ESSAYS IN INTERNATIONAL MIGRATION AND MIGRANTS' REMITTANCES

by
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ABSTRACT

The essays included in this thesis aim to contribute to the better understanding of the international migration phenomenon and its impact on the migrant sending countries through the empirical investigation of four aspects: (1) the characteristics of circular migrants and the factors that influence their decision to move repeatedly; (2) the occupational attainment of return migrants and the impact on entrepreneurship; (3) the relationship between transfers and the general expenditures of the permanent migrant household; and (4) the role played by the migrant's education/skill level in the purpose and use of monetary remittances in the home country. Evidence from Albania shows that re-migration of return migrants (i.e. circularity) occurs along the same selection pattern as initial migration and return. From the initial low to middle educated migrant population those with the highest education return to Albania, and from the returnees those having less education are most likely to re-migrate. In fact, return migrants are found to contribute to employment generating activities, having comparatively the highest odds of being entrepreneurs. However, even if the migrants do not return to the home country and settle aboard permanently, they still can make a positive impact on the home economy over the money transfers to relatives or investments made in the home country. As shown by evidence from the Canadian immigration experience, some migrant groups regard transfers to relatives rather a normal good and, hence, would eventually share a more stable portion of their expenditures with the extended family in periods of economic downturn. Additionally, evidence from immigration to Germany illustrates that the human capital endowment is significantly linked to the decision to invest in the home country. Nevertheless, the economic and political climate in the country of origin seems to play an equally important role.

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CONTENTS

CHAPTER 1: INTRODUCTION

International migration, the movement of people across international borders, is a multifaceted and complex global issue, which today touches practically every country in the world. Over 200 million people (about 3 percent of the world's population) are estimated to live in countries other than that of their birth (IOM 2008). It is therefore not surprising that the causes and impact of international migration have received increasing attention in the last decades.

In particular two topics on international migration caught the special interest of policy makers and academics: temporary migration and migrant remittances. There are several reasons for this. On the one hand, while theoretical and empirical analysis has shown that the immigration of skilled and high-skilled workers (i.e. scientists and high-tech workers) is an important source for endogenous technological change and growth (see for example Bretschger 2001; Borjas 1995), empirical evidence has confirmed the concern that low-skilled immigration has an adverse labour market impact. Borjas (2003) reported evidence that immigration reduces the wage and labour supply of competing native workers, with high school dropouts being the most affected. Adding the fact that low skilled immigrants often have relatively poor labour market performance and are more likely to draw social benefits (see Chiswick 2009), it is not surprising that immigration policies in many industrialised countries are designed to allow low skilled migrants to reside and work only temporarily (Münz *et al.* 2007; OECD 2008). The general idea is that when economic conditions worsen and labour demand decreases, supply of immigrant labour can be eventually reduced, i.e.

migrants return after the expiry of their temporary work permits and fewer permits are issued for the next period.

On the other hand, the return of skilled and high skilled migrants can be beneficial for the migrant sending countries and, therefore, is often seen as a possible compensation mechanism for "brain drain". Through transfer of know-how and technology these returnees may increase the productivity of the home country labour force, attract foreign direct investments and, thus, contribute to development. Nevertheless, with the increasing need for skilled labour in the industrial countries, circular migration (i.e. alternating time spells spent in the home and host country over the lifespan) is expected to be the best solution for ensuring gains for both developing (migrant sending) and industrialised (migrant receiving) countries (European Commission 2005).

Another compensation for the sending countries' loss in human capital through migration eventually comes through the financial transfers migrants make to their family members back home and/or savings repatriated at return. Studies show that migrants' remittances are the largest source of foreign capital in many developing countries, are more stable than foreign direct investments, often help in poverty alleviation and provide indispensable means of investment in the presence of capital constraints (see for example Ratha 2003; Adams and Page 2005; Woodruff and Zenteno 2007; Yang 2008). The official flow of money transfers from migrants to their country of origin accelerated in the last decade:[1] between 1998 and 2008 they almost trippled, reaching US$444 billion, with US$338 billion going to developing countries (Ratha *et al.* 2009).

