the data contain enough variation to be able to calculate the impact of remittances on the selected outcome variables. Note that the coastal districts which have relatively higher migration rates are also the ones that have a higher proportion of remittance recipients. Hence, the importance of remittances as a source of household income differs geographically.

In Table 3, among this sample of nearly 3,600 households, I show summary statistics of household characteristics by remittance-receiving status. It is interesting to characterize household recipient families and compare them to non-recipient ones. Among recipient households adults have higher earnings, the head of the house is more likely to be a female, and per-capita consumption is higher. In addition, household heads of recipient families are almost, on average, 10 years older than non-recipient heads. Remittances-receiving households also tend to have fewer members in the household and have less access to electricity,

water, and telephone, but on average they tend to have more in-house sanitary service. In addition, the number of rooms in household is slightly larger for recipients and a greater proportion of the recipient households compared to non-recipient, on average, own their dwelling. In terms of regional distribution, there is a rural – urban division: while 18.3% of urban households received remittances in 2004, more than 20% of rural households did (Table 2). Remittances-receiving households live more in rural areas than non-recipient households. Also, recipient households seem to be poorer than non remittances-receiving households. Concerning the maximum level of education, both types of households have nearly the same level, but total expenditure on education for non-recipient households is higher compared to the expenditure on education of remittances receiving households. Regarding one of the outcomes of interest in this study (school attendance) recipient households seem to have in general fewer children and also a lower proportion of children are enrolled in school. Finally, concerning labor supply, the evidence seems to suggest that adult members in the household are less likely to work if they receive remittances.

It appears that remittances-recipient households and non-recipient households differ considerably in terms of certain demographic and socio-economic characteristics. Some of these differences can be attributed to selection into migrating and selection into remitting. If the evidence support the idea that remittances recipients come from clear segments of the income distribution, it is necessary then to use some sample selection correction technique.

V. Methodology and Identification Strategy

V. 1. Identification issues

Identifying the impact of remittances on the household outcomes is difficult, because the likelihood of being a remittance-receiving household is likely to be related to the pre-treatment level of the outcomes of interest. In order to properly capture the impact of remittances on the household outcomes of interest, there are several methodological concerns that need to be addressed.

The first concern is that the pool of international migrants and remittance-recipient households are not a random sample. Selection into migration and the fact that families are not randomly assigned into being a recipient household are important issues to be taken into account. Remittances cannot be seen only as an income shock that expands household liquidity constraint, but they can also be seen as the result of an intertemporal common strategy between household members. As shown in the previous section, the fact that remittances-receiving households are systematically different from non-recipient households in observable and non-observable characteristics complicates the identification of the impact of remittances using a standard OLS method. This means that, for a proper econometric estimation of the impact of remittances on household outcomes, it is necessary to control for all characteristics that influence the

probability of being a recipient household, if not the estimates are going to be inconsistent.

The second and most important concern when estimating the impact of remittances on the outcomes of interest is the potential simultaneity of migration/remittances and the economic outcomes in question. Even after accounting for sample selection, unobserved characteristics of households may be correlated with both the outcomes of interest and remittances. If remittances are correlated with unobserved determinants of the outcomes of interest, then the estimates of remittances would be inconsistent. For example, consider the relationship between household wealth, remittances/migration and schooling. If households face credit constraints, poorer households will be less able to send migrants abroad. Consequently these households will not receive remittances and maybe they will be less able to make educational investments in their children. Similarly, unobserved income shocks (e.g., labor-market shocks) can both affect remittances and schooling and working decisions at the same time. For example, if the household head loses his job, this would be an unobserved negative income shock that may induce him or any other member of the household to migrate and send remittances. At the same time, the negative shock would affect children's education and therefore they will have to dedicate less time to school and more time to work, leading to fewer enrollments (Hanson and Woodruff, 2003). Another example would be that because of certain unobserved characteristics, families who send members abroad (and then receive remittances) could also be the ones that consume more leisure. Therefore, unless I find the way of controlling all those household characteristics that may explain the household wealth or income shocks, there will be omitted variables correlated with remittances and the outcomes of interest that would bias the OLS estimates.

V. 2. Estimation Techniques and Identification Strategies

Using cross-sectional data, in order to capture the impact of remittances on school attendance and labor supply, I use three different methods of estimation that help address the identification issues: a standard probit estimation, a propensity score matching estimation and an IV probit estimation.

In all these models, the first outcome of interest or dependent variable of this study is whether children aged 12 to 17 are currently attending school, and the second outcome of interest is whether an adult member of the household aged 22 to 65 has worked for someone during the previous week. As these are both binary outcomes/dummy variables, I use maximum-likelihood to estimate bivariate probit models which provide marginal effects. On the other hand, the treatment variable is whether a household has received remittances in cash from an international migrant, which is dummy variable. I also include a set of control variables at the individual, household and community level.

V. 2. 1. Standard Probit Estimation (OLS)

First I estimate a standard probit model represented by the following linear reduced form:

$$Y^{*}_{ij} = R_j\alpha + X_{ij}\beta + Z_j\gamma + \varepsilon_{ij} \quad (1)$$

where, Y^{*}_{ij} represents the binary outcomes of interest for individual i in household j, R_j represents the independent dummy variable related to remittances and takes the value of 1 if the household j is a remittance-recipient and 0 otherwise, X_{ij} represents a set of demographic characteristics for individual i in household j, Z_j represents a set of household characteristics and ε_{ij} represents the error term associated with unobserved heterogeneity for the individual. To avoid potential biases in the estimation of the standard errors due to unobserved factors present in one district that could affect neighboring districts, I allow for an arbitrary covariance structure within districts by computing apart from Huber-White robust standard errors, clustered standard errors at the district level.

As mentioned before, the standard probit (OLS) identification strategy is not optimal because of two fundamental endogeneity problems: selection problem and simultaneity, which will be addressed in the following sub-sections. I estimate this model in order to compare later its marginal effect results with the other estimation techniques.

V. 2. 2. Propensity Score Matching Estimation

In order to correct for the sample selection problem, a usual approach is to perform a propensity score matching estimation as first proposed by Rosenbaum and Rubin (1983). If selection comes from observable characteristics, this method estimates treatment effects consistently in a non-experimental context. Firstly, I estimate a propensity score in order to capture the probability of being treated (being a remittance-receiving household) on several observable pre-treatment characteristics of the household. Then, I use the propensity score to match remittance-receiving households (treatment group) with non-receiving households (control group) based on the similarities of their observable characteristics.

Once I have matched the households in this manner I compute the average treatment effect of remittances on the outcomes of interest or the average treatment effect on the treated (that is, the effect of the probability of being a remittance-receiving household on the probability of a child currently attending school and on the probability of an adult male or female working for someone during the previous week). Treated and untreated observations of the outcome variables are compared after matching, based on the probability of being treated. The difference is then attributed to the existence of remittances.

