Familiar Faces, Familiar Places:
the Role of Family Networks and Previous Experience for Albanian Migrants

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Abstract

Using data from the 2003 Albania Panel Survey, the paper sets out to achieve two main objectives. First, we fully characterize the evolution of Albanian international migration since the fall of Communism in 1990. We distinguish between permanent and temporary migration, and between the two principal destinations, Greece and Italy. Second, we explore, using multivariate analysis, what individual, household and community level factors influence the current decision to migrate internationally, focusing on the role of previous personal experience and family networks.

We find evidence of important changes over time in the pull and push factors that drive migration flows. While early on in the transition political and economic factors were predominant, over time personal experience and household migration networks assumed a fundamental role, facilitating growth in migration even in times of the relatively stable economic conditions. Other individual, household, and community factors have an important role in the decision to migrate, and these factors vary by type of migration and destination. Furthermore, the spatial configuration of migration is also changing: both temporary and permanent migration are expanding into new parts of the country.

The results have important policy implications. First, policies aimed at controlling migration are likely to be less effective where networks have already developed or where engrained patterns of repeat migration are established. Second, despite increasing legality, migration, particularly for newcomers, is still difficult, risky and often illegal, which fosters a climate of exploitation and abuse. Third, we find that highly educated individuals have a higher propensity to migrate permanently, which constitutes a serious potential risk in terms of brain drain.

Key Words: International migration, Temporary migration, Permanent migration, Migration networks, Albania.

JEL: F22, P2.

I INTRODUCTION

Until 1990 Albania was almost completely isolated both from the Western world and from other Communist countries. During the communist period (1944-1990), international migration came to a virtual halt, as emigration was officially prohibited and severely punished. Since the fall of the government in 1990, the incidence of international migration has reached almost exodus proportions; in the short sphere of over a decade approximately one fifth of the population has moved abroad. This transition out of communism, while sometimes chaotic, has been relatively peaceful. Neither civil war nor ethnic tensions gave rise to these large demographic flows, which are of great importance to the European Union; in fact, Albania sits on the borders and in particularly close proximity to two member countries, Greece and Italy, the latter of which serves as both a destination as well as a transit point for other countries in the EU. Migration has become the single most important political, social and economic phenomena in post-Communist Albania, and for the last decade has constituted a dominating fact of everyday life. International migration, both seasonal and long term, is the number one economic strategy employed by Albanian households, and remittances have become one of the main engines of economic growth.

The objectives of this paper are twofold. The first is to analyze the evolution of the different types of international migration from Albania since their beginning in 1990. We distinguish between permanent and temporary migration, and between the two principal destinations, Greece and Italy. The second objective is to understand what individual, household and community level factors influence the current decision to migrate internationally. We are particularly interested in analyzing the role of migrant networks and previous personal experience in the decision to migrate, given the relatively short history of Albanian migration. For most Albanians, 45 years of isolation has made migration a relatively new livelihood strategy (one new strategy among many given economic liberalization). Understanding the determinants of the current decision to migrate will provide insight into future trends in international migration, and the relevance of policy interventions to manage and take advantage of that flow.

In our econometric analysis we focus on two decisions relating to international migration. We look first at the determinants of the choice between what we define as temporary and permanent migration. Second, we look at the choice between Greece and Italy and beyond as the countries of destination. The analysis is based on panel data from the 2002 and 2003 Albanian Living Standards Measurement Surveys (LSMS), combined with information from the 2001 Housing and Population Census.

Despite the importance of Albanian migration to both national development and neighboring countries, few studies have analyzed the micro-level determinants of international migration in Albania, and those that have been carried have been hindered by data limitations. Papapaganos and Sanfey (2001) and Castaldo, Litchfield and Reilly (2004) model the intent to migrate, which has a tenuous link with actual migration. Germinji and Swinnen (2003) use 2000 data on rural households to model the decision to migrate. Their sample is limited to rural households and their analysis is missing important variables such as on migration networks and previous migration histories. Germenji, Beka and Sarris (2001) use the same data to estimate a remittance function. De Coulon and Pirocha (2003) use 1998 data, not representative at the national level, to analyze

the issue of the performance of return migrants to Albania, and to determine whether migrants are negatively or positively selected.

The paper is organized as follows. Section 2 reviews economic theories of migration in order to lay the foundation for our econometric analysis of the decision to migrate. Here, we also explain our definition of temporary and permanent migration. Section 3 discusses the recent evolution of international migration in Albania. Section 4 describes the characteristics of temporary and permanent migrants, as well as characterizes the experience of temporary migrants abroad. Section 5 describes the evolution of migration networks in Albania. In Section 6 we model the decision to migrate, and in Section 7 we conclude with some policy recommendations.

II WHY DO PEOPLE MIGRATE? COMPLEMENTARY MODELS OF MIGRATION

In order to structure our econometric analysis of the determinants of migration, we bring together the four strands of migration theory which provide insight to the micro-level migration decision: the neo-classical model, the "new economics of migration," network theory, and cumulative causation theory[1].

Neo-classical models view migration as the result of a cost-benefit analysis carried out at the individual level (Sjaastad, 1962; Todaro, 1969; Harris and Todaro, 1970). Potential migrants compare differential income and cost of migrating and moves if the decision produces a positive present net value. Differential income depends on wages, the unemployment rate, and the manner in which human capital is valued in domestic and foreign labor markets. For example, if human capital transfers abroad imperfectly, individuals with higher levels of education may decide not to migrate (Taylor, 1987). Another factor is the probability of success and cost of migration, i.e. will the individual be able to reach her destination and at what cost, and will she manage to stay there as long as she wishes. This depends on government policy and in the case of undocumented migrants, the probability of being caught and deported. If the potential migrant wishes to return home, return costs must also be factored in. Taken together, the fundamental implications of the neo-classical approach are that migration is driven by income differentials between different countries and by the cost (and probability of success) of moving, considered separately by each individual, given their particular characteristics.

Under the **"new economics of migration"** (Stark and Bloom, 1985; Stark, 1991) the migration decision becomes a joint household decision, in which both remaining household members and the migrant share the costs and returns to migration and in which migration is part of a larger household economic strategy. Under this framework, migration is used as a mechanism to diversify economic activities in the face of risk and obtain liquidity and capital in the presence of credit and insurance market failures. One implication of this view is that economic activities at home and abroad are not necessarily substitutes; they may be complements, if engaging in some kinds of business at home requires dealing with risk in a way that migration can best provide.

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[1] A succinct review of micro and macro level theories of migration can be found in Massey et al (1993).

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The new economics of migration also identifies relative deprivation as another cause of migration (Stark et al., 1986, 1988; Stark and Taylor, 1987, 1989). Under this view, households care for their relative economic position with respect to other families in the same community. A given possible increase in income from migration represents a stronger incentive for a family which is poorer with respect to the rest of the community. This also implies that, given household income, the incentive to migrate for families at the bottom of economic ranking will be stronger if the distribution of resources in the community is more unequal.

The network theory of migration focuses on the role of social relationships in the migration decision (Boyd, 1989), while the cumulative causation theory argues that each instance of migration alters the individual, household and community socio economic context within which subsequent migration decisions are made (Massey et al., 1993). Both these theories are dynamic in nature. Previous migration by other household members, relatives, friends, or other members of the community may influence the individual and household decision to migrate. These migrant "networks", which develop over time, are often viewed as a form of social capital (Massey et al., 1994) which influence the migration decision by increasing expected returns and reducing costs and risk associated with migration. This occurs through the provision of direct assistance (cash, food, housing and transport), information on job opportunities and border passage and even a cultural or social predisposition to migration. The growth of networks, combined with a transformation of the socio-economic context, may result in that at some point migration flows are explained mainly by network and no longer by the conditions that had originated them, so that control policies are much less likely to be effective.

We bring these theories together in our conceptualization of the decision to migrate in Albania, both by type of migration and destination. These include the individual characteristics suggested by neo-classical theory, the household characteristics, assets, economic strategy and relative position within the community from the new economics of migration, and the importance of networks and previous migration experience from network and cumulative causation theories. Each of these factors may have a differential – and changing over time – impact on the type of migration or destination. Macroeconomic push and pull factors are also undoubtedly important. However, while macroeconomic trends and shocks affect households differently, depending on market exposure, relative income position, skills and assets, economy-wide push and pull factors cannot be modeled with our data, since they are experienced by all households.

i. Work versus non-work migration

An important issue is that of differentiating between work and non-work migration. The former is supposedly driven by economic factors, while the latter – mostly due to marriage cum migration – follows different dynamics. However, non-work migration can also have economic determinants. Rosenzweig and Stark (1989), using data from India, show how the marriage of daughters is an implicit household risk management strategy, consistent with the theory of the new economics of migration. Therefore, non-work migration may also have economic content. Families may influence marriage choices in order to obtain a better management of income variation risks, or husbands and wives may make a joint decision to migrate for economic reasons, with the male migrating first and the wife following. Whatever the reason, husband and wife (and family) migration is particularly characteristic of Albanian migration compared to other countries from the Balkans. Figuring out the gender-family dynamic in Albanian migration is an

important topic for anthropological research. In any case, in the descriptive part of the paper we do not distinguish between work migration (the majority of cases) or non work. In the econometric analysis, we test to see if the two kinds of migration can statistically be analyzed together or require separation, and proceed accordingly.

ii. Definition of different types of migration

We focus on two different aspects of the migration decision: destination and duration of migration. The first issue is straightforward. An individual can choose to migrate to a given country, or to not migrate at all. Greece and Italy are the top two destinations, although migrants also chose a smaller number of countries further a field in Europe or in North America. Given the relatively small number of observations of these latter destinations, we grouped other European and North American destinations with Italy. Given distance and cost considerations, we considered migration to these countries more akin to migration to Italy than Greece. We separate out these destinations, however, in some of the descriptive tables of historical migration that follow.

To properly characterize migration decision according to the duration dimension, and distinguish between temporary and permanent migration, is more complicated. Other studies have differentiated temporary from permanent (or circular from non circular) migration either by time abroad or by intention of the migrant (see, for example, Djamba, Goldstein and Goldstein, 1999, and Collinson et al., 2003). Most international migrants want to go back to their home country sometimes in the future. Some actually do, while others end up spending the rest of their life abroad. A person who goes abroad for one month is surely a temporary migrant, but some individuals may spend a significant amount of time abroad and then return. Migrants may go abroad with the intention of staying a short or long time, but initial intention is not often related to eventual actions. It is not immediately clear at what point does a migration episode go from permanent to temporary, and vice versa.

The apparent distinction between temporary and permanent migration conjures up images of the temporality of a migration episode, when in fact we link the definition back to a migrant's status within his or her household, as defined by the LSMS. We consider the question of permanence from the position of the country of origin and define temporary migrants, for the purpose of the econometric analysis, as those adults who have migrated internationally, for at least one month. Temporary migration must be considered current household members at the time of the interview (that is, the informant does not state that they have moved out of the house definitively), and, as a check, they must have spent at least 6 months (one month if the household head) of the previous year residing in Albania, whether or not they are currently (at the moment of the survey) residing in Albania. According to the instructions of the LSMS, these individuals are considered household members, even though 27 percent were abroad at the time of the survey. Conceivably some of these may never return, and thus in future surveys would no longer be considered part of the household and thus permanent migrants. We define as a permanent migrant those who have been declared as leaving the household definitively and have migrated internationally. An additional few individuals considered permanent migrants are those who are filtered at the moment of the residence check described above. Clearly some of these may return in the future, in which case they would cease to be permanent migrants.

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Our hypothesis is that individual, household and community level factors will influence the choice between a temporary or permanent migration episode in a different fashion. We are not modeling return migration, or what the optimal time of return would be, nor how long the migration episode will last, but rather the fact that an individual has taken the decision to leave the household in a definitive manner, as interpreted by the household itself.

Note that our definition of temporary and permanent migration for the descriptive analysis, as well as the explanatory variables, is somewhat different than the one used as dependent variable, since in those cases we are looking back in time and are not interested in what they will do in the future. Temporary migrants are defined as those who spent at least one month abroad since 1990, and are still considered members of the household in 2003. In this case, the episode is done, temporary migrants have already gone and come back (in some cases many times), no matter how long the duration of the episode. Permanent migrants are former family members, particularly children, who have left the household and are currently living abroad. In most cases, they live abroad with spouse and children. They are not considered current members of the household.

III THE EVOLUTION OF ALBANIAN MIGRATION

We have divided the evolution of Albanian migration since 1990 into four periods. Trends over these four periods in first-time temporary and permanent migration, along with growth in real GDP and the unemployment rate, can be found in Table 1 and Figure 1. The first period runs from 1990 to 1992. Emigration was officially prohibited during the period of the communist government (1944-1990). The initial political instability, social unrest and economic downturn associated with the fall of the government led to a surge of international migration. By 1992, according to LSMS data, the number of temporary migrants had reached over 40,000 individuals a year, and a total of 52,000 permanent migrants had left the country, though the total number is probably significantly higher.[2]

In the second period, between 1993 and 1996, the political situation stabilized, and the economy began to grow. Inflation dropped to 10 percent (from a high of 226 percent in 1992), unemployment fell to 12 percent and real GDP grew by 9 percent a year. Despite the return of economic growth and a falling unemployment rate, a number of push and pull factors contributed to the increasing numbers of international migrants observed in Figure 1. These factors include continued poverty and unemployment, shrinking availability of public sector jobs, the slow creation of jobs in the private sector and poor access to public services and infrastructure. Further, significant wage and wealth differentials existed between Albania and its neighbors, Italy and Greece, though falling over time; since 1992, Greek per capita GDP has fallen from approximately 43 to 9 times that of Albania, and Italian per capita GDP from 98 to 16 (Carletto et al., 2004).