[1] The acceleration of official international migrants' remittance flows in the last years is, however, partly due to the depreciation of the US dollar, which increased the relative value of remittances from countries other than the United States. Another reason is the tighter control of informal transfer channels (e.g. *hawala*) after September 11, 2001. Therefore, migrants nowadays probably use more often official transfer means.

All these new developments in migration movements, remittance flows and the related policy expectations contribute to the motivation of this thesis: to examine the determinants of different forms of temporary migration - in particular circular migration - and the effect of migration on the sending countries through return migration and monetary remittances. For example, most studies on the determinants of temporary migration focused on the decision of migrants to return to the home country and the amount of time spent abroad, irrespective of the form of temporary migration (e.g. Djajic and Milbourne 1988; Borjas and Bratsberg 1996; Dustmann 1995, 1997, and 2003). The increased interest in circular migration brings up issues about the socio-economic characteristics of circular migrants (as compared to return migrants) and the factors that influence the decision of international migrants to move repeatedly between home and host country.

Another aspect that is extensively analysed in the literature concerns the occupational attainment of return migrants. Many studies showed that return migrants have a relatively higher propensity to become self-employed, due to business skills and/or start-up capital accumulated abroad (e.g. Ilahi 1999; McCormick and Wahba 2001; Dustmann and Kirchkamp 2002; and Mesnard 2004). Nevertheless, a key element missing from the existing literature is the distinction between different types of self-employment. Given that the majority of self-employment activities in developing countries are on own account (i.e. without hiring employees), the distinction between own account work and entrepreneurship becomes important for assessing the true impact of return migration on employment generation.

Most studies analysing the determinants of migrants' remittances have focused either on identifying various motives to remit or, more recently, on the relationship between transfers and savings. Despite the fact that the amount of remittances has been theoretically modelled as being also related to the senders' consumption (see Rapoport and Docquier 2006), no empirical study has looked so far at migrant transfers within the general expenditure decisions of a household. Compared to temporary migrants, who often save more abroad in order to consume at home, the link between transfers and consumption should be even more important for long-term/permanent migrants. They should eventually have an economic behaviour more similar to that of the natives and, thus, relate their transfers to their households' general expenditures.

There is also an ongoing debate about the impact of high-skilled labour migration on the country of origin. Some economists argue that high skilled migrants make a major contribution to development. Besides sending remittances, migrants with a higher level of education would be more likely to make investments in the home country, because of the skills and expertise they have (see Lucas 2001). Others, however, theorise that skilled migrants would remit relatively less because they have a lower propensity to return and are more likely to reunite with their close family in the host country. Therefore, their remittances would not compensate for the human capital loss incurred by their emigration (see Faini 2007).

To sum up, the thesis contributes to the literature on the economic impact of migration on the countries of origin by aiming to find answers to the following research questions:

- To what extent do the socio-economic characteristics of circular/repeat migrants differ from migrants who return permanently to the home country after their first trip and what determines each of these distinctive temporary migration forms?
- How is the aggregated effect of return migration on self-employment divided between own account work and entrepreneurship and what differences are there in characteristics among returnees in various occupational groups?
- How do permanent/long-term migrant households budget for transfers to relatives and to charities and what is the relationship between transfers and total expenditures?
- What role plays the migrant's education/skill level in the purpose and use of monetary remittances?

The introductory chapter is structured as follows. The next section shall give an overview of the recent developments in return migration, the theoretical and empirical literature on the determinants of temporary migration and the impact of return migration on the sending countries' labour markets. Section 1.2 discusses the trends in remittance flows, their importance in the national accounts of the developing countries and the theory and empirical findings on the determinants and economic effects of migrants' remittances. Section 1.3 gives an overview of the thesis' chapters and their contribution to the literature.