The identification assumption is that given a set of observed characteristics W_{ij}, the counterfactual distribution of the outcome Y_{ij} for recipients of remittances is the same as the observed distribution of Y_{ij} for non-recipients. This means that the decision to be treated (i.e. receive remittances), although not random, depends on observable characteristics. Formally,

$$(Y_0, Y_1) \perp D | X \tag{2}$$

This equation states that conditional on a set of observable characteristics X, the outcome of interest is independent of the actual treatment status. Y denotes the remittance-recipient status of the household, being Y_0 the potential outcome in the untreated state, Y_1 the potential outcome in the treated state and D the treatment of receiving remittances. Each household has a (Y_0, Y_1) pair that represents the outcome that would be realized in the two states, but as the household can only be in one state at a time, at most one of the two states is observed at any given point in time. As the goal is to estimate the average treatment effect on the treated, the previous condition can be weakened to mean independence assumption involving only Y_0:

$$E(Y_0 | D = 1, X) = E(Y_0 | D = 0, X) \tag{3}$$

Matching between the treated and control group becomes difficult when there is a k-dimension vector of observable characteristics. To solve this problem, Rosenbaum and Rubin (1983) suggested that if it is valid to match the control and the treated group based on a set of observables, then it would be also valid to match them using the propensity score which summarizes the pre-treatment characteristics of the each group into a single index function:

$$0 < P(X) = E[D] = \Pr(D = 1 | X) = \hat{\beta} X = \hat{D} < 1 \tag{4}$$

where, $P_i(X) = F(h(X))$ and $F(.)$ could be a normal or a logistic distribution, depending on whether a probit or a logit model is used for the estimation of the propensity score.

The basic idea behind the propensity score is that it may reduce the bias if we compare outcomes of treated and control groups which are as similar as possible in observable pre-treatment characteristics. This means that for observations with the same propensity score, the distribution of the observable characteristics must be the same across control and treated groups. That is, conditional on the propensity score, each individual has the same probability of assignment to treatment, as in a randomized experiment. This is called the balancing hypothesis or condition.

One of the problems of this identification strategy is the presence of selection on unobservables, which could still bias the estimates. Nevertheless, matching models assume that conditional on observables there is no unobserved heterogeneity left that affects both the likelihood of being a recipient and the outcome variable.

In order to estimate the propensity score for this study which is the likelihood of being a remittance-recipient household I estimate a probit model. The propensity score is represented by the following reduced form equation:

$$E(D_j) = R_j = X'_{ij}\,\alpha + W_j\beta + \varepsilon_j \qquad (5)$$

where, R_j is the dependent variable (D_j, treatment variable) taking the value of 1 if the household is a remittances-recipient (treatment group) and 0 otherwise (control group), X'_{ij} represents a set of demographic characteristics for the household head i in household j, W_j represents a set of household and community characteristics and ε_j is the error term associated with unobserved heterogeneity for the household.

Once the propensity score is obtained, the next step is to compute the Average Treatment Effect on the Treated (ATT). In order to make the working sample even more comparable, I restrict the sample to households with probabilities that lie within the region known as the common support, that is, the area were the propensity score for the treated group is similar to that of the control group.[10] The construction of the common support implicates the elimination from the sample of all treated households with a propensity score higher than the maximum propensity score of the control group, and also the elimination of all untreated or control households that have a propensity score lower than the minimum propensity score of the treated group. Then, I perform the propensity score matching. At this stage I compare the outcomes of interest (school attendance and labor supply) between the remittances-receiving households and the non-remittances-receiving households for all households to calculate the ATT of the remittances. The estimation of the ATT is calculated as follows:

$$ATT = E(Y_1|D=1,X) - E(Y_0|D=1,X) = E(Y_1|D=1,X) - E(Y_0|D=0,X) \qquad (6)$$

The ATT is calculated using different matching methods: Nearest Neighbor Matching, Radius Matching, Kernel Matching and Stratification Matching for robustness purposes.

[10] All the specifications reported satisfy the balancing condition.

Following Todd (2006), a typical matching estimator takes the form of:

$$\hat{\alpha}_M = \frac{1}{n_1} \sum_{i \in I_1 \cap S_p} \left[Y_{1i} - E\left(Y_{0i} \middle| D = 1, P_i\right) \right]$$

$$\hat{E}\left(Y_{0i} \middle| D = 1, P_i\right) = \sum_{j \in I_0} W(i, j) Y_{0j},$$

$$\hat{\alpha}_M = \frac{1}{n_1} \sum_{i \in I_1 \cap S_p} \left[Y_{1i} - \sum_{j \in I_0} W(i, j) Y_{0j} \right]$$

where I_1 denotes the set of treated individuals (program participants), I_0 the set of non-treated individuals (non program participants), S_P the region of common support and n_1 denotes the number of persons in the set $I_1 \cap S_P$. The match for each treated participant $i \in I_1 \cap S_P$ is constructed as a weighted average over the outcomes of non-treated individuals, where the weights depend on the distance between P_i and P_j. This means that the closer the propensity score of the non-treated to the treated individual, the more weight will be assigned to that non-treated individual in the construction of the weighted average. The alternative matching methods differ in how the neighborhood is defined and in how the weights $W(i,j)$ are constructed.

Nearest neighbor matching

In this method, among the control group, the non-treated participant with the value of P_j that is closest to P_i is selected as the match. This estimator can be implemented either matching with replacement or without replacement. This method is usually applied with replacement in the controls and operates in the following way: if several non-treated individuals match a given treated individual, then one is chosen randomly. In this study I use matching with replacement. The weight for the non-treated individual that has the closest propensity score is 1, and for the rest of the non-treated is 0.

Radius or Caliper matching

This method is a variation of the previous that attempts to avoid "bad" matches by imposing a tolerance on the maximum distance $\|P_i - P_j\|$ allowed. That is, a match for person i is selected only if $\|P_i - P_j\| \leq \varepsilon,\ j \in I_0$, where ε is a pre-specified tolerance. Treated persons for whom no matches can be found are excluded from the analysis. A drawback of caliper matching is that it is difficult to know a priori what choice for the tolerance level is reasonable. The election of the distance or radius should be careful since a very small radius can discard treated observations, but the quality of the match is better. The trade-off in this case is between the quality of the estimator and the sample size.

Stratification Matching

This method consist of dividing the common support into a set of intervals, such that, within each interval, treated and control units have on average the same propensity score. After this, within each interval the difference between the average outcomes of the treated and the control observation is computed. A weighted average of the interval impact estimates, using the fraction of the treated population in each interval for the weights, provides the overall impact estimate.

Kernel Matching

In this method all treated subjects are matched with a weighted average of all controls using weights that are inversely proportional to the distance between the propensity scores of the treated and the controls. The ATT is computed as follows:

$$\hat{\beta}_{KM} = \frac{1}{n_1} \sum_{i \in I_1} \left\{ Y_{1i} - \frac{\sum_{j \in I_0} Y_{0j} G\left(\frac{p_j - p_i}{a_n} \right)}{\sum_{k \in I_0} G\left(\frac{p_j - p_i}{a_k} \right)} \right\}$$

where, G(.) is a Kernel function and a is a parameter.