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[2] The figures derived from the 2003 LSMS are significantly lower then other sources (see review in Carletto, *et al*, 2004). The LSMS provides data only from the perspective of households still living in Albania. Thus, households that have moved abroad altogether and that no longer have parents living in Albania are not counted.

Further, Albania's financial system was slow to develop, and remittances soon became the principal source of income and financing for the majority of Albanians, and indeed for the country as a whole. By 1992, remittances had already overtaken total exports as the primary source of foreign currency. By the late 1990s, Albania had achieved the highest ratio of remittances to export earnings in the world (1.53), the sixth largest recipient in terms of share of GDP, and fourteenth in terms of remittances per capita (Coppel, *et al.*, 2001 and Gammelhoft, 2002).

The collapse of a series of pyramid 'saving' schemes in late 1996 sparked another surge in international migration, covered in the third period. The pyramid schemes had their origin in a weak formal credit system and a thriving informal market unregulated by the government and fueled in large part by remittances. At the highest point, over 2 million deposits were made in these schemes, representing over half of 1996 GDP, as people sold houses, livestock and other assets in order to invest on the promise of receiving a 40 percent monthly return on investment. The collapse brought down the government and triggered riots in which 2000 people were killed (Jarvis, 1999). Thousands of Albanians fled the country, although many of these migrants were repatriated and a multinational force led by Italy helped restore order and prevent a larger exodus (Pastore, 1998). This period corresponds with the peak of temporary and permanent migration observed in Figure 1, during which time the number of first time temporary migrants jumped sharply to about 117,000 and permanent migrants to over 56,000.

Beyond the traumatic political and social impact, however, the economic effects of the collapse of the pyramid saving schemes were relatively short lived. While inflation rose and GDP fell 7 percent in 1997, in the fourth period from 1999 through 2002 the economy steadily recovered. The return of political stability and economic growth again helped curb and stabilize the migratory outflow, although in 2002 we see somewhat surprising increases in permanent migration. This increase may be due in part to the regularization program in Italy, as well as increased family unification (Bonifazio and Sabatino, 2003) or to an increase in migration flows towards other destinations (Germany, other European countries and North America[3], see Figure 3). IMF data also show an increase in remittances in 2003[4].

Although Albania seems to be walking towards higher incomes and stability, which reduce the incentive to migrate, the gap with the nearby economies of the European Union is still large. Further, as the creation of migration networks and migration experience reduces the costs and increases the success of migration, future flows may be unlikely to fall, even as macro economic incentives are reduced. We explore this hypothesis in more detail below.

IV CHARACTERIZING INTERNATIONAL MIGRATION

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[3] In 2002 Canada started a major visa program for (educated) Albanians.

[4] We are aware that none of these arguments is fully convincing, thus we cannot categorically rule out that this increase is an artifact of recall bias.

Between 1990 and 2003, 55 percent of Albanian families currently residing in the country had engaged in some kind of international migration. Of these households, 42 percent experienced temporary migration only, 44 percent experienced only permanent migration and 14 percent experienced both. Overall, 13 percent of the adults currently living in Albania have migrated internationally for at least one month since 1990. Nationally, this figure corresponds to 293,000 individuals. Temporary migration has been carried out by 32 percent of households (about 238,000)[5]. Approximately 85 percent of households with temporary migration concentrate all experience in a single member, with 13 percent in two members and 2 percent in three or more. On the other hand, over a third of Albanian families currently have at least one former household member living abroad. Strikingly, only 56 percent of the 2,482 children of the head of the household or spouse who are no longer living with the family are currently still in Albania.

In line with our initial hypothesis, temporary and permanent migration appear to reflect different phenomena, as shown by the contrasting demographic characteristics of migrants, destinations and location of origin. Permanent migrants (at the time of leaving home) tend to be younger then first-time temporary migrants, better educated and much more likely to be female, with all of these trends maintaining over time (Tables 2 and 3). Focusing on the last period, a higher share of permanent migrants hail from the Coastal region, while a disproportionate share of first-time temporary migrants come from the Central and Mountain regions.

For both temporary and permanent migrants important shifts can be observed over time. First-time temporary migrants are increasingly less educated. The share of migrants with less then 8 years of schooling doubled from 4 percent to 9 percent, remaining however below the share in the whole population (25 percent). First-time migrants with a complete primary education increased their share from 56 percent in 1990-92 to 62 percent (with respect to 45 percent in the whole population), while the share of migrants with secondary education decreased from 36 percent to 26 percent. Second, first-time temporary migration is increasingly from the Mountain region, moving from 1 percent in 1990-1992 to 18 percent in 1999-2002. This may help explain why the level of education of first-time temporary migrants has decreased over time, as an increasing share of migrants come from the more backward regions of the country. The contribution of the Coast has decreased from 36 to 26 percent, as well as from the Center (57 to 49 percent), though the latter is still responsible for the largest flow among regions.

Similar trends are found among permanent migrants. First, permanent migrants are less educated (at the moment of migration) over time. The share of permanent migrants with a complete primary education increased from 47 to 57 percent, while the share with secondary education decreased from 45 percent to 34 percent. The share with higher education increased from 5 to 7 percent between 1990 and 2002, after reaching 11 percent in 1997-98. The share of permanent migrants with higher level education is the same as in the remaining general population,

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[5] Carletto *et al*. (2004) find that 7 percent of individuals and 18 percent of families experienced temporary migration between 1997 and 2001. The higher figure estimated in this paper with 2003 LSMS data is due both to the wider time interval considered (since January 1990) and to the fact that all episodes above one month of length are now taken into account, while the first round of the LSMS (2002) asked about three months or more. Evidence from the second round of the LSMS shows that migration episodes lasting less than three months account for 21 percent of the total.

indicating a slowing down of a feared brain drain, a proposition we will formally test in the econometrics section. Second, permanent migration is increasingly from the Mountain region, moving from 1 to 9 percent in 1999-2002. The contribution of Tirana decreased from 13 to 11 percent and the Coast from 46 to 40 percent, while the Center's remained the same at 40 percent. The share of women among permanent migrants has increased from 26 to 33 percent, reaching a high of 45 percent in 1997-98.

In 2002, most permanent migration was work related, as seen in Table 4. However, 90 percent of males migrated for work reasons, while only 33 percent of women did so for the same reason. Instead, the majority of women migrated for marriage, cohabitation or to set up their own home. Equal shares across gender lines (7 percent) migrated to study abroad.

First-time temporary migrants chose Greece as their destination in 79 percent of cases, Italy in 13 percent, and other destinations in the remaining 8 percent of cases (Germany 2 percent, other European countries 5 percent, USA and other extra-European countries 1 percent). However, the popularity of Greece among first-time migrants decreased over time from virtually 100 percent in 1990 to a minimum of 63 percent in 2002, as can be seen in Figure 2. Italy was chosen with increasing frequency, with a first peak of 19 percent in 1996, up to a maximum of 29 percent in 2000, decreasing to 22 percent in 2002. The data show that Italy was chosen in very few cases in 1992-93 and that a second fall was experienced from 1997 to 1999. The popularity of other European and non-European destinations increased over time, accounting for 16 percent of cases in 2002. While 47 percent of temporary migrants left Albania only once, 53 percent repeated migration more than once since 1990 and about 20 percent (of the total) migrated more than five times. Migration was more often repeated when the first destination was Greece (57 percent) than when towards Italy (33 percent) and other destinations (39 percent).

Looking at the characteristics of temporary migrants by destination, in Tables 5 and 6, first time migrants to Greece are younger and have a lower level of education then those that migrate to Italy. Households with migrants to Italy are wealthier then those with migrants to Greece, or with no migrants at all, with significantly higher levels of consumption. In terms of destination by location of origin, migration from Tirana and the urban Center is characterized by a higher share going to Italy and farther. This share increases remarkably in 2002 from Tirana and the urban Coast, with three migrants out of four from the Capital city going to Italy or farther.

In contrast to temporary migrants, permanents migrants overall have chosen Italy and other destinations over Greece, as can be seen in Figure 3. Overall, 43 percent of migrants live in Greece, and 57 percent in Italy or elsewhere (with Italy accounting for approximately two-thirds of this number). Clearly, since 1990 the younger generations more and more chose to live abroad, and these migrants increasingly prefer Italy. After a brief setback in 1993, perhaps a response to the negative publicity in Italy towards Albanian migration in this period, the share of children leaving home that decide to migrate to Italy is now greater then the share that remain in Albania. Among those that have remained in Albania, 12 percent have had experiences of international migration in the past, mainly in Greece.

The majority of those currently abroad live with their spouse (61 percent) and children (54 percent). Most of the remaining permanent migrants are not married and do not have children. Of those that are married, only a few migrated without the spouse (5 percent) and children (5

percent), which supports our definition of permanent migration. Approximately 55 percent of individuals living abroad send remittances to the family of origin; of these, 68 percent send cash only, 3 percent send only in-kind remittances and 29% send both kind[6]. These numbers are roughly similar to those found by Cavounidis (2004) in her study of legal Albanian migrants in Greece. She found that 48 percent of Albanians living in Greece remitted, which represented the lowest propensity among all Balkans nationalities in Greece. She attributed this to the tendency among Albanians to migrate with the spouse and children.

Comparing the characteristics of permanent migration by destination, in Tables 7 and 8, permanent migrants to Italy have a higher level of education than migrants to Greece, while gender and age characteristics are similar. As with temporary migrants, households with permanent migration to Italy have higher levels of per capita consumption. In terms of destination by location of origin, in Table 8, little spatial differentiation is evident, with the exception of Tirana, urban Coast and urban Mountain, which are primarily oriented towards Italy and farther destinations.

i. The experience of temporary migrants

The vast majority of temporary international migration is illegal. Overall, since 1990, migration was reported as being legal in only 32 percent of the cases, although this share increased steadily from 10 percent in 1990 to 47 percent in 2002. Legal migration was less frequent towards Greece (overall 28 percent of cases) than towards Italy (44 percent), although again for both countries the share of legal migration episodes steadily increased from 1990 to 2002.

In over 92 percent of first time temporary migration episodes, the motivation behind migration was work related. As seen in Table 9, more then 84 percent of these migrants found work; this share was somewhat higher in Greece (85 percent) then in Italy (77 percent). In only 19 percent of these cases was the work legal. All of these shares are stable over the entire 1990-2002 period. However, for repeat migrants in 2002-2003, 95 percent found work, and 65 percent legal work. Overall, among those who worked, the main occupation was as skilled agricultural and fishery workers (39 percent, mainly market gardeners and crop growers), followed by construction workers (building finishers (18 percent) and bricklayers (12 percent)) and by unskilled transport laborers and freight handlers (13 percent). Again, these percentages have remained constant since 1990, as seen in Table 9.

Useful information about where to go and how to find work was provided more often by friends than by other family members (67 percent versus 16 percent). As family network expanded, information from family members became more important over time, going from 9 percent in 1990-1992 to 23 percent in 1999-2002. However, in most cases the family was the main source of money necessary for migration (67 percent of cases versus 17 percent in which migration was self-financed by previous savings of the individuals and 12 percent in which money was provided by friends). These shares remain stable over time, although repeat migrants in 2002 report a much higher share of information and financing deriving from their own resources.

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[6] The likelihood of receiving remittances decreases as family ties grow more distant, with remittances being sent by one sibling (of the household head) out of five, one grandchild out of twenty and one nephew out of forty-two.

Overall, 40 percent of individuals were detained by the police during their first migration experience (43 percent in Greece, 33 percent in Italy) and 39 percent were forcibly returned to Albania (43 percent in Greece, 28 percent in Italy), as can be seen in Table 10. Among repeat migrants these numbers are much lower. Only 8 percent were detained in 2002, compared with 28 percent of first-time migrants during the same period, and only 6 percent were returned. Not finding work, being detained by the police or being forcibly returned to Albania does not seem to deter migrants. Few differences are found between the average number of migration episodes and whether a migrant found work, was detained, or was returned during their first migration experience, as can be seen in Table 11.

V MIGRATION NETWORKS AND PREVIOUS EXPERIENCE

An overwhelmingly majority of Albanian households has an familial connection with international migration. As can be seen in Table 12, by 2002, 12 years after the opening of Albania's borders, over half of all households had a direct (current or former household member) experience with international migration. Most of this experience is specialized by type of migration, but approximately 6 percent of households experienced both permanent and temporary migration. Further, one family out of two has at least one sibling of the household head living abroad, three out of four have at least one nephew of the head abroad, one out of two have at least one cousin and one out of five at least one grandchild. Only one family out of ten does not have any of these relatives of the household head living abroad. Cavounidis (2004) finds that 60 percent of Albanians in Greece had a relative there prior to their arrival, and another 15 percent had no family but an acquaintance or friend.