1.1 The Economics of Temporary Migration

1.1.1 The Magnitude of Temporary Migration Flows

Empirical evidence shows that temporary migration is an important phenomenon. However, the migrants' return rates vary considerably by host country and within host countries by migrants' nationality, ranging anywhere between 20 and 75 percent of the initial immigration flow. For example, countries that traditionally favour permanent immigration (e.g. Canada, the US, and New Zealand) seem to retain more immigrants than European OECD countries. Borjas and Bratsberg (1996) estimated that at the time of the 1980 census out-migration rates from the US were 17.5 percent after five years or less and 21.5 percent after six to ten years since immigration (i.e. for cohorts entering 1970 to 1974 and 1975 to 1979). Similarly, from the male migrants that entered Canada in 1996, Aydemir and Robinson (2006) found that after five years about 23.7 percent emigrated, while Shortland (2006) estimates that 23 percent of the cohort entering New Zealand in 1998 had left the country by 2003.

Comparatively, out-migration of foreigners from West and North European countries, having more restrictive immigration policies, was significantly higher. The average exit rate after five years was around 35 percent in the case of the Netherlands (Bijwaard 2004), 40 percent for the UK (Dustmann and Weiss 2007), and around 50 percent for Norway (Bratsberg *et al.* 2007).

Out-migration rates vary also substantially depending on the migrants' origin. As a general rule, migrants seem to be less likely to leave the host country if they originate from poorer countries. In the case of the US, the exit rate of Mexican migrants and of migrants from other South American countries (18 percent and 24 percent respectively) are about half of those of migrants from

Canada or the EU-15 (43 percent and 54 percent respectively). Estimates for Norway show also great diversity according to region of origin: the out-migration rate of immigrants from non-Western countries is less than 25 percent, while over 70 percent in the case of immigrants from OECD countries (Bratsberg *et al.* 2007).

If leaving the host country, migrants from poorer countries of origin are less likely to return home but rather move on to a third country. For instance, the share of return migration in total out-migration exceeds 85 percent for immigrants from Nordic and West European countries but falls below 60 percent in the case of East Europeans and even below 50 percent for Asian and African migrants in Sweden (Nekby 2006). Similarly, 93 percent of Danish and Swedish immigrants, 87 percent of migrants from the UK and 86 percent of migrants from the US who left Norway in the period 1963 to 2003 returned to their home countries. By contrast, the return migration rate of immigrants from developing countries was much lower: 70 percent for Somalia, and only 33 percent for Vietnam (Bratsberg *et al.* 2007).

The figures presented should, however, be interpreted with care. One major difficulty with the assessment of return migration is measurement. Many migrant receiving countries have registration procedures in place that allow assessment of the number of incoming immigrants, but estimation of immigrants' outflows is less straightforward (Dustmann and Weiss 2007). There are no procedures in place that register immigrants who leave a country. The standard estimation procedure consists of computing indirectly the out-migration rate from the difference between the stock of an initial cohort arrived at time t and the remaining stock of the cohort after a given number of years (e.g. $t+5$), divided by the stock of the initial cohort (see Dumont and Spielvogel 2008; Dustmann and Weiss 2007). Although this procedure gives some indication of the degree of return migration,

there are several sources of error. Depending on the month the initial cohort is surveyed: a) the initial cohort could be underestimated, if the survey is conducted before the end of the calendar year, or b) the magnitude of temporary migration may be underestimated, if the survey is conducted at the end of the calendar year and many migrants arriving early that year had already returned; that is particularly important in the case of seasonal migration. Moreover, Labour Force Surveys (LFS) do not capture short-term migration at all. The registration criteria vary from "intent to stay for three months or more" in some countries to "intent to stay for one year or more" in others. Therefore, estimates based on the LFS underestimate temporary migration flows (Dumont and Spielvogel 2008).[2]

A further limit of national statistics in migrant receiving countries (i.e. LFS and census data) is that they cannot and do not capture irregular migration flows, which in some cases (e.g. Mexican migration to the US; East European migration to Southern European countries) could be quite substantial.[3] This is, however, possible in population censuses or representative household surveys in migrants' home countries, if they collect information on the migration history (i.e. past regular and/or irregular migration trips) of the respondents and the household members currently abroad, as for example the Albanian Living Standard Measurement Survey (ALSMS).[4] Own estimates using the ALSMS 2005 show that 8.1 percent of Albania's population aged 15 to 64 had a past migration experience in 2005 (i.e. migrated abroad for non-visit purposes for time spells longer than one

[2] The inter-country comparability of estimates based on the LFS is also limited, since in countries where the registration criterion is one year relatively fewer entries will be recorded and consequently the out-migration rate is lower.