V. 2. 3. IV Probit Estimation

Previously I stated that the likelihood of being a remittance-receiving household may depend on unobserved characteristics of the household (e.g. household wealth or income shocks) that also influence the outcomes of interest. If I do not control for this simultaneity or the omitted variables problem, then my estimates will be inconsistent. In order to overcome this potential endogeneity problem I use an Instrumental Variables Approach (IV). The basic idea of this method is to find a variable (the instrument) that helps predict the endogenous variable and at the same time is not correlated directly with the outcome of interest.

Therefore, I use historic migration rates at the district level from 1989 till 2001 to capture the partial variability of the likelihood of being a remittance-receiving household via the presence of migration networks abroad. [11] This requires assuming that historic migration rates affect the outcomes of interest only through remittances, and that they are uncorrelated with the error term. My identifying assumption is that historic district migration rates represent the migration networks abroad, which help predict current migration and remittances, but they do not directly affect the outcome variables. The basic idea behind the relevance condition is that district migration patterns are an indicator of migration networks abroad, which have lowered migration costs (e.g. legal entrance, obtaining a job, etc) for subsequent generations of migrants from those

[11] I constructed the instrumental variable using data of international migration outflows by district since 1989 till 2001, which is available in Carletto et al., (2004), Table 8.

districts. Households with better access to migration networks should be more likely to send migrants abroad and as a result, historic migration rates help predict whether a particular household currently receives remittances from abroad or not. The basic assumption behind the exogeneity condition is that historical district migration rates do not influence education and labor outcomes 4 years later.

Historical migration rates by state have been used as instruments for remittances-receiving households in previous literature by Hanson and Woodruff (2003), Woodruff and Zenteno (2004), Hildebrandt and McKenzie (2005), Lopez - Cordova (2005), McKenzie (2005), McKenzie and Rapoport (2006), Acosta (2006), Grigorian and Melkonyan (2008). Even though all these authors rely on the exogeneity assumption of this instrument, it's important to consider any possible threat to its validity. For example, McKenzie and Rapoport (2006) indicate that a possible threat to the validity of this instrument is that the historic district migration network has a direct effect on schooling through changing the incentive to acquire education. But they argue that the incentive effects should be much stronger if children have a household member who has previously migrated than if they merely have someone in their community who has migrated, so that the direct effect of the community network is likely to be second-order in the education decision. As the outcome variables of this study are binary outcomes I use the Amemiya's Generalized Least Squares estimator, also known as "IV Probit Estimation".

VI. Results

In this section, I present the regression results for the impact of remittances on school attendance and adult labor supply. As the data available for the study is cross-sectional, in addition to remittances I include a set of independent variables for each case that serve as control variables. These control variables include individual and household level characteristics for the school attendance and labor supply outcomes, which are defined in Tables 4. Tables 6 and 7 present the results of estimating the different estimation techniques of the previous section. In these tables, column 1 and 2 show the results for the probit estimation, columns 3 to 6 show the results for the different matching methods, while columns 7 and 8 show the results for the IV probit estimation. Huber-White standard errors are reported in parentheses to account for heterocedasticity and clustered standard errors at the district level are reported in brackets to account for arbitrary correlation of households within a district.

For the matching method, the propensity score needs to be estimated previously in order to match later recipient households with non-recipient households and calculate the ATT. Table 5 presents the results (marginal effects) of estimating the propensity score. I estimated a probit model for the likelihood of being a recipient household at the household level as a function of household

characteristics. The observable characteristics used for this estimation are defined in Table 4.

As shown in Table 5, a U-shaped relationship is found between households head's age and remittances, indicating that both youngest and oldest heads are more likely to receive remittances. Also, female and married household heads seem to be more likely to receive remittances, suggesting that the family members who migrate are usually males (e.g, the husband). Families with a higher number of children are also more likely to receive remittances, especially households with younger children (0-5 years old), but this is not significant. Household size is significantly and negatively correlated to the probability of being a remittance-receiving household. As proxies for household wealth, I use household head's years of schooling, the logarithm of household income and the logarithm of per capita expenditure. The results show that more educated household head's reduce the probability of receiving remittances, which may be reflecting that these types of households do not need external assistance. Richer households in terms of household income seem to be less likely to receive remittance, but households with higher per-capita expenditure tend to receive more remittances. Finally, historic migration rates, district networks and returned migrants seem to be positively correlated with remittances, indicating that migration networks abroad help in the future migration process by reducing migration costs and also increasing the likelihood of the new migrants to send money to their relatives in the home country.

VI. 1. Remittances and children's school attendance

Table 6 presents the results for the impact of remittances on children's school attendance, where the dependent variable is whether a child aged 12 to 17 years old is currently enrolled in school.

The first column only considers the impact of remittances on school attendance, while the second column adds controls for the child and household characteristics. The standard probit model in column 1 shows a significant, but small, negative impact of remittances on school attendance. This means that remittances decrease the likelihood of attending school for children in recipient households. The marginal effect of receiving remittances suggests that remittance-receiving households are 7.1% less likely than non-receiving households to keep children at school. After controlling for child and household characteristics, in column 2 the probit results still show a negative impact for remittances on school attendance, but it is smaller (1%) and not significant. This specification also shows that the number of children in the house seems to affect children's school attendance. If the children have young brothers and sisters (0-5 years old), they are less likely to attend school, than if they have more siblings of school age (6 – 17 years old). Children from households with better educated families (especially if the household head has achieved university level) are more likely to be enrolled in school. Households located in rural areas have fewer

children studying than households located in urban areas. In addition, the distance to school is negatively correlated to school attendance, as expected.

After the propensity score estimation, in Table 6 columns 3 to 6 show the average treatment effect of remittances on the treated (children between 12 to 17 years old). These estimates represent the difference in children's school attendance when comparing a remittance recipient with a non-remittance-recipient child with similar observable characteristics. The impact of remittances in the matched sample for every matching method also shows a negative and significative correlation between remittances and school attendance. The results indicate that the likelihood of a remittance receiving child to attend school ranges from 5.7% to 7.1% percentage points lower than a non-recipient child. The fact that all methods reported a negative impact accounts for the robustness of the results. However, these results still could be biased because propensity score matching methods do not control for the presence of unobservables.

In order to control for the selection bias and the endogeneity problem, I perform an IV probit estimation. First stage results, although not reported, closely resemble those of Table 5. As predicted, the presence of migration networks encourages migration and remittances, because the correlation between historic migration rates and remittances is positive and highly significant. After the first stage, results of the second stage are presented in columns 7 and 8 in Table 6. These columns report the results of Amemiya's GLS estimation after controlling for the endogeneity of remittances using the historic district migration rates as instruments. As in the probit estimation, column 7 in Table 6 only considers the impact of remittances on school attendance, while column 8 adds controls for the child and household characteristics. The IV probit in both columns also reports a negative and significant impact of remittances on school attendance, but compared to standard probit and matching, these coefficients are much larger. These results show that being in a remittances-receiving household decreases the likelihood of attending school for 12 to 17 year old children by 55%. After controlling for child and household characteristics, the marginal effect of receiving remittances suggests that remittance-receiving households are 64% less likely than non-receiving households to keep children at school. Specification (8) also shows a positive effect of HH head's years of education on school attendance, and a negative correlation between the likelihood of children's school attendance and the number of children in the household, rural settlement and distance to school.