Thus, particularly for temporary migration, "new" migration households are hard to find. Table 13 disaggregates temporary migration by year, classifying migrants' households by experience of temporary and permanent migration before that year. By 1994, for those households engaging in temporary migration that year, only 34 percent had no previous migration experience; which was almost exclusively previous temporary migration. The share of temporary migrants' households with no previous migration experience reached a low of 8 percent in 2001. Overall, by 2002, very few temporary migrants came from households new to migration. Further, over time, the share of temporary migrants' households with previous permanent migration experience steadily increased, reaching 25 percent in 2002.

Table 14 presents analogous evidence with reference to permanent migrant households only. The trends are similar, though for permanent migrants, previous experience is not as pervasive. In 2002, almost half of households with a member migrating permanently in that year did not have any previous migration experience, temporary or permanent. Among the others, 40 percent had temporary migration experience and 60 percent percent had only permanent experience by another household member. The period when the share of households with previous experience – among those with permanent migration – was highest is 2000-2001.

VI   ECONOMETRIC ANALYSIS OF THE DECISION TO MIGRATE

Referring to our earlier discussion of micro theories of migration, we carry out the econometric analysis at the individual level, while controlling for household and community level characteristics. The panel data set is made by 1,735 households in 2002, which become 1,778 in 2003 because of some cases of splitting, for a total of 5,511 adult individuals. Of these, 5,427 adults remain in Albania in 2003, while 84 leave the household permanently and migrate between the first and the second round of the survey[7]. These are our permanent migrants in the econometric analysis. Further, the sample comprises 230 cases of temporary migration.

Individuals migrated for work reasons in 213 of the 230 cases of temporary migration and 52 of the 84 cases of permanent migration. Though both work and non-work migration can be driven by economic causes, as discussed in the theoretical section, we need to address the problem related to the possibility of grouping them in the econometric analysis. Both the Wald and the Likelihood Ratio test reject this possibility, implying that statistically the two kinds of migration need being treated separately. Most variables affect work and non-work migration similarly, but gender, age and regional location have different effects. As we observe a limited number of non-work migration cases, we cannot sensibly analyze the phenomenon econometrically. Therefore, we focus on work migration only[8].

Since permanent migrants are not surveyed in 2003, having left the household and no longer considered a member of the family, we do not have the information from the 2003 LSMS migration module. For these individuals, information is limited to the period 1997-2001 as collected by the 2002 LSMS. Therefore, we perform a two part regression analysis by type of migration. First, we perform a multinomial logit analysis of the decision of temporary versus permanent migration. In this case, all 5,511 individuals are considered and information on temporary migration experience is limited to the period 1997-2001. For the migration model by destination, we estimate the multinomial logit in the same fashion. Second, we perform a more detailed analysis of temporary migration exploiting only the 2003 sample, for which the whole history of migration since 1990 is available.

We thus estimate the following three models:

$$M_i = b_0 + b_1 * X_i + b_2 * E_{97-01i} + b_3 * N_i + u_i \quad i=1, 2, \ldots, 5511$$
$$D_i = b_0 + b_1 * X_i + b_2 * E_{97-01i} + b_3 * N_i + u_i \quad i=1, 2, \ldots, 5511$$
$$P_i = b_0 + b_1 * X_i + b_2 * E_{90-01i} + b_3 * N_i + u_i \quad i=1, 2, \ldots, 5427$$

where:

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[7] The cases of individuals leaving the household permanently are 143. Of these, 84 migrate, 52 remain in Albania and are successfully tracked by the LSMS 2003 (and surveyed in their new household) and 7 are lost.

[8] Results of the estimation for all kinds of migration (with work and non-work cases combined) can be found in the Appendix.

- *M* is the dependent variable for the multinomial logit analysis of the type of migration, which has value 0 if the individual does not migrate for work between January 2002 and May 2003, 1 for temporary migrants and 2 for permanent migrants;
- *D* is the dependent variable for the multinomial logit of the destination of migration, which has value 0 if the individual does not migrate, 1 if she migrates (either temporarily or permanently) to Greece and 2 if she migrates to Italy or farther;
- *P* is the dependent variable for the probit analysis, which has value 0 if the individual does not migrate temporarily between January 2002 and May 2003, 1 if she migrated temporarily;
- *X* is a vector of individual, household, and community characteristics. The vector *X* includes the same variables for the probit and for both multinomial logit analysis;
- *E* is a vector characterizing the temporary migration experience of the individual and of other adult household members. As mentioned, the reference period is different in the Probit model, as we are able to use migration events dating back to 1990; and
- *N* is a vector of variables expressing the permanent migration networks.

In all regressions we account for autocorrelation among observations in the same household by correcting the estimation of the standard errors through the command cluster in Stata (which also corrects for heteroscedasticity).

The vector X includes a number of control variables, all obtained from the first round of the LSMS, i.e. prior to the migration decision. Individual demographic characteristics include age (expressed by three dummy variables, with omitted category for "45 and older") and gender.

Individual education, a proxy for human capital, is expressed by three dummy variables for primary, secondary and university degree (the omitted category is "less than primary education"). The effect of education on migration could be either positive or negative, depending on the relative returns to education in the domestic and foreign labor markets and on the kind of migration (legal or not, temporary or permanent). Previous studies on Mexico to US migration show that the returns to education were positive on the internal labor market, but null at destination (Taylor, 1987). This is due to the fact that migrants, in particular if illegal and with no working visa, are often employed in elementary occupations (Stark and Taylor, 1989). However, a minimum level of education may be necessary in order to handle the challenge of international migration.

Household human capital is expressed by the numbers of other adult members with primary, secondary and university education (excluding the individual to which the dependent variable refers).

Household demographics include family size, age of the head of household, a dummy for female headed household, and composition in terms of number of (other) members classified by age and gender. The number of children in the family might affect migration decisions. A family with young dependents might need more resources and this might increase the probability of migration. On the other hand, this migration will only be possible if the structure of the family ensures the possibility to take care of those who remain.

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For household assets, we use the pre-migration value of dwelling durables, two dummies indicating ownership of agricultural and non-agricultural business durables, land size and number of heads of cattle and sheep. Assets may provide the resources initially necessary for migration. Furthermore, productive assets may be invested in activities complementary with migration. Conversely, such activities may require the presence of adult family members or be positively associated with wealth, which could make migration unnecessary.

Among the explanatory variables we also include an index of household relative deprivation, which measures the relative welfare position of the household with respect to other families living in the same village. Following Stark and Taylor (1989), relative deprivation is measured by the product of the mean excess wealth of households wealthier than household i and the proportion of households in the community that are richer than household i; it can be expressed as follows:

$$RD_i = \left(\frac{\sum\limits_{y^j > y^i} [y^j - y^i]}{\sum\limits_{y^j > y^i} 1} \right) \cdot \left(\frac{\sum\limits_{y^j > y^i} 1}{N} \right) = \left(\frac{\sum\limits_{j=1}^{N} [\max(0, (y^j - y^i))]}{N} \right)$$

where $i, j = 1 \ldots N;$
N = number of households in the community;
y^i = household i's wealth[9].

If migration is correlated with poverty, it is likely that not only how poor a household is matters, but also the relative poverty with respect to the neighboring households. If a family experiences a high relative deprivation, the incentive to migrate in order to acquire resources and climb the social ladder is expected to be higher (Stark and Taylor (1989), Winters et al. (2001)).

The characteristics of the local labor market are modeled as shares of jobs in industry, construction and services in the community (excluded is agriculture) as well as the community unemployment rates. The latter are based on data from the 2001 Population Census. The role of geographical location is expressed by three regional dummies for Coast, Center and Mountains (excluded category is the capital city Tirana) and by a dummy for rural areas.

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9 The following procedure was followed: (a) a set of variables representing demographic composition, physical and human capital assets was prepared both for the LSMS families and for the Census of all Albanian households; (b) in the Census, all the families living in the same villages containing at least one LSMS enumeration area were kept; (c) the two dataset were appropriately integrated (some community variables surveyed in the LSMS were reported to the Census families, even if they had not been surveyed in the Census) and appended; (d) factor analysis was applied to all the families in order to create a Score representing an index of wealth; (e) in each village, the index of relative deprivation was calculated, based on the wealth Score; (f) only the LSMS families were kept for the rest of the analysis. The factor analysis which produces the index of wealth for each family is based on family size, demographic structure, characteristics of the head of the household, education, engagement in agricultural activities, work activities, household unemployment rate, dwelling characteristics, assets, community characteristics, regional location, migration networks.

The role of household permanent migration networks is captured by the following variables, which vary by equation:[10]
o <u>For the probit of temporary migration and the type of migration multinomial logit</u>:
   ▪ Three variables indicating the number of the children of the head and spouse who had migrated abroad permanently before 1997, between 1997 and 1998 and between 1999 and 2001. The information and resources provided by these networks are expected to reduce the potential cost of migration, as well as increase the possibility of success.
o <u>For the destination of migration multinomial logit</u>:
   ▪ The same three variables indicating the number of the children of the head and spouse who had migrated abroad permanently before 1997, between 1997 and 1998 and between 1999 and 2001, but with each further disaggregated by current location in Greece and Italy, for a total of six variables.

Permanent migration experience of extended family members is expressed by four variables indicating the number of siblings, cousins, nephews and grandchildren of the head of the household and spouse, who migrated before 2002.

Previous temporary international migration experience is modeled in the following fashion:
o <u>For the probit of temporary migration</u>:
   ▪ Four dummies for previous individual experience of temporary migration, divided by the year of the first episode (1990-92, 1993-96, 1997-98 and 1999-2001), and four dummy variables for the number of individual migration episodes (two, three, four and five or more). The excluded option is no migration.
   ▪ Total duration of previous individual experience (logarithm of the number of months).
   ▪ Two dummy variables indicating experience in temporary international migration by other adult members of the household (a single episode or "two or more").
   ▪ Total duration of experience by other adult members.
o <u>For the type of migration multinomial logit</u>:
   ▪ One dummy variable indicating previous individual experience with temporary migration, in the period 1997-2001.
   ▪ One dummy variable indicating previous experience by other adult members of the family, in the period 1997-2001.
o <u>For the destination of migration multinomial logit</u>:
   ▪ Two dummy variables indicating previous individual experience with temporary migration, in the period 1997-2001, in Greece or in Italy.
   ▪ Two dummy variables indicating previous experience by other adult members of the family, in the period 1997-2001, in Greece or in Italy.

Finally, we control for previous experience with internal migration. In all models, we include a dummy variable indicating if the head of the household was born in a different locality then that of current residence. In the probit of temporary migration we include two additional dummy

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[10] The previous migration experience variables refer to both work and non-work episodes, since both kinds of experience provide information and reduce the cost of new migration.

variables, indicating internal migration by the individual and by other adult members of the household in the period 1990-2001. A significant positive effect of these variables would imply sequencing in migration, with international moves anticipated by internal ones.

i. Analysis of the appropriateness of a multinomial logit model

Two related issues arise with the use of the multinomial regression model. The first is whether the three outcomes in the model (no external migration, temporary migration and permanent migration in one case, and no external migration, migration to Greece and migration to Italy in the other) are distinct or whether any two of the outcomes might be aggregated. The possibility of combining outcome categories depends on whether the variables in the model distinguish between these outcomes in a statistical sense or whether a more parsimonious model may provide just as good a fit. This possibility is rejected using the Wald test, hence our decision to treat each of the three outcomes as distinct in both cases is supported by the data.

The second question raised by the multinomial model is the underlying assumption of the Independence of Irrelevant Alternatives (IIA); that is whether the odds of outcomes in the model do not depend on other available choices. In both cases, the Hausman[11] fails to reject that the IIA assumption holds.

ii. Results

ii.1 Migration by type

We look first at the probit of the decision to migrate temporarily. Individual-level demographic characteristics, education and previous migration experience are the most important determinants of the decision to migrate, as can be seen in Table 15. First, younger males with medium levels of education (completed primary and secondary) have a higher probability of temporary migration, confirming what we had seen in the descriptive statistics. Second, the greater the number of previous migration episodes and the longer the time spent abroad, the higher the current probability of migration; this decreases if the first migration episode took place farther back in time. This can be seen graphically in Figure 4[12], which analyzes the (predicted) probability of temporary migration in 2002 as a function of the number of previous temporary migration spells and of the period in which this experience started – under the simplifying assumption that all temporary migrants spent the same amount of time abroad (the sample mean among migrants). An individual with 5 or more previous migration episodes who migrated for the first time in 1999, has a 67 percent probability of migrating in 2002, compared to an individual with no previous migration history. The corresponding probability for a first time migrant in 1990-92 (with five migration episodes) is 4 percent (slightly higher than the value for an individual with a single but recent episode).