[3] This might lead, on the one hand, to an underestimation of return migration flows, if majority of the irregular migrants are temporary. On the other hand, overstaying visas and, thus, entering irregularity could lead to an overestimation of out-migration rates, since these migrants disappear from statistics but do not leave the host country.

[4] For more details on this dataset see also Chapters 2 and 3.

month and returned), representing about one-third of the total population with migration experience (i.e. including those living abroad at the time of survey).[5]

A further advantage of household surveys is that they allow the distinction between different forms of temporary migration. For example, evidence from the ALSMS 2005 shows that between 1990 and 2005 about 50 percent of the Albanian temporary migrants had returned permanently back after their first trip, while the other half had a history of repeat/circular migration movements (see Chapter 2).

1.1.2 The Determinants of Temporary Migration

The economics of temporary migration evolved mainly out of the aim to explain the observed return migration flows to the country of origin despite persistent higher income levels in the host country.

This behaviour could not be explained in the framework of the neoclassical labour migration theory, according to which individuals choose to move from a region/country with lower wages (w_i) to one that has relatively higher wages (w_j), if the benefits from migration - discounted over the remaining lifespan by a factor r - exceed the cost of migration M (Sjaastad 1962).[6] The model as represented by Borjas (2001) has the form:

$$PV = \sum_{k=t}^{T} \frac{w_{jk} - w_{ik}}{(1-r)^{k-t}} - M \qquad (1.1)$$

A key conclusion of the neoclassical micro theory and the models that build on it by adding unemployment (e.g. Harris and Todaro 1970) is that international movement takes place only in the presence of inter-country differences in expected

[5] A proportion of those living abroad at the time of the survey will also return and hence the asserted figure of one third return-migrants should be seen as a lower bound.

[6] The seminal model of Sjaastad (1962) assumes no unemployment in either the home or host labour market.

earnings (i.e. the product of earnings and employment rates) and migration will continue until the expected earnings net of migration costs have been equalised (Massey *et al.* 1993). Reverse migration flows should, therefore, occur only when the expected earnings in the country of origin rise to a level that exceeds those in the host country.

1.1.2.1 Preference for residence and/or consumption in the home country

One set of theoretical models that allowed the explanation of return migration from high income to low income countries explicitly assume preference for home country residence or higher utility from consumption at home. For example, based on the observation that Mexicans in the US made their decision to return on subjective reasons (e.g. the presence of family members in the home country, a dislike of the US climate and/or a preference for the Mexican culture and life-style), Hill (1987) considered that individuals derive utility from lifetime consumption of goods and services and the amount of time spent in the home country. Following the life-cycle theory of savings, he further theorised that the migrants have a preference for smoothing their consumption of home residence by splitting the time abroad over several trips. Utility, thus, varies with the number of migration trips as well, and there is a trade-off between utility from the frequency of trips and lifetime earnings net of migration costs.

Assuming that wages are higher in the host relative to the home country, the model allows for several interesting predictions. An increase in the home country wage leads to higher utility and more time spent at home. Nevertheless, a decrease in the host country wage leads to lower utility, less time spent in the home country and a reduction in the number of trips. Probably the most

remarkable result is that an increase in migration costs (e.g. a more restrictive immigration policy in the host country or a tax on migration in the home country) has an income effect (i.e. decreases marginal utility of earnings) that leads to less frequent movements and, however ambiguous, could increase the amount of time spent abroad as well.

This last prediction was confirmed in a similar model, in which individuals are assumed to have a higher preference for consumption at home (Djajic and Milbourne 1988) and several empirical studies. For example Massey and Espinosa (1997), show that increasing migration costs by stricter border controls would prevent potential migrants to come in, but those already present would increase the amount of time spent in the host country. Thus, stricter immigration policies have often no effect on the foreign labour supply in destination countries and even increase it in some cases (see also Azzarri and Carletto 2009).