All results suggest a very controversial finding about the impact of remittances on school attendance; the evidence indicates that receiving remittances from abroad has a negative impact on the likelihood of children's school enrollment. Previous to this finding, one would expect that receiving remittances from abroad would relax any liquidity constraints and this would expand investment

in human capital. The fact that this study of Albania indicates the opposite suggests various possible explanations:

Firstly, international migration may have disruptive effects on family structure, organization, and leadership. For example, the absence of the household head may lead to less parental inputs to education, structure and control in the household, thus negatively affecting children's school enrollment, performance and continuation of education. This absence may result in the need for children to undertake household work in place of migrant adults. (McKenzie, 2006). Secondly, it is possible that members of remittance-receiving households are likely to later migrate themselves and, therefore, not value the local education as much. When the opportunity cost of staying at school increases due to higher potential earnings abroad, children from migrant households might leave school earlier. Thirdly, it could be that consumption patterns of the members of the household left behind might be under scrutiny of the remitter, who might command the use of the remittances for only uses such as food and public services/utilities, and presumably not education (Grigorian and Melkonyan, 2008). Furthermore, the preferences of the migrant household member and the decision maker among those remaining may not be aligned. Finally, remittances might have a negative effect on enrollment rates if children from households that receive remittances have opportunities of getting returns that are higher than those to education. In particular, if households with migrants use remittances to engage in higher return activities, and these provide alternative avenues for skill formation and higher returns than staying in school, then children from households with migrants may stop schooling investments earlier (World Bank, 2007).

VI. 2. Remittances and adult labor supply

The results for the impact of remittances on adult labor supply are reported in Table 7. The dependent variable in this case is whether an adult individual aged 22 to 65 has worked for someone during the previous week.

The first column presents the probit estimates without controls for the impact of remittances on labor supply. The marginal effects show a negative and significant coefficient, and its magnitude is rather large. These probit estimates suggest that any adult individual who receives remittances from abroad is 12.8% less likely to participate in the labor market. In column 2, after the inclusion of certain individual and household characteristics, the negative effect still remains, although the marginal effect is much lower (6.7%) than in column 1. This indicates the bias of the coefficient of remittances in column 1, which is probably capturing other effects related to both labor supply and remittances. The remaining control variables in this specification generally show the expected sign. If the individual is married, the likelihood of working tends to increase. The presence of younger children in the household (0-5 years old) decreases the probability for working, indicating that when individuals have younger children

maybe one of the parents should stay at home to take care of the children, especially for the case of women. On the contrast, if the individual has children of school age, the likelihood of working increases. This may indicate these individuals work in order to invest in human capital for their children. Similarly, if the individual belongs to an educated household, his labor market participation increases. The household size is negatively correlated with the likelihood of working for someone other than a household member. This could suggest that households with many members are usually engaged in self-employment activities like a family firm or family size could provide additional benefits such as insurance against volatility or vulnerability and, therefore, lead to less labor supply. Finally, remittances are found to have a significantly negative impact on labor supply in rural areas, indicating the low job opportunities in these areas.

Columns 3 to 6 present the average treatment effect on the treated for the different matching methods in order to correct for sample selection. After the selection correction on observables, all the matching methods indicate that "treated" individuals (those who live in a household that receives remittances) tend to work less than "non-treated" individuals (those who live in a household that does not receive remittances). The results show that the treated individuals are 8.7% to 12.9% less likely to work in the labor market, compared to the non-treated individuals. The negative and significant impact in all the matching methods accounts for the robustness of the results.

Finally, columns 7 and 8 report the IV probit estimates for the impact of remittances on labor supply. The instrument historic migration rates and the results of the first stage used for children's school attendance were also used in this case. The IV probit estimates confirm the results obtained in the previous models. This approach also suggests that individuals in recipient households are less likely to participate in the labor force, compared to non recipient households. The marginal effects of Amemiya's GLS estimations without controls shows also a negative and highly significant impact, but compared to the probit estimation and the matching methods, the magnitude of the coefficient is much larger (32%). After controlling for the individual and household characteristics, the marginal effect in column 8 remains negative, but it lowers to 28% and it is significantly different from zero. When I cluster the standard errors at the district level, the coefficient remains statistically significant.

In sum, all the results reported by the different empirical methodologies suggest that remittances are found to have a significantly negative impact on labor supply, indicating that the presence of these cash transfers to underdeveloped countries may have a disincentive effect on labor supply. One of the possible explanations of this phenomenon is that, as the marginal value of the additional income decreases, the adult individuals may decide to substitute work for more leisure. Remittances produce an increase in the reservation wage, which would

reduce the probability that an individual participates in the labor force. One of the determinants of the reservation wage is non-labor income, which for an individual is a function of her own assets and the amount of income of other household members. The higher is the level of income of the rest of the household, the higher is the reservation wage of the individual, and the lower is the probability that he or she participates in the labor force. If remittances are considered as an increase in non-labor income, they would lead to a reduction in labor force participation of recipient household members left behind (Cox-Edwards and Oreggia, 2006). Also seasonal or potential migration may reduce individual's participation in the labor at home, while they are waiting for the first or next migration experience.

In other studies on Albania, Germenji and Swinnen (2005), Azzari et al., (2006) also show similar results that support my findings. The first authors find a negative link between remittances and farm efficiency due to a drop in labor effort. Similarly, Azzari et al., (2006) also suggest a disincentive effect on labor effort and participation.

VI. 3. Other robustness checks

I perform two more robustness checks. Firstly, I examine the impact of remittances on household expenditure in education and then I examine the impact of remittances on whether an unemployed individual has tried to find a job or to start his own business in the past four weeks.

In the first specification I regress the logarithm of household educational expenditure on whether a household receives remittances from abroad or not and on a set of household characteristics. The results of this specification are reported in Table 8 and show a negative and significant effect of remittances on educational expenditure. The OLS method in column 1 indicates that in remittance-receiving households the educational expenditure on average drops 25% compared to non-recipient households and after controlling for household characteristics the magnitude of the coefficient in column 2 raises up to 32%. These results suggest that on average remittance recipient households spend 6072 leks less on education, than non recipient households.[12] However one possible explanation for this outcome could be that the educational expenditure for many migrant households such as transportation to school, clothes and so on could be in-kind remittances and therefore not reported.

For the second specification, I restrict the sample only to unemployed individuals, whom are asked in the survey whether they have tried to find a job or to start their own business in the past four weeks. The results of this specification are reported in Table 9 and show a negative and significant impact

[12] See Table 3. The average education expenditure for all households in the sample is 23,738 leks (old leks), for remittance-receiving households is 18,485 leks (old leks) and for non-remittance receiving households is 24,557.5 leks (old leks).

of remittances on whether an individual has tried to find a job, for the probit model. These marginal effects indicate that any adult unemployed individual who receives remittances from abroad is 4.6% less likely to try to find a job, compared to an individual who does not receive remittances from abroad. After including several controls the coefficients in column 2 shows that unemployed individuals who live in a recipient household are 2.1% less likely to try to find a job, compared to individuals living in a non-recipient household. This result is in line with the disincentive effect of remittances on labor supply in the previous section.