On the other hand, neither the previous migration history of other current family members, nor the existence of former family members living abroad has any significant impact on the current

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[11] Our tests are based on the mlogtest procedure developed by Long and Freese (2000).
[12] In Figures 4 to 7, the effect of a change in each variable is calculated on the basis of the regression coefficients, keeping other characteristics constant at the sample mean.

decision to migrate temporarily (once controlled for personal temporary migration experience). Further, internal mobility (within Albania) of either the individual or other family members has no impact on the decision to migrate, suggesting that at least with temporary migration, sequencing of migration movements (first internal, then external) is not an issue.

Households of temporary migrants are generally not involved in off farm activities; both the existence at the household level of non agricultural business assets, and a greater share of an array of non agricultural labor activities at the community level, reduce the likelihood of temporary migration. Living in the Mountain region, and in urban areas, increases the likelihood of temporary migration (given all other characteristics).

The results for the multinomial logit of the type of migration are found in Table 16. Here, important differences emerge between temporary and permanent migration. This can be seen visually in Figure 5 where we compare the odds of choosing a type of migration across age groups. The probability of permanent migration is highest among younger adults (aged 15 to 34) and drops after 35, while the probability of temporary migration remains high also in the 35-44 group. Second, while adults with middle levels of schooling have higher odds of migrating temporarily, adults with a university level education have a significantly higher probability of permanent migration. This can be seen in Figure 6. Third, while the likelihood of both kinds of migration is increased by earlier temporary migration, earlier migration by children as well as siblings and other relatives of the head of the household are both associated with an increased likelihood of permanent migration. While the coefficient on only one type of each is significant, each group of migration variables is jointly significant for permanent migration. Thus, migration networks appear to play a role in facilitating permanent migration, but not temporary migration, which appears to be driven primarily by previous personal experience. Fourth, adults living in predominately agricultural communities, with greater amounts of agricultural land at their disposal, are more likely to temporarily migrate. Finally, compared to Tirana, residents of the Mountain region are more likely to migrate temporarily, while residents of Tirana are more likely then all other regions to migrate permanently.

ii.2 Migration by destination

The results for the multinomial logit on the destination of migration are found in Table 17. For the individual and household level variables, the results are similar to the multinomial logit on the type of migration, where moving to Greece equates to temporary migration. Younger individuals, with a higher level of education, have a greater likelihood of migrating to Italy than to Greece. Further, individuals from (relatively) poorer households, with agricultural land, located in predominately agricultural communities have a greater likelihood of migrating to Greece.

On the other hand, migration assets by destination are not necessarily complementary. While a personal history of temporary migration to Greece increases the likelihood of migration to both Greece and Italy, a personal history of migration to Italy decreases the likelihood of migration to Greece, and increases that of migration to Italy, as can be seen in Figure 7. All other migration assets are substitutes. Previous temporary and permanent migration by a family member to a given country increases the likelihood of migration to that country and decreases the likelihood to the other, and vice versa.

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VII. CONCLUSIONS AND POLICY RECOMMENDATIONS

This paper has analyzed the evolution of Albanian international migration since the fall of Communism in 1990 and has investigated the determinants of current flows. We first distinguished by destination, between migration to neighboring Greece as opposed to Italy and other (farther) countries. Second, we classified migration as either temporary or permanent – the former a short-term and periodical and repeated strategy, the latter a longer-term choice. Though this distinction is not so clear cut, we find evidence that they are indeed different phenomenon.

Individual, household, community and network factors all have a role in the decision to migrate, though these vary by kind of migration and destination. Younger, higher educated males are more likely to migrate permanently. Living in Tirana increases the likelihood of permanent migration. Conversely, somewhat older males, with middle levels of education, living predominately in agricultural communities are much more likely to migrate temporarily. These migrants are more likely to come from the Mountain region. These characteristics are mirrored in the choice between Greece and Italy and beyond. Younger, higher educated males are more likely to migrate to Italy than Greece. Individuals from relatively poorer households, with agricultural land, located in primarily agricultural communities, are more likely to migrate to Greece.

Family migration networks, and above all personal experience, play a key role in the decision to migrate. While family networks are a significant determinant in explaining permanent migration, personal temporary migration experience – and the more repeated and recent the better – is the most important factor in explaining temporary migration, and is also important for permanent migration. Further, from the descriptive analysis it is evident that job success and legality improve with repeated experience. Family migration networks and personal experience are location specific, facilitating migration to their respective countries and dissuading migration to the others, with the exception of previous personal migration to Greece, which is a significant determinant of migration to Italy and beyond as well.

Since 1990 migration has become the most important livelihood strategy utilized by Albanian households. Based on our analysis, we believe that international migration is still in the expansion phase and that migration flows will continue at their current rate into the foreseeable future. First, despite the relatively short history of post-communist migration, there is evidence of important changes in the pull and push factors that drive migration flows. While early on in the transition political and economic factors were predominant, over time personal experience and household migration networks have developed and assumed a fundamental role, facilitating growth in migration even in times of the relatively stable and improving economic conditions after 2000. Second, personal experience increases the likelihood of a successful migration spell, and this migration is more often itself legal, employment is more often legal and problems with the police less likely. Repeated migration is therefore likely and restrictive policies become less effective once the phenomenon has developed. Third, both temporary and permanent migration is expanding into new parts of the country. Migration is increasingly important for more poverty-stricken areas in the Mountain region and spreading to poorer and less educated families.

These results have important policy implications. First, policies aimed at controlling migration are likely to be less effective where networks have already developed or where engrained patterns

of repeat migration are established. If the goal is to slow down migration, development policies should focus on those areas like the North-East where international migration is not entrenched, but, as shown by more recent trends, is rapidly growing.

Second, despite increasing legality, the migration experience, particularly for newcomers, is still difficult, risky and often illegal, which foster a climate of exploitation and abuse. It is thus still very important for the Albanian government, as well as for migration advocacy organizations, to press the primary destination countries for increased legalization and regularization of migration flows. Legalizing migration not only reduces exploitation of migrants, but also ironically may facilitate their return home. Illegal migrants are often unable to leave the destination country for fear of not being able to get back.

Third, the finding that university educated individuals have a higher propensity to migrate permanently constitutes a serious potential risk in terms of brain drain. While the remittances generated by permanent migration are key to the economic development of Albania, the country has little future if the best educated leave in disproportionate numbers. The government must find incentives for university educated individuals to stay in Albania, or return home.

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TABLES AND FIGURES

Table 1. Flows and stocks of temporary and permanent migration, 1990-2002

year	First-time temporary migration	Permanent migration, new cases	Permanent migration, total	Real GDP growth	Unemployment rate
1990	4355	12032	12032	-0.10	0.10
1991	22069	23899	35931	-0.28	0.09
1992	45451	18512	54443	-0.07	0.28
1993	63360	19072	73515	0.10	0.22
1994	68661	16088	89603	0.09	0.20
1995	74190	23897	113500	0.09	0.12
1996	82067	28671	142171	0.09	0.12
1997	101219	37071	179242	-0.07	0.15
1998	116941	56135	235377	0.08	0.18
1999	98801	48556	283933	0.07	0.18
2000	98834	49645	333578	0.08	0.17
2001	89813	50773	384351	0.07	0.15
2002	94467	71931	456282	0.06	

Sources: 2002 and 2003 LSMS; IMF, 2002 and 2003.

Table 2. Characteristics of temporary migrants, by year of first migration

	1990-92	1993-96	1997-98	1999-02	1990-02	Non-migrants
Number of observations	120	221	163	161	665	4762
Age at migration (years)	27	29	30	30	29	
Share of females	0.08	0.05	0.15	0.11	0.09	0.59
Share with less than 8 years schooling	0.04	0.05	0.06	0.09	0.06	0.25
Share with primary education	0.56	0.54	0.51	0.62	0.56	0.45
Share with secondary education	0.36	0.36	0.38	0.26	0.34	0.24
Share with higher education	0.04	0.05	0.05	0.03	0.04	0.07
Share from Tirana	0.06	0.06	0.11	0.07	0.07	0.17
Share from Coastal region	0.36	0.28	0.34	0.26	0.30	0.30
Share from Central region	0.57	0.56	0.45	0.49	0.52	0.43
Share from Mountains	0.01	0.10	0.10	0.18	0.10	0.11
Household per-capita consumption in 2002	9321	8286	8419	7498	8314	8218
Share to Greece	0.88	0.80	0.85	0.67	0.79	
Share to Italy	0.08	0.13	0.09	0.20	0.13	
Share to other destinations	0.04	0.08	0.06	0.13	0.08	

Source: 2002 and 2003 LSMS.

Table 3. Characteristics of permanent migrants, by year of migration

	1990-92	1993-96	1997-98	1999-02	1990-02
Number of observations	129	206	221	546	1102
Age at migration (years)	25	26	28	25	26
share of females	0.26	0.37	0.45	0.33	0.35
share with less than 8 years schooling	0.04	0.02	0.01	0.02	0.02
share with primary education	0.47	0.48	0.43	0.57	0.51
share with secondary education	0.45	0.41	0.45	0.34	0.39
share with higher education	0.05	0.09	0.11	0.07	0.08
share from Tirana	0.13	0.09	0.08	0.11	0.10
share from Coastal region	0.46	0.46	0.44	0.40	0.43
share from Central region	0.40	0.43	0.45	0.40	0.42
share from Mountains	0.01	0.01	0.03	0.09	0.05
Household per-capita consumption in 2002	11590	10469	10039	9858	10213
Share to Greece	0.53	0.58	0.43	0.35	0.43
Share to Italy	0.32	0.28	0.34	0.40	0.36
Share to other destinations	0.15	0.15	0.23	0.24	0.21

Source: 2002 and 2003 LSMS.

Table 4. Reason for migrating in 2002, permanent migration, by gender

Reason	Male	Female	Total
Number of observations	41	43	84
Left for job	0.90	0.33	0.61
For marriage or cohabitation	0.00	0.51	0.26
Left to college or university	0.07	0.07	0.07
Left to set up own home	0.00	0.07	0.04
Other	0.03	0.02	0.02

Source: 2003 LSMS.

Table 5. The characteristics of temporary migrants, by destination

	None	Greece	Italy or other	Greece 2002	Italy and other 2002
Number of observations	4762	519	146	180	50
Dummy gender: female	0.59	0.09	0.10	0.06	0.14
Age at first migration	-	28	32	32[a]	38[a]
Education: share with no primary	0.25	0.06	0.07	0.04	0.14
Education: share with primary	0.45	0.59	0.41	0.71	0.42
Education: share with secondary	0.24	0.31	0.46	0.24	0.43
Education: share with university	0.07	0.04	0.06	0.00	0.02
Household head: age (at time of first migration)	-	42	44	49	52
Per-capita consumption in 2002	8218	7944	9653	6912	11252

Source: 2002 and 2003 LSMS. (a) Data referred to all migrants in 2002, not only first time migrants.

Table 6. Intensity of temporary migration, by destination and region

Migration by region	share of migrants any time	share to Greece any time	share to Italy and farther any time	share to Greece in 2002	share to Italy and farther in 2002
Tirana	0.06	0.51	0.49	0.26	0.74
Coast urban	0.12	0.79	0.21	0.64	0.36
Coast rural	0.14	0.76	0.24	0.77	0.23
Center urban	0.14	0.68	0.32	0.68	0.32
Center rural	0.15	0.89	0.11	0.86	0.14
Mountain urban	0.10	0.86	0.14	0.89	0.11
Mountain rural	0.13	0.81	0.19	0.84	0.16
Total	0.13	0.78	0.22	0.78	0.22

Source: 2002 and 2003 LSMS.

Table 7. Characteristics of permanent migrants, by destination

	None any time	Greece any time	Italy or other any time	Greece 2002	Italy and other 2002
Number of observations	1380	471	631	27	57
Dummy gender: female	0.65	0.37	0.34	0.46	0.54
Age (at migration)		26	26	26	26
Education: share with no primary	0.03	0.02	0.02	0.12	0.07
Education: share with primary	0.58	0.58	0.46	0.74	0.51
Education: share with secondary	0.30	0.36	0.41	0.11	0.31
Education: share with university	0.09	0.04	0.11	0.03	0.11
Household head: age (at time of migration)		55	56	49	55
Per-capita consumption in 2002	8832	9657	10635	8026	9661

Source: 2002 and 2003 LSMS.

Table 8. Location of origin of permanent migration, by destination and region.

Migration by region	share of migrants any time	share to Greece any time	share to Italy and farther any time	share to Greece in 2002	share to Italy and farther in 2002
Tirana	0.41	0.17	0.83	0.13	0.87
Coast urban	0.53	0.26	0.74	0.10	0.90
Coast rural	0.47	0.49	0.51	0.50	0.50
Center urban	0.48	0.47	0.53	0.29	0.71
Center rural	0.41	0.55	0.45	0.39	0.61
Mountain urban	0.25	0.14	0.86	-	-
Mountain rural	0.31	0.48	0.52	0.50	0.50
Total	0.44	0.43	0.57	0.32	0.68

Source: 2002 and 2003 LSMS.