Thom (2010) develops a structural model in which the time spent abroad and the frequency of trips is modelled as dependent of a combination of the international wage gap, the preference for residence in the home country as well as an imbalance between the real exchange rate and the purchase power parity between home and host country. As in previous models, it predicts that an increase in the cost of migration unambiguously decreases the frequency of trips abroad, but it increases the amount of time spent abroad only at low levels of preference for residence in the home country. Counterfactual simulations using data from the Mexican Migration Project (MMP) show that higher migration costs – measured as higher Border Patrol payrolls – would deter some individuals from migrating, but would cause those who migrate to spend more time in the United

States. Nevertheless, the deterrence effect seems to be stronger, causing the aggregate amount of immigrant-days spent in the United States to decrease.

He also finds that neither education nor the community of origin has an effect on the location preference and the cost of migration. Education and community type, thus, influencing the pattern of temporary migration only though differences in the wage distribution across regions and educational groups.

Besides the welfare function of the migrants, Djajic and Milbourne (1988) also considered a welfare function of the workers who did not migrate and predicted that an emigration tax introduced by the home country to lower the difference in the standard of living between return migrants and non-migrant workers would have an adverse welfare effect not only on migrants (by lowering their net income) but on the remaining workers as well. The emigration tax would increase the cost of migration and, consequently, fewer individuals will migrate, the supply on the home labour market will increase and impact negatively on the domestic wage rate.

A more quantifiable measure of the preference for consumption in the home country is given by a higher purchasing power at home of the savings accumulated abroad, as in the models of Dustmann (1995) and Stark *et al.* (1997). Stark *et al.* (1997), for example, show that if the wage abroad is higher than the wage at home and the price of consumption at home is lower than the price of consumption abroad, migrants who return home and consume from savings accumulated abroad attain maximal utility. Furthermore, the optimal duration of migration declines with a rise in the purchasing power differential and increases when the purchasing power gap between home and host country narrows.

Therefore, the exchange rate policies of both countries can affect the value of migrants' savings and thereby return migration. Either the appreciation of the host country currency or the devaluation of the home country currency is likely to increase the value of the migrant's savings - in terms of home country consumption - and accelerate return migration.

Dustmann (1997) adds uncertainty about the labour market situation in the host and home countries in a Djajic and Milbourne (1988) type model. He concludes that the desired amount of time spent in the host country is increased if the wage differential between home and host country is large and the home country labour market is relatively risky. The opposite effect is attained if the wage differential is small and the host country labour market is riskier, as for example in the case of illegal migration.

Considering both higher utility for consumption at home and higher purchasing power of the savings accumulated abroad, Dustmann (2003) reaches similar conclusions to those in Djajic and Milbourne (1988) that an increase in economic disparity between the sending and the receiving region has an ambiguous effect on the optimal migration duration. Migrants would, on the one hand, like to prolong their stay abroad as a response to higher wages but, on the other hand, they have less utility from consuming further abroad. As a consequence, migrants may return earlier. Dustmann's (2003) empirical results based on household data from the German Socio-Economic Panel (GSOEP) give evidence that wages in the host-country and completed migration durations have an inverse U-shaped relationship: migration durations respond negatively to higher wages in the host-country, except at very low wage levels.

Several studies have confirmed the role that attachment to the home country can play in return migration. Constant and Massey (2002 and 2003) show that having close relatives (i.e. a spouse or children) in the home country was an important factor for return for immigrants in Germany. Conversely, attachment to the host country (i.e. "feeling German") and access to German nationality had a positive effect on the decision to settle permanently. Massey and Espinosa (1997) obtained similar results in the case of Mexican migrants in the US. Moreover, they found that the amount of time spent in the US decreases the likelihood of return, eventually increasing the attachment to the host and decreasing that to the home country.

Own work using Albanian data (see Chapter 2) shows similar results: the amount of time spent abroad, access to legal residence and the presence of children abroad significantly reduce the probability of return.