VII. Conclusion

At the beginning of the 90's, Albania faced a serious economic, political, and social crisis, which ended with the collapse of the communist regime. In 1992, the profound economic reform caused the fall of the centralized economy and increased unemployment, thus provoking a huge phenomenon of migration mainly towards Greece and Italy, but also towards USA, Canada and Western European countries. Another migratory wave took place at the end of 1996 and beginning of 1997 after the Pyramid Scheme collapse, as a result of deteriorating macro economic indicators and the political and social chaos that turned into a revolt. By the end of the decade over one fifth of the Albanian population (around 600,000 – 700,000 Albanians) were estimated to be living abroad. Consequently remittances, which constitute a mayor source of foreign revenue for Albania, increased.

This paper contributes to the literature of migration and remittances by studying the microeconomic impact of remittances on children's school attendance and labor supply in Albania. I hypothesized that remittances can have adverse consequences in terms of incentives on education and labor supply. Using cross-sectional data provided by the 2005 ALSMS and a combination of empirical methodologies in order to correct for potential sample selection and endogeneity of remittance receipts, I find that remittances decrease the likelihood of attending school for children (12 – 17 years old) in recipient households and that remittances decrease the likelihood of participating in the labor force for adults between 22 – 65 years old.

The first result sheds light on the debate about the relationship between remittances and investment on human capital. While many previous studies (Cox-Edwards and Ureta, 2003; Hanson and Woodruff, 2003) suggest a significant and positive impact of remittances on children's school attendance, my results suggest exactly the opposite. This means that remittances can produce a disincentive effect on children's schooling. In addition, I also find that remittance-receiving households tend to spend less in education than non receiving households. The second result seems to be in line with the majority of the previous literature and indicates that remittances also provoke a disincentive

effect on labor supply and increase the consumption of leisure in foreign- income dependent economies.

In the case of Albania, all these results suggest that remittances are not channeled into productive activities such as children's school attendance or labor supply, which are key factors for the promotion of growth in the developing countries. Therefore, while migration and the resulting remittances have greatly contributed to increase household's income and to keep many families out of poverty, they are not likely to be a sustainable mechanism for socio-economic development and long-term growth.

References

ACOSTA, P., (2006). "Labor Supply, School Attendance and Remittances from International Migration: the case of El Salvador", World Bank Policy Research Working Paper 3903.

ADAMS, R., AND J. PAGE, (2005). "Do International Migration and Remittances Reduce Poverty in Developing Countries?" World Development 33, 1645-1669.

AGGARWAL, R., AND N. SPATAFORA, (2005). "Remittances: Determinants and Impact" mimeo (Washington, DC: IMF).

AHLBURG, D., (1991). "Remittances and Their Impact: A Study of Tonga and Western Samoa," Canberra: National Centre for Development Studies, Research School of Pacific Studies, the Australian National University.

AMUEDO-DORANTES, C., AND S. POZO, (2006a). "Migration, Remittances, and Male and Female Employment Patterns," American Economic Review (AEA Papers and Proceedings), 96(2): 222–226.

ANDRESEN, E., B. J. ChRISTENSEN AND O. MOLINA, (2005). "The Impact of Aid on Recipient Behavior: A Micro-Level Dynamic Analysis of Remittances, Schooling, Work, Consumption, Investment and Social Mobility in Nicaragua," Development Research Working Paper Series 02/2005, Institute for Advanced Development Studies.

AZZARI, C., G. CARLETTO, B. DAVIS AND A. ZEZZA, (2006). "Choosing to Migrate or Migrating to Choose: Migration and Labor Choice in Albania" ESA Working Paper 06-06, Rome: Agriculture and Development Economics Division, FAO.

BECKER, S., AND A. ICHINO, (2002). "Estimation of Average Treatment Effects Based on Propensity Scores" The Stata Journal, 2(4):358-377.

BROWN, R.P.C., (1994). "Migrants' Remittances, Savings, and Investment in the South Pacific," International Labour Review 133(3): 347–367

BROWN, R.P.C. AND D.A. AHLBURG, (1999). "Remittances in the South Pacific," International Journal of Social Economics 26(1/2/3): 325–344.

CARLETTO, G., B. DAVIS, M. STAMPINI, S. TRENTO AND A. ZEZZA, (2004). "Internal Mobility and International Migration in Albania", ESA Working Paper 04-13, Rome: Agriculture and Development Economics Division, FAO.

CASTALDO, A., AND B. REILLY, (2007). "Do Migrant Remittances Affect the Consumption Patterns of Albanian Households?" South-Eastern Europe Journal of Economics 1: 25-54

CASTALDO, A., J. LITCHFIELD AND B. REILLY, (2004). "Who is Most Likely to Migrate from Albania? Evidence from the Albania Living Standards Measurement Survey", forthcoming in Eastern European Economics.

CHAMI, R., C. FULLENKAMP, AND S. JAHJAH, (2005). "Are Immigrant Remittance Flows a Source of Capital for Development?" IMF Staff Papers 52(1).

COX-EDWARDS, A., AND M. RODRIGUEZ –OREGGIA, (2007). "The effects of remittances on labor force: An Analysis for Mexican Households using Propensity Score Matching", Instituto de Investigaciones sobre Desarrollo Sustentable y Equidad Social, Universidad Iberoamericana.

COX-EDWARDS, A., AND M. URETA, (2003). "International Migration, Remittances, and Schooling: Evidence from El Salvador," Journal of Development Economics, 72, 2, December 2003: 429-62.

DUSTMANN, C., AND O. KIRCHKAMP, (2002). "The optimal migration duration and activity choice after re-migration," Journal of Development Economics Vol. 67: 351–372

De SOTO, H., P. GORDON, I. GEDESHI and Z. SINOIMERI, (2002). "Poverty in Albania: a Qualitative Assessment", World Bank Technical Paper 520, Washington, DC: World Bank

FUNKHOUSER, E., (1992). "Migration from Nicaragua: Some Recent Evidence". World Development 20, 1209-1218.

GEDESHI, I., H. MARA AND XH. PRENI, (2003). "The Encouragement of Social-Economic Development in Relation to the Growth of the Role of the Remittances", Tirana: Centre for Economic and Social Studies, unpublished report on behalf of UNDP and Soros Foundation.

GEDESHI, I., AND E. URUÇI, (2003). "Remittances management in Albania", Working Paper, Programma MigraCtion, CeSPI

GERMENJI, E., AND J.F.M. SWINNEN, (2005). "Human Capital, Market Imperfections, Poverty and Migration: Evidence from Albania" Research Group on Food Policy, Transition & Development (PRG-Leuven). Working paper 2005/5

GIULANO, P., AND M. RUIZ-ARRANZ, (2006). "Remittances, Financial Development, and Growth". IMF Working Paper No. 05/234

GLYTSOS, N., (1993). "Measuring the Income Effects of Migrant Remittances: A Methodological Approach Applied to Greece," Economic Development and Cultural Change 42(1): 131–68.