Table 9. Characteristics of temporary migration episodes, by year of first migration

	1990-92	1993-96	1997-98	1999-02	overall	first	2002 repeated
Number of temporary migrants	120	221	163	161	665	52	162
% of migrants who found work	84	86	82	83	84	84	95
% of migrants with legal work of those with work	24	15	16	24	19	30	65
% agriculture	34	44	35	39	39	32	44
% construction	30	34	30	25	30	27	36
% transport and freight	15	13	11	15	13	17	9
primary provision of information							
% from family	9	13	19	23	16	26	12
% from friends	72	69	63	63	67	57	44
% from yourself	-	-	-	-	-	12	39
provision of money for migration							
% from family	61	69	72	65	67	59	55
% from friends	9	13	6	17	12	21	8
% from yourself	-	-	-	-	17	16	30

Source: 2003 LSMS.

Table 10. Deportations and forced returns of temporary migrants, by year of first migration

	1990-92	1993-96	1997-98	1999-02	overall	2002 only first	repeated
Number of temporary migrants	120	221	163	161	665	52	162
% of migrants detained	38	46	37	36	40	28	8
% in Greece	42	52	36	39	43	-	-
% in Italy	11	31	48	35	33	-	-
% of migrants returned	31	48	37	35	39	30	6
% in Greece	34	55	40	39	43	-	-
% in Italy	11	28	32	31	28	-	-

Source: 2003 LSMS.

Table 11 – Average number of migration episodes, by experience during first episode

	Average number of migration episodes	Number of observations
Found work		
No	3.1	101
Yes	3.3	512
Detained by police		
No	2.9	402
Yes	3.6	263
Forcibly returned		
No	3.0	410
Yes	3.6	255

Source: 2003 LSMS.

Table 12 – All households, by previous migration experience

Year	Both permanent and temporary	only temporary	only permanent	None
1990	0.00	0.00	0.00	1.00
1991	0.00	0.00	0.01	0.98
1992	0.00	0.03	0.03	0.94
1993	0.00	0.06	0.05	0.89
1994	0.01	0.09	0.06	0.84
1995	0.01	0.12	0.07	0.80
1996	0.01	0.14	0.09	0.76
1997	0.01	0.16	0.11	0.71
1998	0.02	0.19	0.14	0.65
1999	0.03	0.22	0.17	0.58
2000	0.04	0.23	0.19	0.54
2001	0.05	0.23	0.21	0.51
2002	0.06	0.23	0.23	0.48

Source: 2003 LSMS.

Table 13. Household level experience with temporary migration, by previous migration experience

Year	Both permanent and temporary	only temporary	only permanent	None
1990	0.00	0.00	0.00	1.00
1991	0.00	0.14	0.02	0.83
1992	0.04	0.38	0.02	0.57
1993	0.04	0.47	0.01	0.48
1994	0.06	0.59	0.01	0.34
1995	0.08	0.63	0.01	0.27
1996	0.07	0.65	0.01	0.26
1997	0.07	0.62	0.01	0.30
1998	0.08	0.62	0.04	0.26
1999	0.14	0.72	0.03	0.11
2000	0.15	0.69	0.04	0.12
2001	0.19	0.72	0.01	0.08
2002	0.20	0.60	0.05	0.15

Source: 2003 LSMS.

Table 14. Household level experience with permanent migration, by previous migration experience

Year	Both permanent and temporary	only temporary	only permanent	None
1990	0.00	0.00	0.00	1.00
1991	0.00	0.00	0.02	0.98
1992	0.00	0.00	0.26	0.74
1993	0.00	0.03	0.20	0.77
1994	0.00	0.03	0.39	0.58
1995	0.02	0.05	0.27	0.66
1996	0.04	0.04	0.22	0.71
1997	0.02	0.09	0.33	0.56
1998	0.04	0.11	0.33	0.51
1999	0.04	0.09	0.37	0.50
2000	0.04	0.08	0.51	0.37
2001	0.07	0.12	0.44	0.37
2002	0.07	0.15	0.31	0.46

Source: 2003 LSMS.

Table 15. Probit of temporary migration

	TEMPORARY WORK MIGRATION - INDIVIDUAL LEVEL REGRESSION			joint test
		dF/dx	P>|z|	Prob > chi2
Individual	Dummy: age 15-24 (omitted group: over 44)	0.0093	**0.000**	
	Dummy: age 25-34	0.0080	**0.000**	
	Dummy: age 35-44	0.0062	**0.003**	
	Dummy: 8 years of schooling (omitted: no diploma)	0.0030	**0.003**	
	Dummy: secondary education	0.0054	**0.001**	*0.000*
	Dummy: university and above	-0.0017	0.210	
	Dummy: female	-0.0102	**0.000**	
Household	Family size	-0.0010	**0.095**	
	Age of household head	0.0000	0.122	
	Dummy: female headed hh	0.0042	**0.023**	
	Hh: # children aged 0-9 (excl group f >60)	0.0007	0.250	
	Hh: # children aged 10-14	0.0010	0.129	
	Hh: # males aged 15-24 (excluded individual)	0.0013	**0.067**	
	Hh: # females aged 15-24 (excluded individual)	0.0006	0.399	
	Hh: # males aged 25-34 (excluded individual)	0.0010	0.297	
	Hh: # females aged 25-34 (excluded individual)	0.0011	0.219	
	Hh: # males aged 35-59 (excluded individual)	0.0019	**0.077**	
	Hh: # females aged 35-59 (excluded individual)	0.0015	**0.080**	
	Hh: # males aged over 59 (excluded individual)	0.0040	**0.001**	
	Hh: # ind 8years schooling (excluded individual) (excl group no diploma)	0.0002	0.546	
	Hh: # ind secondary education (excluded individual)	-0.0009	**0.075**	
	Hh: # ind university education (excluded individual)	-0.0011	0.319	
	Hh: value of dwelling durables	0.0000	**0.011**	
	Hh: dummy, hh owns non-ag business durables	-0.0015	**0.073**	
	Hh: dummy, hh owns ag business durables (excl. Land and animals)	-0.0002	0.828	
	Hh: size of agr land	0.0004	0.450	
	Hh: size of cattle	-0.0001	0.640	
	Hh: # sheep and goats	0.0000	0.139	
	Household: relative deprivation	0.0012	0.396	
	Household: square of relative deprivation	0.0000	0.916	
Community	Community: share of jobs in industry (excluded agriculture)	-0.0201	**0.030**	
	Community: share of jobs in constructions (excluded agriculture)	-0.0120	**0.078**	*0.005*
	Community: share of jobs in services (excluded agriculture)	-0.0083	**0.095**	
	Community: unemployment rate	0.0057	0.139	
External mig	Individual temp mig exp: log of total duration	0.0037	**0.000**	
	Individual temp mig experience: first episode 1990-1992	-0.0023	**0.000**	
	Individual temp mig experience: first episode 1993-1996	-0.0024	**0.000**	
	Individual temp mig experience: first episode 1997-1998	-0.0021	**0.000**	
	Individual temp mig experience: first episode 1999-2001	-0.0018	**0.050**	
	Individual temp mig exp: 2 episodes	0.0540	**0.000**	
	Individual temp mig exp: 3 episodes	0.1139	**0.000**	
	Individual temp mig exp: 4 episodes	0.1625	**0.000**	
	Individual temp mig exp: 5 or more episodes	0.3116	**0.000**	
	Other adults temp mig experience: 1 episode	0.0033	0.170	
	Other adults temp mig experience: 2 or more episodes	0.0028	0.208	0.331
	Other adults temp mig experience: log of total duration	-0.0002	0.603	
	Hh: permanent migration. Number of children since before 1997	0.0003	0.696	
	Hh: permanent migration. Number of children since 1997-1998	0.0002	0.809	0.925
	Hh: permanent migration. Number of children since 1999-2001	-0.0002	0.682	
	Hh: permanent migration. Number of head's siblings before 2002	-0.0001	0.542	
	Hh: permanent migration. Number of head's nephews before 2002	0.0000	0.934	0.860
	Hh: permanent migration. Number of head's cousins before 2002	0.0000	0.263	
	Hh: permanent migration. Number of head's grandchildren before 2002	0.0000	0.743	
Internal mig	Individual internal migration experience 1990-2001	0.0018	0.594	
	Other adults internal migration experience 1990-2001	-0.0015	0.312	
	Hh: head not born in current locality (internal migration)	0.0001	0.855	
Region	Dummy: costal region	0.0025	0.280	
	Dummy: central region	0.0018	0.348	0.008
	Dummy: mountain region	0.0072	**0.059**	
	Dummy: rural	-0.0088	**0.020**	
	Constant	-	-	
	N. observations	5427		
	Pseudo-R2	0.5759		

Table 16. Multinomial logit analysis of temporary and permanent migration

	TEMPORARY AND PERMANENT WORK MIGRATION	Temp.		Perm.		Joint test		perm vs.
		beta	P>|z|	beta	P>|z|	Temp	perm	
Individual	Dummy: age 15-24 (omitted group: over 44)	1.2905	**0.000**	2.0277	**0.001**			0.278
	Dummy: age 25-34	1.7540	**0.000**	2.2175	**0.000**	*0.000*	*0.000*	0.491
	Dummy: age 35-44	1.6201	**0.000**	0.3539	0.594			*0.088*
	Dummy: 8 years of schooling (omitted: no diploma)	0.9907	**0.003**	0.9083	0.164			0.912
	Dummy: secondary education	1.1921	**0.002**	1.5015	**0.017**	*0.002*	0.055	0.676
	Dummy: university and above	-0.7325	0.460	1.7743	**0.031**			0.057
	Dummy: female	-3.0701	**0.000**	-1.3532	**0.002**			
Household	Family size	-0.3487	**0.061**	-0.2560	0.538			
	Age of household head	-0.0160	**0.064**	-0.0061	0.699			
	Dummy: female headed hh	1.0392	**0.001**	1.2037	**0.013**			
	Hh: # children aged 0-9 (excl group f >60)	0.3718	**0.072**	-0.2260	0.671			
	Hh: # children aged 10-14	0.1606	0.404	0.5792	0.208			
	Hh: # males aged 15-24 (excluded individual)	0.4169	**0.074**	0.3679	0.515			
	Hh: # females aged 15-24 (excluded individual)	0.5014	**0.041**	0.4081	0.400			
	Hh: # males aged 25-34 (excluded individual)	0.2417	0.421	0.6655	0.202			
	Hh: # females aged 25-34 (excluded individual)	0.4320	**0.090**	0.1548	0.754			
	Hh: # males aged 35-59 (excluded individual)	0.6548	**0.043**	0.1326	0.807			
	Hh: # females aged 35-59 (excluded individual)	0.5491	**0.027**	0.0986	0.826			
	Hh: # males aged over 59 (excluded individual)	1.4873	**0.000**	1.0222	0.109			
	Hh: # ind 8years schooling (excluded individual) (excl group no diploma)	-0.0957	0.360	-0.0708	0.759			
	Hh: # ind secondary education (excluded individual)	-0.3060	**0.035**	-0.2449	0.278			
	Hh: # ind university education (excluded individual)	-0.4158	0.312	-0.0985	0.828			
	Hh: value of dwelling durables	-0.0013	**0.037**	0.0001	0.892			
	Hh: dummy, hh owns non-ag business durables	-0.7361	**0.070**	-0.0757	0.925			
	Hh: dummy, hh owns ag business durables (excl. Land and animals)	-0.2206	0.351	-0.0340	0.955			
	Hh: size of agr land	0.3581	**0.018**	0.2795	0.464			
	Hh: size of cattle	-0.0689	0.327	-0.1183	0.612			
	Hh: # sheep and goats	-0.0083	0.318	-0.0300	0.471			
	Household: relative deprivation	0.0330	0.931	1.5704	0.106	*0.029*	0.269	
	Household: square of relative deprivation	0.1466	0.249	-0.5832	0.127			
Community	Community: share of jobs in industry (excluded agriculture)	-2.4382	0.264	-2.3405	0.590			
	Community: share of jobs in constructions (excluded agriculture)	-4.3149	**0.039**	2.4623	0.542	*0.001*	0.880	
	Community: share of jobs in services (excluded agriculture)	-3.6444	**0.002**	0.1510	0.908			
	Community: unemployment rate	0.9708	0.333	1.4812	0.529			
External mig	Dummy individual temp mig exp 1997-2001	1.6402	**0.000**	1.3168	**0.000**			0.401
	Dummy temp mig exp by other adults 1997-2001	0.5046	**0.041**	-0.0395	0.925			
	Hh: permanent migration. Number of children since before 1997	0.1164	0.603	0.3723	0.162			
	Hh: permanent migration. Number of children since 1997-1998	-0.1547	0.551	0.9235	**0.003**	0.886	*0.009*	
	Hh: permanent migration. Number of children since 1999-2001	-0.0086	0.965	-0.3142	0.480			
	Hh: permanent migration. Number of head's siblings before 2002	0.0043	0.883	0.1041	**0.011**			
	Hh: permanent migration. Number of head's nephews before 2002	-0.0017	0.850	0.0132	0.311	0.640	*0.014*	
	Hh: permanent migration. Number of head's cousins before 2002	0.0156	0.155	-0.0178	0.395			
	Hh: permanent migration. Number of head's grandchildren before 2002	-0.0152	0.568	-0.0391	0.544			
Internal mig	Hh: head not born in current locality (internal migration)	-0.0308	0.890	-0.3257	0.405			
Region	Dummy: costal region	0.6464	0.285	-1.8914	**0.008**			
	Dummy: central region	0.9248	0.120	-1.8881	**0.015**	*0.000*	0.057	
	Dummy: mountain region	1.5991	**0.008**	-1.4397	**0.079**			
	Dummy: rural	-2.1488	**0.001**	0.9143	0.230			
	Constant	-2.3449	**0.050**	-6.3582	**0.000**			
	N. observations	5511						
	Pseudo-R2	0.3496						