1.1.2.2 Failure of the migration target and accumulation of human capital

Return migration is possible in a human capital approach if assuming uncertainty or imperfect information about the labour market prospects at destination (Borjas and Bratsberg 1996). In this case, migrants who experience outcomes worse than expected (i.e. do not find a job or find a job only at a lower wage than expected) may decide to return. Alternatively, they have the option to work temporarily in the host country (i.e. invest in their human capital) and, thus, improve their earnings potential in the home country after return.[7]

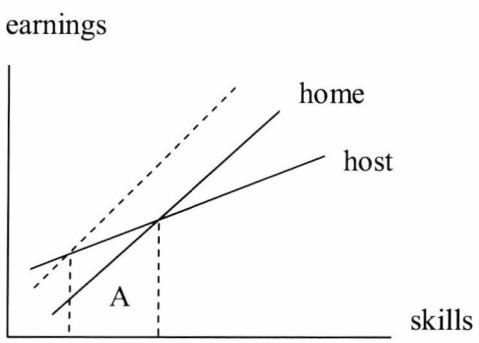
The Borjas and Bratsberg (1996) model allows predictions about the selectivity of migrants into migration and return. If the rate of return to skills is

[7] See also Dustmann (1995).

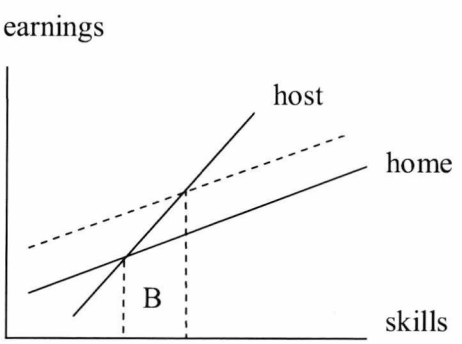
relatively lower in the country of origin compared to the destination country, individuals with higher than average skills will migrate. The migrants with highest skills will intuitively gain most from working in the host country and will stay permanently. The least skilled are the "marginal" migrants and would, therefore, be most responsive to a change in earnings at home. Therefore, the least skilled will return in order to collect the benefits of their investment in human capital. The opposite is true in the case of a relatively higher rate of return to skills in the home country.

Figure 1.1: Self-selection into emigration and return migration

(a) Positive self-selection into return



(b) Negative self-selection into return



Source: de Coulon and Piracha 2005.

Using home and host wages (net of migration costs) as thick lines and expected wages (net of remigration costs) upon return to the home country as dotted lines, de Coulon and Piracha (2005) illustrate the two cases of self-selection graphically (see Figure 1.1). Assuming a relative higher rate of return to skills in the home country in case (a) there are gains from migration for individuals with lower skills, whereas those with relatively higher skills are better off staying in the home country. Amongst the negatively selected migrants, those who have

relatively higher skills will face incentives to collect the gains from returning home (plot A). In case (b), the rate of returns to skills is lower at home. Individuals with relatively higher skills will migrate and the least skilled of them will find it worthwhile to return after a spell in the host country (plot B).

The empirical results in Chapter 2 confirm the hypothesis and the empirical findings of Borjas and Bratsberg (1996) that return migration accentuates the type of selection that generated the initial migration flow: Albanian migrants are relatively lower educated compared to non-migrants and the relatively better educated of them return. Additionally, re-migration of return migrants (i.e. circularity) follows this selection pattern: circular migrants being significantly less educated compared to migrants who return permanently to Albania after the first trip. Regarding the failure of the migration target, we find that it is a negative experience that not only determines return migration but seems to act as a deterrent for future migration movements as well.

1.1.2.3 Accumulating capital for investment in the home country

In a model that links the savings behaviour in the host country, the optimal migration duration, and the activity in the home country (i.e. inactivity, wage employment or self-employment), Dustmann and Kirchkamp (2002) find, as in earlier literature, that increasing wages abroad has an ambiguous effect on the optimal migration duration of wage employees. Nevertheless, they report the effect to be negative in the case of migrants that choose to be inactive after return, since staying abroad does not provide a relative gain in the accumulation of savings but only decreases their marginal utility (because of the preference for consumption at home). The effect is even stronger for the future self-employed, as

an early return would allow them to benefit from investing the accumulated capital for a longer period of time.