GLYTSOS, N., (2002). "Dynamic Effects of Migrant Remittances on Growth: An Econometric Model with an Application to Mediterranean Countries". Discussion Paper, No. 74, KEPE, Athens, 2002

GÖRLICH, D., T. O. MAHMOUD AND Ch. TREBESCH, (2007). "Explaining Labour Market Inactivity in Migrant-Sending Families: Housework, Hammock, or Higher Education," Kiel Working Papers 1391, Kiel Institute for the World Economy.

GRIGORIAN, D.A., AND T.A. MELKONYAN, (2008). "Microeconomic Implications of Remittances in an Overlapping Generations Model with Altruism and Self-Interest," IMF Working Papers 08/19

HANSON, G., AND C. WOODRUFF, (2003). "Emigration and Educational Attainment in Mexico" Mimeo, University of California at San Diego. Unpublished

HILDEBRANDT, N., AND D. McKENZIE, (2005). "The Effects of Migration on Child Health in Mexico" Forthcoming, Economics Journal of the Latin American and Caribbean Economic Association

KIM, N., (2007). "The Impact of Remittances on Labor Supply: The Case of Jamaica". World Bank Policy Research Working Paper No. 4120

KING, R., AND J. VULLNETARI, (2003). "Migration and Development in Albania", Working Paper C5, Development Research Centre on Migration, Globalization and Poverty, University of Sussex

KIREYEV, A., (2006). "The Macroeconomics of Remittances: The Case of Tajikistan," International Monetary Fund Working Paper 06/02. Washington, DC.

KULE, D., A. MANÇELLARI, H. PAPAPANAGOS, S. QIRICI, AND P. SANFEY, (2002). "The Causes and Consequences of Albanian Emigration During Transition: Evidence from Micro Data," International Migration Review 36(1): 229–39.

LAYNARD, R., O. BLANCHARD, R. DORNBUSCH AND P. KRUGMAN, (1992). "East-West Migration: The Alternatives". MIT: Cambridge.

LIPTON, M., (1980). "Migration from rural areas of poor countries: the impact on rural productivity and income distribution," World Development 8(1): 1–24

LÓPEZ - CORDOVA, E., (2005). "Globalization, Migration and Development. The Role of Mexican Migrant Remittances", Working Paper

LU, Y., AND D. J. TREIMAN, (2007). "The Effect of Labor Migration and Remittances on Children's Education Among Blacks in South Africa." Revise and resubmit in Demography. (Available as CCPR working paper 001-07, California Center for Population Research, UCLA.)

MANKIW, N. G., D. ROMER, AND D. WEIL, (1992). ''A Contribution to the Empirics of Economic Growth,'' Quarterly Journal of Economics, CVII, 407–438

MASSEY, D.S., AND E.A, PARRADO, (1998). "International Migration and Business Formation in Mexico," Social Science Quarterly 79(1): 1–19

McCORMICK, B., AND J. WAHBA, (2001). "Overseas Work Experience, Savings and Entrepreneurship Amongst Return Migrants to LDCs," Scottish Journal of Political Economy 48(2): 164–178.

McKENZIE, D., (2005) a. "Beyond Remittances: The Effects of Migration on Mexican Households", in: Ozden, C., Schiff, M. (Eds.), International Migration, Remittances and the Brain Drain. The World Bank, Washington, D.C.

McKENZIE, D., AND H. RAPOPORT, (2006). "Can migration reduce educational attainments? Depressing evidence from Mexico," Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.

MUENT, H., F. PISSARIDES, AND P. SANFEY, (2001). "Taxes, Competition and Finance for Albanian Enterprises: Evidence from a Field Study," MOCT-MOST, 11: 239–51

NICHOLSON, B., (2001). "From Migrant to Micro-Entrepreneur: Do-It-Yourself Development in Albania", South-East Europe Review, 4(3), 39-41

PAPAPANAGOS, H., AND P. SANFEY, (2002). 'Intentions to Emigrate in Transition Countries: The Case of Albania, Journal of Population Economics 14: 491-504.

ROZELLE, S., J.E. TAYLOR, AND A. deBRAUW, (1999). "Migration, remittances and agricultural productivity in China," American Economic Review (AEA Papers and Proceedings), 89(2): 287–91.

ROSENBAUM, P., AND D. RUBIN, (1983). The Central Role of the Propensity Score in Observational Studies for Causal Effects. Biometrika 70, 41-55.

RUSELL, S.S., (1992). "Migrant Remittances and Development," International Migration Quarterly Review 30(3/4): 267–87.

TAYLOR, J.E., (1992). "Remittances and inequality reconsidered: direct, indirect and intertemporal effects," Journal of Policy Modeling 14(2): 187–208.

THOMAS-HOPE, E., (1999). "Return Migration to Jamaica and its Development Potential" International Migration, Vol.37 (1), pp.183-208

TODD, P., (2006). "Evaluating Social Programs with Endogenous Program Placement and Selection of the Treated," Working Paper, Handbook of Agricultural Economics, Volume 4, North Holland

WOODRUFF, C., AND R. ZENTENO, (2007). Remittances and Microenterprises in Mexico. Mimeo, University of California at San Diego.

WORLD BANK, (2007). "Albania Urban Growth, Migration and Poverty Reduction – A poverty assessment", Report Number 40071-AL, Washington, DC: World Bank.

WORLD BANK, (2005). "Remittances: Development Impact and Future Prospects," (eds.) S. M. Maimbo and D. Ratha. Washington, DC.

WORLD BANK, (2003). "Albania Poverty Assessment", Report Number 26213-AL, Washington, DC: World Bank.

YANG, D., (2007). "International Migration, Human Capital, and Entrepreneurship: Evidence from Philippine Migrants' Exchange Rate Shocks." Mimeo, University of Michigan.

ZARATE-HOYOS, G.A., (2004). "Consumption and Remittances in Migrant Households: Toward a Productive Use of Remittances," Contemporary Economic Policy 22(4): 555–565.

Table 1: Measures of International Migration - ALBANIA

Region	District	Population[1] (2004 estimates)	International Migration[2] (%)	HH receiving Remittances[3] (%)
Coastal	Kurbin	54.500		
	Lezhe	68.100		
	Durres	182.800		
	Lushnje	144.200		
	Fier	199.900	38,6	37,8
	Mallakaster	39.800		
	Vlore	147.100		
	Delvine	10.800		
	Sarande	35.200		
	Kavaje	78.300		
Central	Malesia e Madhe	37.000		
	Puke	34.400		
	Shkoder	185.600		
	Mirdite	37.000		
	Kruje	64.300		
	Mat	61.800		
	Elbasan	224.700		
	Peqin	32.900		
	Berat	128.200	25,7	26,5
	Kuçove	35.500		
	Skrapar	29.800		
	Devoll	34.700		
	Korçe	143.300		
	Kolonje	17.200		
	Pogradec	70.800		
	Gjirokaster	55.900		
	Permet	25.800		
	Tepelene	32.400		
Mountain	Tropoje	28.100		
	Has	19.800		
	Kukes	64.000		
	Diber	86.000	19,9	22,2
	Bulqize	42.900		
	Librazhd	72.400		
	Gramsh	35.700		
Tirana	Tirane	522.500	15,5	13,3
Albania		3.083.400	31	20,2

Notes: (1) Source: Albanian 2001 Census. (2) Percentage of HHs with a family member abroad in the sample. (3) Percentage of HHs that receive remittances from abroad in the sample.