Table 17. Multinomial logit analysis of destination of migration

	WORK MIGRATION – INDIVIDUAL LEVEL REGRESSION	Greece		Other dest.		Joint test		Greece
		beta	P>|z|	beta	P>|z|	Greece	Oth dest	Vs oth dest
Individual	Dummy: age 15-24 (omitted group: over 44)	1.2998	0.001	2.2247	0.000	*0.000*	*0.000*	
	Dummy: age 25-34	1.9375	0.000	1.9463	0.000			
	Dummy: age 35-44	1.6893	0.000	0.9300	0.059			
	Dummy: 8 years of schooling (omitted: no diploma)	1.0590	0.002	0.9358	0.062	*0.010*	*0.012*	
	Dummy: secondary education	1.1592	0.003	1.7583	0.002			
	Dummy: university and above	0.3523	0.680	1.4922	0.038			
	Dummy: female	-2.9426	0.000	-1.5635	0.001			
Household	Family size	-0.3526	0.066	-0.1953	0.565			
	Age of household head	-0.0201	0.021	-0.0038	0.810			
	Dummy: female headed hh	1.1919	0.000	1.2315	0.004			
	Hh: # children aged 0-9 (excl group f >60)	0.2113	0.329	0.1536	0.697			
	Hh: # children aged 10-14	0.2276	0.241	0.3449	0.361			
	Hh: # males aged 15-24 (excluded individual)	0.4004	0.115	0.2428	0.588			
	Hh: # females aged 15-24 (excluded individual)	0.5465	0.033	0.1399	0.758			
	Hh: # males aged 25-34 (excluded individual)	0.3973	0.212	0.2140	0.677			
	Hh: # females aged 25-34 (excluded individual)	0.7545	0.003	-0.6929	0.210			
	Hh: # males aged 35-59 (excluded individual)	0.7598	0.025	-0.3608	0.448			
	Hh: # females aged 35-59 (excluded individual)	0.5744	0.032	0.1011	0.811			
	Hh: # males aged over 59 (excluded individual)	1.6239	0.000	0.6917	0.222			
	Hh: # ind 8years schooling (excluded individual) (excl group no	-0.1648	0.149	0.1489	0.429			
	Hh: # ind secondary education (excluded individual)	-0.3997	0.011	0.0450	0.827			
	Hh: # ind university education (excluded individual)	-0.6812	0.218	0.1102	0.778			
	Hh: value of dwelling durables	-0.0018	0.044	0.0000	0.963			
	Hh: dummy, hh owns non-ag business durables	-0.5206	0.277	-0.7730	0.381			
	Hh: dummy, hh owns ag business durables (excl. Land and animals)	-0.2477	0.320	-0.0258	0.966			
	Hh: size of agr land	0.3376	0.046	0.0962	0.839			
	Hh: size of cattle	-0.0644	0.393	-0.0982	0.560			
	Hh: # sheep and goats	-0.0091	0.286	-0.0284	0.498			
	Household: relative deprivation	0.2552	0.530	1.1377	0.105	*0.007*	0.186	
	Household: square of relative deprivation	0.1137	0.396	-0.3182	0.278			
Community	Community: share of jobs in industry (excluded agriculture)	-2.1920	0.349	-3.8964	0.336	*0.012*	0.290	
	Community: share of jobs in constructions (excluded agriculture)	-3.9527	0.069	-2.6167	0.444			
	Community: share of jobs in services (excluded agriculture)	-2.8368	0.017	-2.3449	0.206			
	Community: unemployment rate	1.0400	0.301	0.4061	0.821			
External	Dummy individual temp mig exp to Greece 1997-2001	1.5339	0.000	1.1448	0.009			
	Dummy individual temp mig exp to other dest. 1997-2001	-1.1037	0.276	3.1174	0.000			
	Dummy temp mig exp by other adults to Greece 1997-2001	0.7884	0.005	-2.6105	0.017			
	Dummy temp mig exp by other adults to other dest. 1997-2001	0.0753	0.913	0.8727	0.111			
	Hh: perm mig to Greece. N. of children since before 1997	0.4522	0.043	-0.2136	0.606	*0.002*	0.217	
	Hh: perm mig to Greece. N. of children since 1997-1998	0.1645	0.646	0.2097	0.698			
	Hh: perm mig to Greece. N. of children since 1999-2001	0.2097	0.523	-1.2113	0.110			
	Hh: perm mig to other dest. N. of children since before 1997	-1.0864	0.309	0.3223	0.440	*0.085*	0.524	
	Hh: perm mig to other dest. N. of children since 1997-1998	-0.5301	0.268	0.6186	0.161			
	Hh: perm mig to other dest. N. of children since 1999-2001	-0.8380	0.060	0.1309	0.671			
	Hh: permanent migration. Number of head's siblings before 2002	0.0447	0.174	0.0219	0.652	0.639	0.568	
	Hh: permanent migration. Number of head's nephews before 2002	-0.0025	0.796	0.0141	0.335			
	Hh: permanent migration. Number of head's cousins before 2002	0.0059	0.601	0.0147	0.402			
	Hh: permanent migration. Number of head's grandchildren before	-0.0102	0.709	-0.0069	0.920			
Internal mig	Hh: head not born in current locality (internal migration)	-0.0728	0.765	-0.1512	0.687			
Region	Dummy: costal region	0.5761	0.383	-1.0073	0.100	*0.004*	0.185	
	Dummy: central region	0.8325	0.196	-0.9995	0.117			
	Dummy: mountain region	1.5111	0.021	-0.2480	0.720			
	Dummy: rural	-1.4298	0.032	-1.6538	0.110			
	Constant	-3.0994	0.016	-3.9455	0.018			
	N. observations	5511						
	Pseudo-R2	0.3691						

Figure 1. Flows and stocks of temporary and permanent migration, 1990-2002
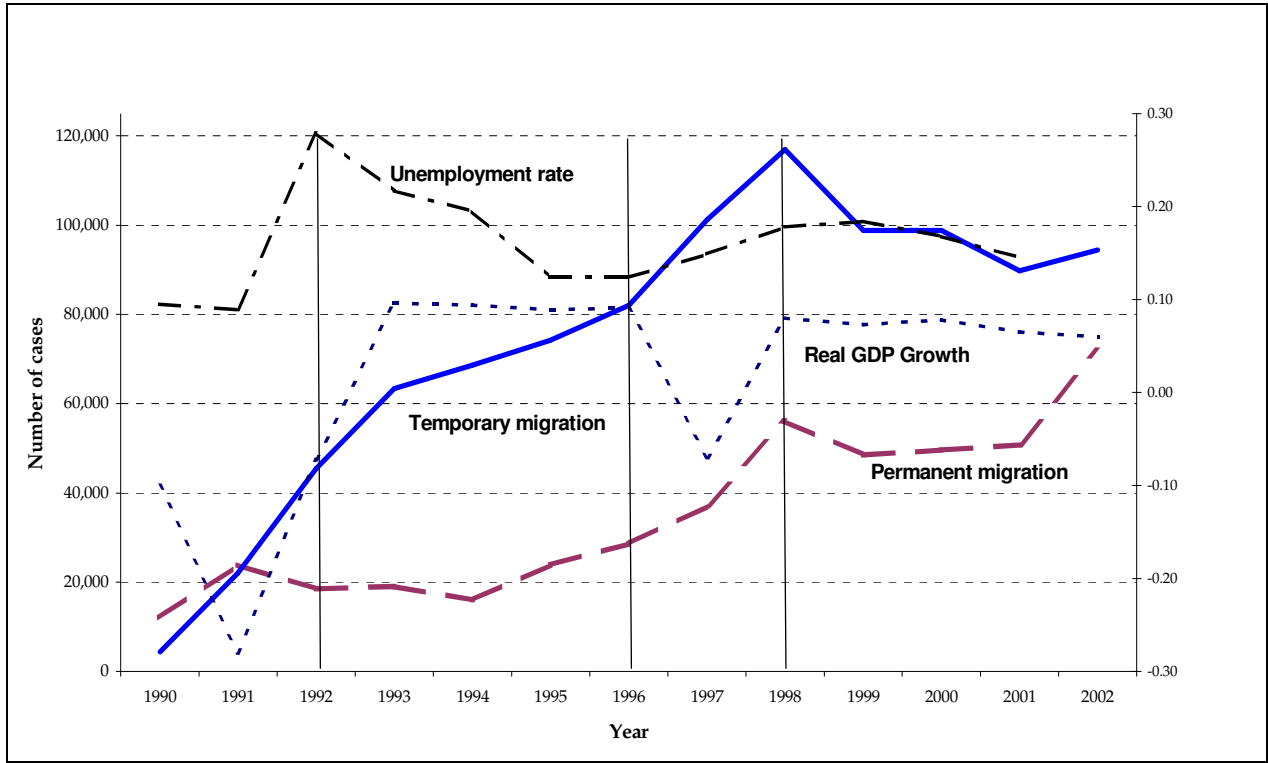
Figure 2. Destination of first-year temporary migrants, by year of migration
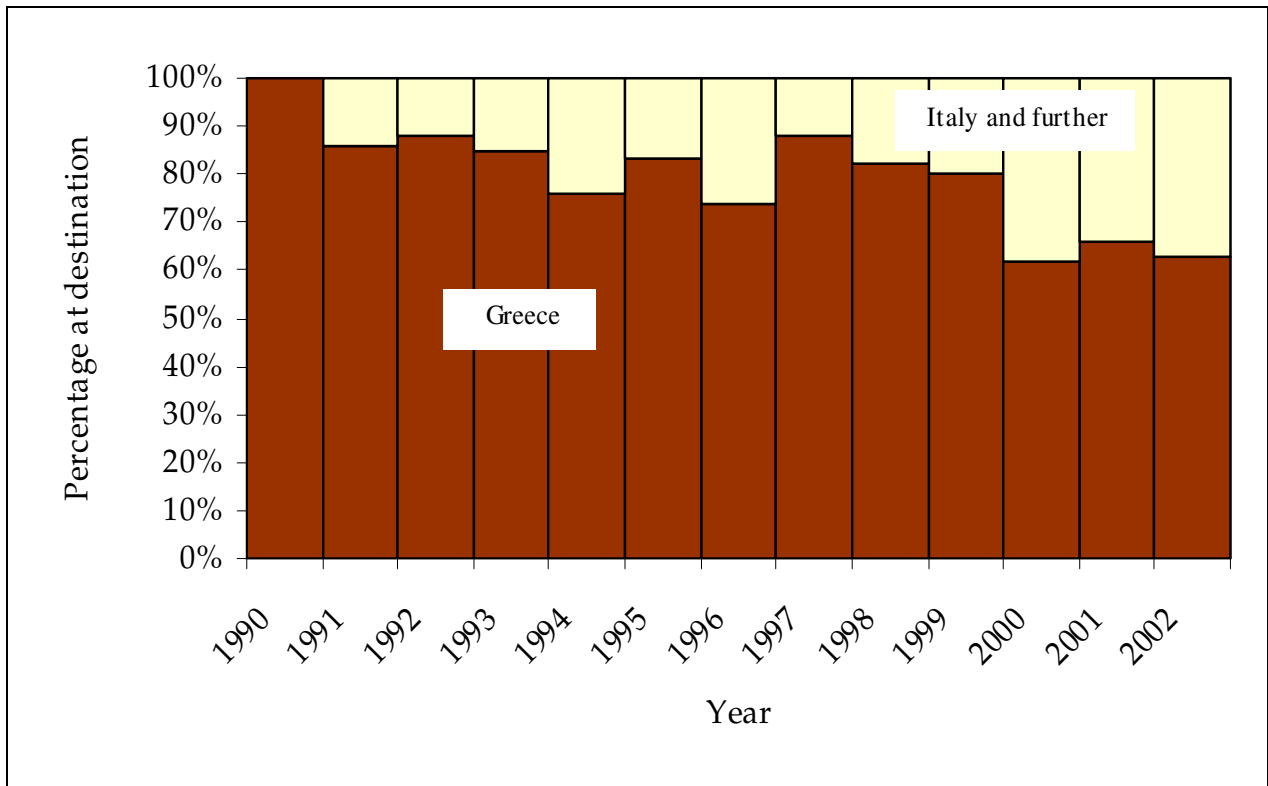
Figure 3. Residence of children who have left the household, by year in which they left
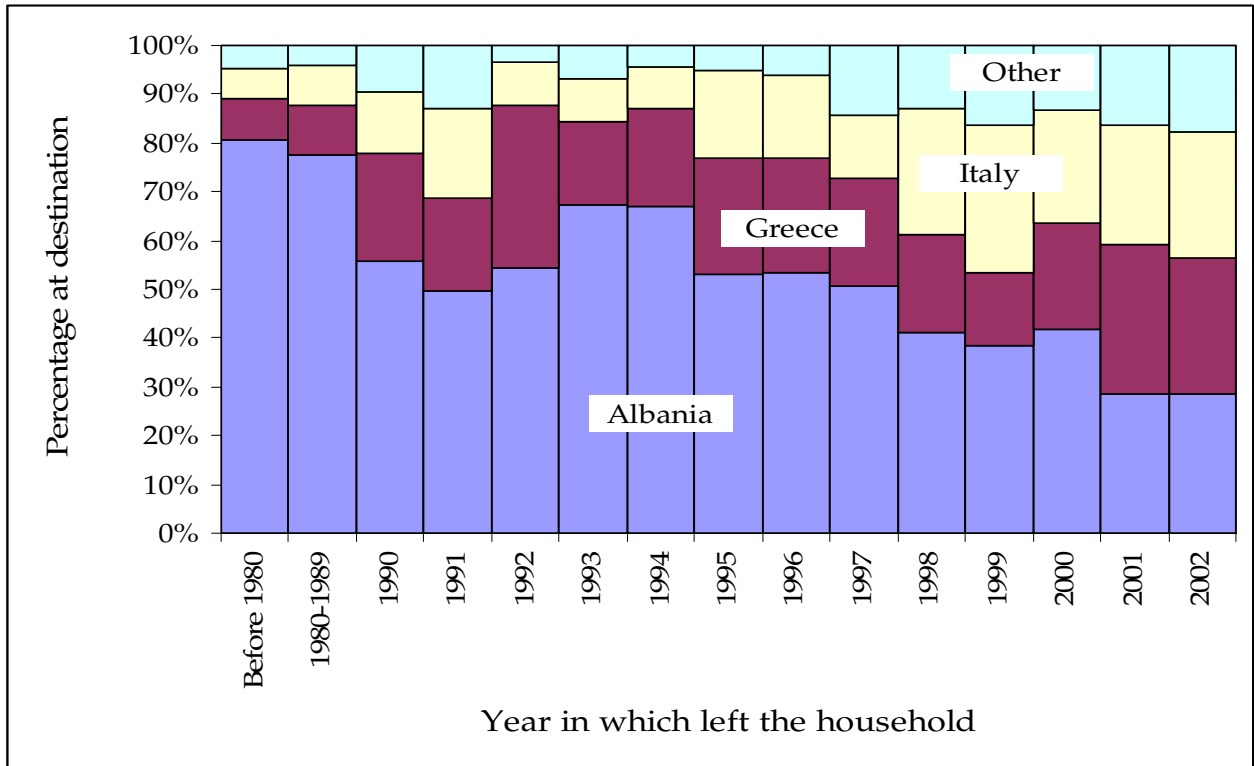
Figure 4. Probability of new temporary migration, by year of first experience and number of episodes