Table 2: Regional Distribution of HH by Remittances-Receiving Status

	All Households (%)	Urban HH (%)	Rural HH (%)
Do not receive remittances	79.2	81.7	76.2
Receive remittances	20.8	18.3	23.7
Total	100.0	100.0	100.0

Table 3: Descriptive Statistics – Albania 2005
Household Characteristics by Remittance-Receiving Status

Variable	*Non Receiving Remittances*	*Receiving Remittances*	*Mean Difference*
Number of members in the house	4.48	3.46	1.02
	(1.73)	(1.78)	(.071)***
Female Head	.085	.169	-.086
	(.279)	(.375)	(.012)***
Age of Household Head (Years)	50.08	59.01	-8.97
	(12.93)	(11.72)	(.518)***
Max. Household Education (Years)	13.02	13.37	-.34
	(4.57)	(5.14)	(.202)*
Children at school (12 - 17 years old)	.722	.463	.25
	(.384)	(.434)	(.018)***
Number of children (0 - 5 years old)	.387	.223	.16
	(.670)	(.551)	(.026)***
Number of boys (6 - 17 years old)	.588	.352	0.23
	(.768)	(.628)	(.030)***
Number of girls (6 - 17 years old)	.576	.326	0.25
	(.827)	(.656)	(.032)***
Rural Area	.433	.515	-.082
	(.495)	(.500)	(.020)***
Per-capita consumption (in Leks)	9725.3	11117.9	-1392.6
	(6290.7)	(5702.5)	(251.8)***
Education expenditure (in Leks)	24,557.5	18,485.2	6,072.3
	(1133.2)	(1756.7)	(2952.0)**
Access to Continuous Electricity	.303	.293	.013
	(.459)	(.455)	(.018)
Access to Running Water	.531	.500	.031
	(.499)	(.500)	(.023)
In-House Sanitary Service	.678	.703	-.024
	(.467)	(.457)	(.018)
Telephone Service	.310	.292	.017
	(.462)	(.455)	(.018)
Number of Rooms in Household	2.34	2.55	-.193
	(1.05)	(1.03)	(.043)***
Family Member Abroad	.136	1	-.860
	(.343)	(.000)	(.012)***
Own dwelling	.893	.956	-.056
	(.308)	(.204)	(.011)***
Monthly net income (in Leks)	337,888.8	513,883.5	-175,994.7
(excluding remittances)	(14,770.4)	(186,165.8)	(99,503.0)*
Adults employed (22 - 65 years old)	.315	.187	.128
	(.464)	(.390)	(.013)***
Poverty Headcount	.158	.058	.100
	(.364)	(.233)	(.013)***
Households	2,895	758	

Note: Standard deviation in parentheses. * Statistically different from zero at the .1 level of significance; ** Statistically different from zero at the .05 level of significance; *** Statistically different from zero at the .01 level of significance.

Table 4: Description of the control variables

Variable	Variable Description
Remittances	=1 if the households receives remittances in cash from abroad; = 0 otherwise
HH Head level	
Age	The age of the head of the household in years
Female	=1 if the head of the household is female; = 0 otherwise
Married	=1 if the head of the household is married; = 0 otherwise
Education	The total number of years of education of the household head
None/Primary	=1 the individual has no education or achieved four or less primary grades; = 0 otherwise
Secondary	=1 if the individual achieved secondary level; = 0 otherwise.
University	=1 if the individual achieved university level; = 0 otherwise.
Child level	
Age	The age of the child of the household in years
Female	=1 if the child of the household is female; = 0 otherwise
Adult Level	
Age	The age of the adult individual in years
Female	=1 if the adult individual is female; = 0 otherwise
Married	=1 if the adult individual is married; = 0 otherwise
Household Level	
Household Size	The total number of individuals in the household
Birth in three years	=1 if any woman of the household had a birth in the last three years; = 0 otherwise
Number of Children 0 - 5 Years Old	The total number of children in the household between 0 and 5 years old
Number of Boys 6-17 Years Old	The total number of boys in the household between 6 and 17 years old
Number of Girls 6-17 Years Old	The total number of girls in the household between 6 and 17 years old
Rooms	The total number of rooms in the household
Log of Total Household Expenditure	The logarithm of the total (monthly) expenditure of the household
Log Current HH income	The logarithm of the average monthly income of the household in Leks
Rural Settlement Type	=1 if the household belongs to a rural settlement; = 0 otherwise
Return Migrants	The number of international migrants who returned to the household two or more years ago
Distance School	The distance from the household to the school in km
District Level	
Historic Migration Rate	The international migration rates by district between 1989 - 2001
District Network	The percentage of households which have a family member abroad, by district

Table 5: Propensity Score Estimation
Determinants of Remittance receiving households

Method	Probit
Sample Households	All Households
Model	1
Age (HH head)	.036
	(.004)***
Age squared (HH head)	.000
	(.000)***
Female (HH head)	.290
	(.053)***
Married (HH head)	.117
	(.012)***
Education HH head (years)	-.003
	(.001)***
Number of Children 0 - 5 Years Old	.025
	(.016)
Number of Boys 6-17 Years Old	.004
	(.010)
Number of Girls 6-17 Years Old	.011
	(.010)
Birth in last the 3 years	.004
	(.029)
Family Size	-.037
	(.006)***
Number of rooms in HH	.017
	(.005)***
Log Current HH income (in Leks)	-.016
	(.008)*
Log of Per Capita Expenditure (in Leks)	.045
	(.015)***
Rural Area	.063
	(.014)***
Historic migration rates	.070
	(.021)***
Village network	.561
(% of HH with Migrants)	(.077)***
Number of Return Int. Migrants	.181
(2 + years ago)	(.027)***
Stratum (region) Indicators	Yes
Observations	3389

Note: Robust Standard errors are in parentheses. * Statistically different from zero at the .1 level of significance; ** Statistically different from zero at the .05 level of significance; *** Statistically different from zero at the .01 level of significance.