Figure 5. Probability of temporary and permanent migration by age

Figure 6. Probability of temporary and permanent migration, by education

Figure 7 – Probability of migration to a specific destination, by access to migration assets

Table 15b. **Probit of temporary migration** – all migration

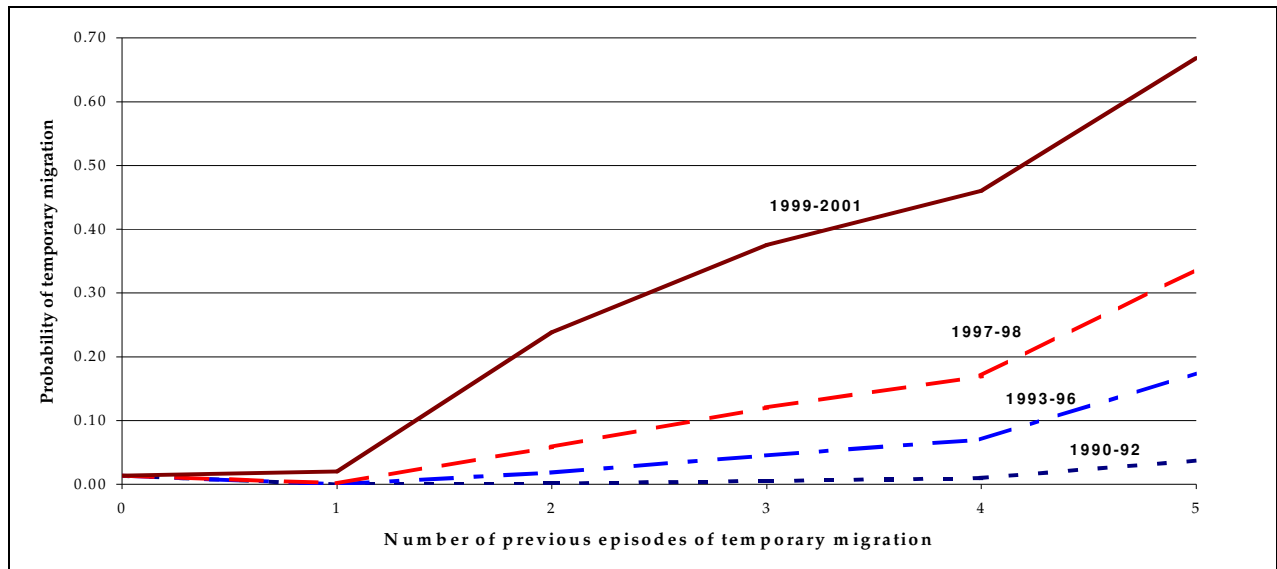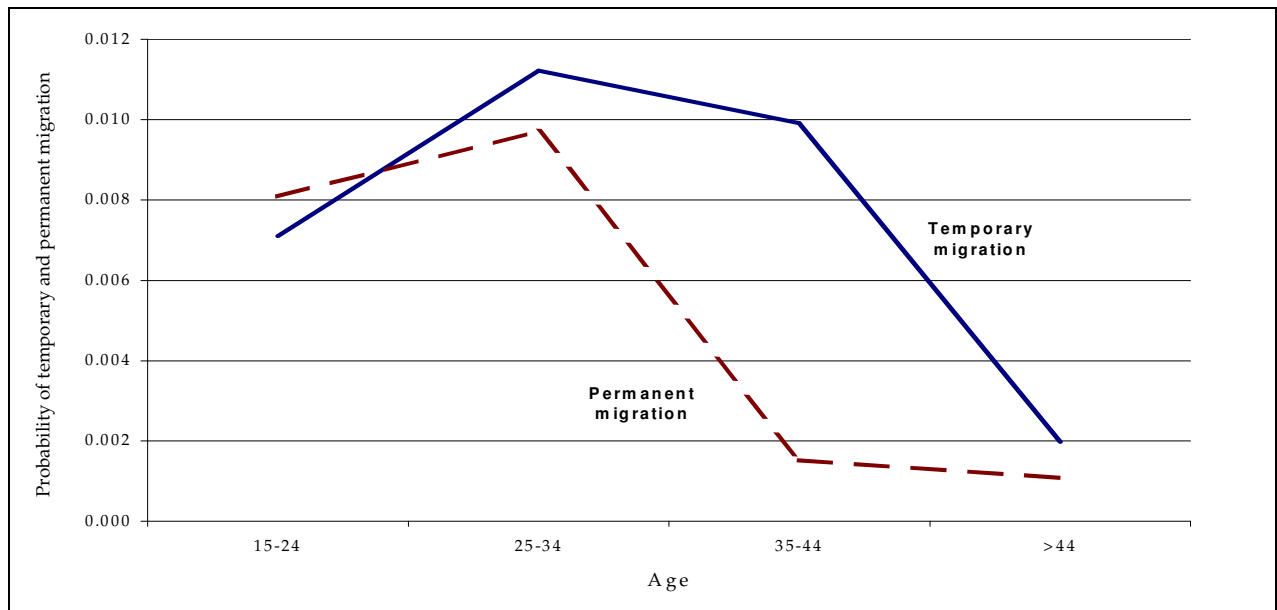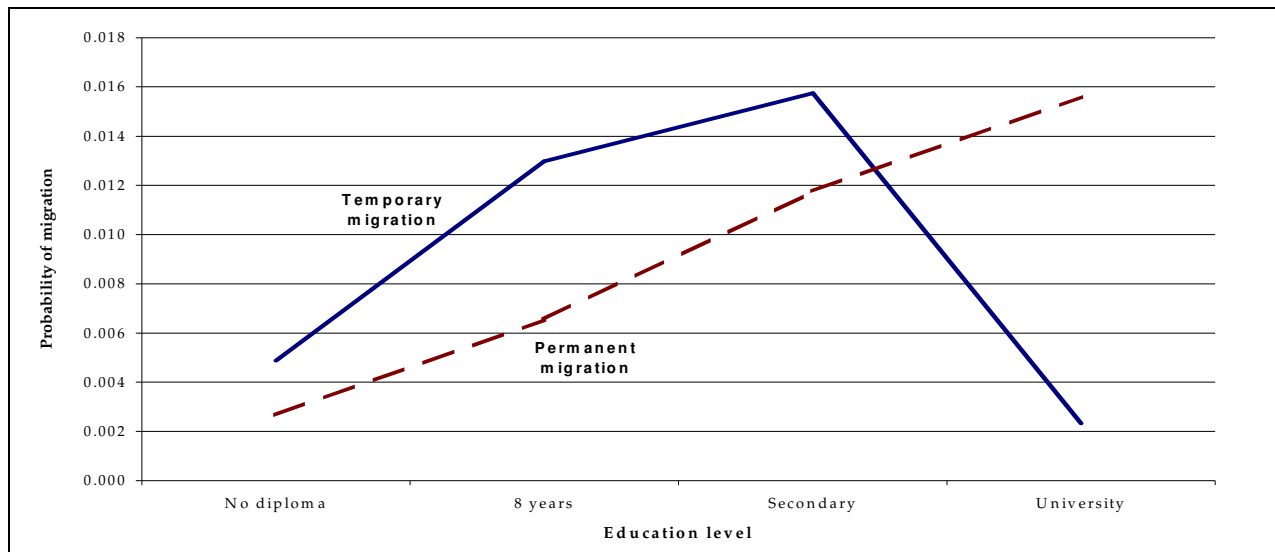|	TEMPORARY MIGRATION - INDIVIDUAL LEVEL REGRESSION			joint test
		dF/dx	P>|z|	Prob > chi2
Individual	Dummy: age 15-24 (omitted group: over 44)	0.0106	**0.006**	
	Dummy: age 25-34	0.0071	**0.054**	
	Dummy: age 35-44	0.0102	**0.010**	
	Dummy: 8 years of schooling (omitted: no diploma)	0.0044	**0.049**	
	Dummy: secondary education	0.0068	**0.042**	*0.029*
	Dummy: university and above	-0.0044	0.296	
	Dummy: female	-0.0184	**0.000**	
Household	Family size	-0.0031	**0.055**	
	Age of household head	-0.0001	0.251	
	Dummy: female headed hh	0.0153	**0.002**	
	Hh: # children aged 0-9 (excl group f >60)	0.0019	0.242	
	Hh: # children aged 10-14	0.0025	0.141	
	Hh: # males aged 15-24 (excluded individual)	0.0035	**0.074**	
	Hh: # females aged 15-24 (excluded individual)	0.0026	0.198	
	Hh: # males aged 25-34 (excluded individual)	0.0037	0.141	
	Hh: # females aged 25-34 (excluded individual)	0.0029	0.223	
	Hh: # males aged 35-59 (excluded individual)	0.0072	**0.008**	
	Hh: # females aged 35-59 (excluded individual)	0.0043	**0.050**	
	Hh: # males aged over 59 (excluded individual)	0.0124	**0.000**	
	Hh: # ind 8years schooling (excluded individual) (excl group no diploma)	-0.0001	0.940	
	Hh: # ind secondary education (excluded individual)	-0.0023	**0.085**	
	Hh: # ind university education (excluded individual)	-0.0053	**0.082**	
	Hh: value of dwelling durables	0.0000	0.195	
	Hh: dummy, hh owns non-ag business durables	-0.0041	0.113	
	Hh: dummy, hh owns ag business durables (excl. Land and animals)	-0.0003	0.911	
	Hh: size of agr land	0.0006	0.656	
	Hh: size of cattle	-0.0002	0.758	
	Hh: # sheep and goats	-0.0001	0.116	
	Household: relative deprivation	0.0020	0.589	
	Household: square of relative deprivation	0.0000	0.996	
Community	Community: share of jobs in industry (excluded agriculture)	-0.0518	**0.030**	
	Community: share of jobs in constructions (excluded agriculture)	-0.0179	0.348	*0.055*
	Community: share of jobs in services (excluded agriculture)	-0.0154	0.192	
	Community: unemployment rate	0.0139	0.157	
External mig	Individual temp mig exp: log of total duration	0.0098	**0.000**	
	Individual temp mig experience: first episode 1990-1992	-0.0071	**0.000**	
	Individual temp mig experience: first episode 1993-1996	-0.0073	**0.000**	
	Individual temp mig experience: first episode 1997-1998	-0.0065	**0.002**	
	Individual temp mig experience: first episode 1999-2001	-0.0036	0.355	
	Individual temp mig exp: 2 episodes	0.0737	**0.000**	
	Individual temp mig exp: 3 episodes	0.1777	**0.000**	
	Individual temp mig exp: 4 episodes	0.2805	**0.000**	
	Individual temp mig exp: 5 or more episodes	0.4197	**0.000**	
	Other adults temp mig experience: 1 episode	0.0049	0.325	0.525
	Other adults temp mig experience: 2 or more episodes	0.0056	0.299	
	Other adults temp mig experience: log of total duration	-0.0011	0.346	
	Hh: permanent migration. Number of children since before 1997	0.0013	0.372	
	Hh: permanent migration. Number of children since 1997-1998	-0.0014	0.556	0.492
	Hh: permanent migration. Number of children since 1999-2001	0.0020	0.224	
	Hh: permanent migration. Number of head's siblings before 2002	-0.0003	0.397	
	Hh: permanent migration. Number of head's nephews before 2002	-0.0001	0.416	0.417
	Hh: permanent migration. Number of head's cousins before 2002	0.0001	0.140	
	Hh: permanent migration. Number of head's grandchildren before 2002	0.0002	0.387	
Internal mig	Individual internal migration experience 1990-2001	0.0026	0.756	
	Other adults internal migration experience 1990-2001	-0.0044	0.375	
	Hh: head not born in current locality (internal migration)	0.0006	0.769	
Region	Dummy: costal region	0.0013	0.806	
	Dummy: central region	-0.0004	0.929	0.123
	Dummy: mountain region	0.0054	0.431	
	Dummy: rural	-0.0116	0.128	
	Constant	-	-	
	N. observations	5427		
	Pseudo-R2	0.5297		

Table 16b. Multinomial logit analysis of temporary and permanent migration – all migration

	INDIVIDUAL LEVEL REGRESSION	Temp.		Perm.		Joint test		perm vs.
		beta	P>|z|	beta	P>|z|			
Individu	Dummy: age 15-24 (omitted group: over 44)	0.9111	**0.006**	3.3304	**0.000**	Temp	perm	temp
	Dummy: age 25-34	1.2761	**0.000**	2.8897	**0.000**			*0.000*
	Dummy: age 35-44	1.3020	**0.000**	1.1218	**0.099**	*0.000*	*0.000*	*0.017*
	Dummy: 8 years of schooling (omitted: no diploma)	0.7859	**0.006**	0.4439	0.317			0.813
	Dummy: secondary education	0.9428	**0.005**	0.6517	0.173			0.504
	Dummy: university and above	-0.4622	0.556	1.1014	0.101	*0.009*	0.417	0.602
	Dummy: female	-2.5028	**0.000**	-0.0162	0.961			0.120
Househo	Family size	-0.3537	**0.042**	0.0771	0.817			
	Age of household head	-0.0127	0.106	0.0121	0.385			
	Dummy: female headed hh	1.0336	**0.001**	0.3943	0.341			
	Hh: # children aged 0-9 (excl group f >60)	0.3524	**0.070**	-0.4236	0.312			
	Hh: # children aged 10-14	0.1431	0.436	-0.0074	0.985			
	Hh: # males aged 15-24 (excluded individual)	0.3778	**0.087**	-0.0193	0.963			
	Hh: # females aged 15-24 (excluded individual)	0.5055	**0.026**	0.0205	0.956			
	Hh: # males aged 25-34 (excluded individual)	0.2470	0.387	0.0170	0.969			
	Hh: # females aged 25-34 (excluded individual)	0.4380	**0.059**	0.0061	0.987			
	Hh: # males aged 35-59 (excluded individual)	0.7175	**0.016**	-0.8324	**0.075**			
	Hh: # females aged 35-59 (excluded individual)	0.5353	**0.019**	0.2336	0.502			
	Hh: # males aged over 59 (excluded individual)	1.4389	**0.000**	-0.2054	0.696			
	Hh: # ind 8years schooling (excluded individual) (excl group no diploma)	-0.1222	0.229	-0.0898	0.596			
	Hh: # ind secondary education (excluded individual)	-0.3260	**0.023**	-0.2174	0.236			
	Hh: # ind university education (excluded individual)	-0.5436	0.154	-0.1070	0.736			
	Hh: value of dwelling durables	-0.0007	**0.080**	0.0000	0.816			
	Hh: dummy, hh owns non-ag business durables	-0.6633	**0.069**	-0.4887	0.451			
	Hh: dummy, hh owns ag business durables (excl. Land and animals)	-0.1644	0.456	0.0372	0.936			
	Hh: size of agr land	0.3401	**0.018**	0.7232	**0.013**			
	Hh: size of cattle	-0.0541	0.410	-0.1075	0.480			
	Hh: # sheep and goats	-0.0064	0.415	-0.0021	0.883			
	Household: relative deprivation	-0.0743	0.835	1.6310	**0.040**			
	Household: square of relative deprivation	0.1509	0.200	-0.8937	**0.016**	*0.053*	*0.053*	
Commun	Community: share of jobs in industry (excluded agriculture)	-2.7006	0.175	-0.8605	0.796			
	Community: share of jobs in constructions (excluded agriculture)	-2.9378	0.149	1.0588	0.760			
	Community: share of jobs in services (excluded agriculture)	-2.8034	**0.007**	2.1501	**0.066**	*0.008*	0.250	
	Community: unemployment rate	0.9402	0.313	1.2421	0.490			
External	Dummy individual temp mig exp 1997-2001	1.7349	**0.000**	1.3958	**0.000**			
	Dummy temp mig exp by other adults 1997-2001	0.4769	**0.034**	0.0106	0.978			0.366
	Hh: permanent migration. Number of children since before 1997	0.2559	0.169	0.4187	**0.033**			
	Hh: permanent migration. Number of children since 1997-1998	-0.2331	0.362	0.7526	**0.005**			
	Hh: permanent migration. Number of children since 1999-2001	0.1399	0.450	-0.3137	0.412	0.397	*0.004*	
	Hh: permanent migration. Number of head's siblings before 2002	-0.0054	0.849	0.0898	**0.013**			
	Hh: permanent migration. Number of head's nephews before 2002	-0.0046	0.604	0.0207	**0.027**			
	Hh: permanent migration. Number of head's cousins before 2002	0.0163	0.109	-0.0229	0.228	0.560	*0.003*	
	Hh: permanent migration. Number of head's grandchildren before 2002	0.0082	0.726	-0.0401	0.423			
Internal	Hh: head not born in current locality (internal migration)	0.0339	0.872	-0.3048	0.311			
Region	Dummy: costal region	0.3719	0.500	-0.8988	0.116			
	Dummy: central region	0.5856	0.287	-1.3073	**0.022**			
	Dummy: mountain region	1.1758	**0.039**	-1.1239	**0.094**	*0.003*	0.117	
	Dummy: rural	-1.6300	**0.006**	1.0377	0.132			
	Constant	-2.1921	**0.041**	-9.0351	**0.000**			
	N. observations	5511						
	Pseudo-R2	0.3026						

Table 17b. Multinomial logit analysis of destination of migration – all migration

	INDIVIDUAL LEVEL REGRESSION	Greece		Other dest.		Joint test		Greece Vs oth dest
		beta	P>|z|	beta	P>|z|	Greece	Oth dest	
Individual	Dummy: age 15-24 (omitted group: over 44)	1.6388	**0.000**	2.2925	**0.000**			
	Dummy: age 25-34	2.0592	**0.000**	1.5679	**0.000**	0.000	0.000	
	Dummy: age 35-44	1.8270	**0.000**	0.8418	**0.037**			
	Dummy: 8 years of schooling (omitted: no diploma)	1.1722	**0.001**	0.1690	0.600			
	Dummy: secondary education	1.2484	**0.001**	0.7274	**0.071**	0.002	0.215	
	Dummy: university and above	0.1284	0.884	0.6723	0.243			
	Dummy: female	-2.1922	**0.000**	-0.2284	0.479			
Household	Family size	-0.3062	**0.092**	0.0193	0.944			
	Age of household head	-0.0148	**0.076**	0.0111	0.375			
	Dummy: female headed hh	0.9543	**0.003**	0.6773	**0.052**			
	Hh: # children aged 0-9 (excl group f >60)	0.2054	0.321	-0.1191	0.718			
	Hh: # children aged 10-14	0.1200	0.525	0.0504	0.867			
	Hh: # males aged 15-24 (excluded individual)	0.3379	0.162	-0.0675	0.850			
	Hh: # females aged 15-24 (excluded individual)	0.4928	**0.040**	0.0086	0.979			
	Hh: # males aged 25-34 (excluded individual)	0.2297	0.447	-0.1081	0.780			
	Hh: # females aged 25-34 (excluded individual)	0.7271	**0.002**	-0.3789	0.359			
	Hh: # males aged 35-59 (excluded individual)	0.4886	0.121	-0.7889	**0.048**			
	Hh: # females aged 35-59 (excluded individual)	0.6908	**0.007**	0.2081	0.499			
	Hh: # males aged over 59 (excluded individual)	1.2740	**0.000**	0.0064	0.989			
	Hh: # ind 8years schooling (excluded individual) (excl group no diploma)	-0.1758	0.106	0.0817	0.617			
	Hh: # ind secondary education (excluded individual)	-0.4440	**0.005**	0.0042	0.981			
	Hh: # ind university education (excluded individual)	-0.2346	0.557	-0.2718	0.422			
	Hh: value of dwelling durables	-0.0018	**0.016**	0.0004	0.352			
	Hh: dummy, hh owns non-ag business durables	-0.6028	0.177	-0.5292	0.323			
	Hh: dummy, hh owns ag business durables (excl. Land and animals)	-0.1688	0.464	-0.0365	0.937			
	Hh: size of agr land	0.4110	**0.009**	0.3773	0.269			
	Hh: size of cattle	-0.0600	0.395	-0.1021	0.417			
	Hh: # sheep and goats	-0.0080	0.319	-0.0015	0.926			
	Household: relative deprivation	0.1168	0.769	0.9500	0.174	0.027	0.393	
	Household: square of relative deprivation	0.1220	0.351	-0.3816	0.228			
Community	Community: share of jobs in industry (excluded agriculture)	-2.6158	0.248	-2.2708	0.445			
	Community: share of jobs in constructions (excluded agriculture)	-4.6499	**0.039**	-0.4186	0.869	0.019	0.873	
	Community: share of jobs in services (excluded agriculture)	-2.1423	**0.054**	0.1367	0.921			
	Community: unemployment rate	1.0829	0.251	-0.0547	0.970			
External	Dummy individual temp mig exp to Greece 1997-2001	1.5842	**0.000**	1.2539	**0.002**			
	Dummy individual temp mig exp to other dest. 1997-2001	-0.3762	0.611	3.1616	**0.000**			
	Dummy temp mig exp by other adults to Greece 1997-2001	0.7928	**0.003**	-1.8180	**0.004**			
	Dummy temp mig exp by other adults to other dest. 1997-2001	-0.0042	0.995	0.6731	0.116			
	Hh: perm mig to Greece. N. of children since before 1997	0.5366	**0.003**	-0.3147	0.422			
	Hh: perm mig to Greece. N. of children since 1997-1998	0.4987	0.181	-0.4147	0.417	0.002	0.217	
	Hh: perm mig to Greece. N. of children since 1999-2001	0.2861	0.345	-0.8885	0.163			
	Hh: perm mig to other dest. N. of children since before 1997	-0.7281	0.304	0.4252	**0.094**			
	Hh: perm mig to other dest. N. of children since 1997-1998	-0.0636	0.877	0.3165	0.311	0.257	0.312	
	Hh: perm mig to other dest. N. of children since 1999-2001	-0.7348	**0.055**	0.1560	0.591			
	Hh: permanent migration. Number of head's siblings before 2002	0.0516	**0.098**	0.0085	0.827			
	Hh: permanent migration. Number of head's nephews before 2002	0.0008	0.930	0.0162	**0.095**	0.590	0.472	
	Hh: permanent migration. Number of head's cousins before 2002	-0.0002	0.984	0.0082	0.556			
	Hh: permanent migration. Number of head's grandchildren before 2002	0.0009	0.970	0.0064	0.883			
Internal mig	Hh: head not born in current locality (internal migration)	0.0272	0.904	-0.2185	0.438			
Region	Dummy: costal region	0.8442	0.168	-0.7163	0.143			
	Dummy: central region	1.0143	**0.097**	-0.9260	**0.054**	0.003	0.408	
	Dummy: mountain region	1.6460	**0.008**	-0.6707	0.245			
	Dummy: rural	-1.3531	**0.039**	-0.3487	0.687			
	Constant	-4.0170	**0.001**	-5.7095	**0.000**			
	N. observations	5511						
	Pseudo-R2	0.3158						

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