Table 6: Determinants of Children's School Attendance - (Children 12 -17 years old) - ALBANIA 2005

	Dependent Variable: Enrolled in school during 2005							
Method	Probit	Probit	Kernel Matching	Nearest N. Matching	Radius Matching	Stratific. Matching	IV Probit	IV Probit
Model	1	2	3	4	5	6	7	8
HH Receive Remittances	-.071	-.010	-.071	-.057	-.068	-.063	-.550	-.640
	(.025)***	(.020)	--	(.035)**	(.028)***	(.029)***	(.162)***	(.172)***
	[.029]***	[.025]	{.026}***	{.040}**	{.027}***	{.028}**	[.269]**	[.278]**
Age		-.086						-.088
		(.004)***						(.005)***
		[.005]***						[.004]***
Female		-.010						-.008
		(.017)						(.020)
		[.016]						[.018]
Number of Children 0 - 5 Years Old		-.051						-.076
		(.015)***						(.020)***
		[.019]**						[.030]**
Number of Boys 6-17 Years Old		-.010						-.032
		(.009)						(.015)**
		[.010]						[.021]
Number of Girls 6-17 Years Old		-.028						-.046
		(.008)***						(.011)***
		[.011]**						[.018]**
Rural Areas		-.099						-.074
		(.015)***						(.021)***
		[.024]***						[.032]**
Distance to School		-.013						-.013
		(.004)***						(.006)**
		[.005]**						[.005]**
Education HH head (years)		.012						.011
		(.002)***						(.002)***
		[.003]***						[.003]***
None/Primary Education		.006						.038
		(.023)						(.029)
		[.027]						[.037]
Secondary Education (HH Head)		.036						.008
		(.017)*						(.002)
		[.025]						[.032]
University Education (HH Head)		.073						.071
		(.024)**						(.036)**
		[.018]**						[.028]**
Observations	2278	2104	2278	987	2207	2207	2278	2104
N. Treated			318	318	277	277		
N. Control			1960	669	1930	1930		

Note: Robust standard errors are in parentheses. Standard errors clustered at the district level are in brackets. Bootstrap standard errors are in braces. * Statistically different from zero at the .1 level of significance;** Statistically different from zero at the .05 level of significance;*** Statistically different from zero at the .01 level of significance

Table 7: Determinants of Labor Supply - (Adults 22 - 65 years old) - ALBANIA 2005

	Dependent Variable: Works for someone other than a HH Member							
Method	Probit	Probit	Kernel Matching	Nearest N. Matching	Radius Matching	Stratific. Matching	IV Probit	IV Probit
Model	1	2	3	4	5	6	7	8
HH Receive Remittances	-.128	-.067	-.129	-.087	-.113	-.100	-.326	-.283
	(.011)***	(.014)***	--	(.016)***	(.013)***	(.013)***	(.063)***	(.094)**
	[.013]***	[.014]***	{.012}***	{.017}***	{.012}***	{.011}***	[.231]*	[.197]*
Age		-.004						-.003
		(.001)***						(.001)**
		[.001]***						[.002]*
Female		-.235						-.214
		(.010)***						(.020)***
		[.019]***						[.038]***
Married		.097						.088
		(.014)***						(.016)***
		[.011]***						[.019]***
Number of Children 0 - 5 Years Old		-.038						-.043
		(.010)***						(.010)***
		[.011]***						[.013]***
Number of Boys 6-17 Years Old		.011						-.002
		(.007)*						(.011)
		[.008]						[.020]
Number of Girls 6-17 Years Old		.016						.006
		(.007)**						(.009)
		[.005]***						[.013]
Rural Areas		-.156						-.133
		(.010)***						(.020)***
		[.014]***						[.040]***
Household Size		-.014						-.019
		(.004)***						(.004)***
		[.005]***						[.006]***
Max. HH Education		.051						.040
		(.003)***						(.008)***
		[.003]***						[.015]**
Observations	8409	7632	8409	4702	7632	7632	8409	7632
N. Treated			1454	1454	1290	1290		
N. Control			6955	3405	6342	6342		

Note : Robust standard errors are in parentheses. Standard errors clustered at the district level are in brackets. Bootstrap standard errors are in braces. * Statistically different from zero at the .1 level of significance;

** Statistically different from zero at the .05 level of significance; *** Stastistically different form .01 level of significance.

Table 8: Robustness check for Children's School Attendance – Albania 2005
Determinants of HH Educational Expenditure

Dependent Variable: Log of Educational Expenditure (in Leks)		
Method	Probit	Probit
Model	1	2
HH Receive Remittances	-.250	-.320
	(.091)***	(.102)***
Age (HH head)		.124
		(.024)***
Age squared (HH head)		-.001
		(.001)***
Female (HH head)		.275
		(.190)
Married (HH head)		.175
		(.191)
Family Size		.061
		(.032)***
Number of Children 0 - 5 Years Old		-.506
		(.063)***
Number of Boys 6-17 Years Old		-.258
		(.046)***
Number of Girls 6-17 Years Old		-.140
		(.044)***
Rural Areas		-.438
		(.064)***
Distance to School		-.082
		(.022)***
Education HH head (years)		.026
		(.006)***
Log Current HH income (in Leks)		.506
		(.039)***
Constant		-.595
		(.790)
Observations	2171	2054

Note: Robust standard errors are in parentheses. * Statistically different from zero at the .1 level of significance; ** Statistically different from zero at the .05 level of significance; *** Statistically different from zero at the .01 level of significance

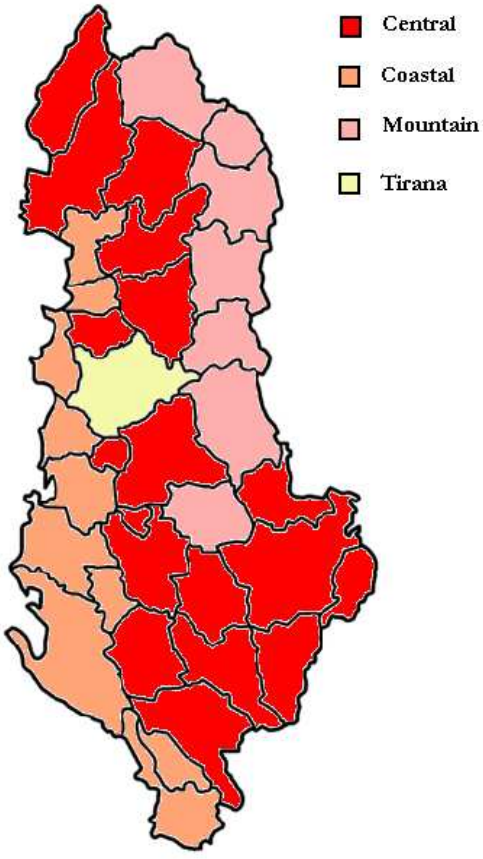
Table 9: Robustness check for Labor Supply - (Adults 22 - 65 years old) - Albania 2005

Dependent Variable: Tried finding job		
Method	Probit	Probit
Model	1	2
HH Receive Remittances	-.046	-.021
	(.012)***	(.012)**
Age		-.004
		(.001)***
Female		-.131
		(.015)***
Married		.033
		(.012)***
Number of Children 0 - 5 Years Old		-.011
		(.009)
Number of Boys 6-17 Years Old		.023
		(.007)***
Number of Girls 6-17 Years Old		.007
		(.007)
Rural Areas		-.105
		(.009)***
Household Size		-.002
		.003
Max. HH Education		.001
		(.003)***
Observations	3253	2911

Note: Robust standard errors are in parentheses. * Statistically different from zero at the .1 level of significance; ** Statistically different from zero at the .05 level of significance; *** Statistically different from zero at the .01 level of significance

Figure 1: Albania Geographically

Map A: Albanian Districts



Map B: Regional distribution of Albania