Mesnard (2004) adds to a Djajic and Milbourne (1988) model capital constraints in the home country and further assumes that self-employment earnings after return are higher compared to wage earnings both abroad and at home. In this setting, return migration is, therefore, part of a life-cycle plan to accumulate the start-up capital needed to become self-employed in the home country. Similar to the models presented above, she concludes that an increase in the host country wage has an ambiguous effect on the migration duration. For those choosing to become self-employed after return, both higher self-employment earnings and lower start-up costs would decrease the amount of time spent abroad. Nevertheless, policies of lump sum payments offered by some host countries to migrants on condition that they return to invest in the source country, may, in fact, induce migrants who initially intended to return as wage employees to stay longer in the foreign country, until they have accumulated enough start-up capital.

1.1.2.4 The NELM: risk spreading and relative deprivation

The New Economics of Labour Migration (NELM) adds a few more explanations to the temporary migration phenomenon. Assuming that migration decisions are made by a larger unit of related people (i.e. the family or household), the members of the unit may act collectively not only to maximise income, but also to minimise risk and overcome constraints in various markets (e.g. insurance, future or capital markets). For example, a family in which the total income risk is lowered by

placing one of the members in a foreign labour market,[8] has now the possibility to make riskier, higher return investments. If the investment is successful, the need for a migration-provided insurance ceases and the migrant could return (Stark 1991).

Another reason for return could be relative deprivation. According to the theory, an individual may move to work abroad for a higher wage, in order to improve his rank in the income distribution of his home reference group (see Stark 1984; Stark and Taylor 1991 and 1989; and Stark and Yitzhaki 1988). However, after a certain time spent abroad he would change reference groups and start to relate himself to the income distribution in the host country. In this case, a successful migrant would decide to return when feeling relatively less deprived in the home compared to the host country reference group.

1.1.3 Development Effects of Return Migration

Return migrants contribute to the development of their country of origin primarily through the transfer of two resources: human capital (i.e. education, working experience or business skills acquired abroad) and financial capital (i.e. repatriated savings). The type of impact depends on the occupation they choose upon return. Wage employees may have a positive effect on the home economy, if they contribute to a relative increase in the human capital content of the labour force and/or if the increased labour supply helps to ease shortages that hinder development. By creating new businesses, self-employed returnees can help to improve the functioning of markets. Moreover, if they hire paid employees, they additionally have a positive contribution on the home country's general

[8] The conditions in the two labour markets are assumed to be not fully correlated.

employment. Even inactive return migrants might have a marginal positive impact on the economy - at least at the regional level - as long as the increased demand generated by spending the savings accumulated abroad is met by an increase in production capacities and/or output. However, if the local production capacities fail to adjust, the increased demand might generate inflation and/or have an adverse effect on the current account (see World Bank 2005a).

Few macroeconomic studies have tried to assess the impact of return migration on the home economy, mainly because of the lack of adequate data but also due to the complexity of the processes involved. For example, return migration does not only have an impact but is at the same time determined by economic development in the home country, the two processes being rather mutually reinforcing (Dumont and Spielvolgel 2008). The economic literature on the impact of return migration focuses primarily on the occupational attainment upon return and the returns to human capital accumulated abroad (i.e. earnings gap between returnees and non-migrants). The remainder of the section discusses these issues in more detail, while section 1.2 discusses the determinants and impact of remittances and repatriated savings (i.e. transferred by both return and permanent migrants) on sending countries.

1.1.3.1 Return migration and occupational attainment

Several studies focusing on return migration in developing countries show that a substantial proportion of returnees start a business or work as self-employed in the home country. Mesnard (2004), for example, finds that the proportion of self-employed among return migrants in Tunisia is 26.3 percent. Although not significantly different from non-migrants (23.8 percent), the self-employment rate

of return migrants almost doubled when compared to their status before migration (15.6 percent). Dustmann and Kirchkamp (2002) report the percentage of self-employed among Turkish returnees from Germany to be even higher (51 percent). Nevertheless, the majority were working on own account, while only about 40 percent were employers (i.e. had paid employees in their companies) and even less (24 percent) employed individuals from outside the family.

There are two sets of explanation for the higher self-employment rates among returnees: i) nascent entrepreneurs overcome home market capital constraints by savings accumulated abroad (Mesnard 2004; Ilahi 1999), and ii) the exposure to the host country's market economy environment helps migrants to accumulate ideas and skills necessary to start and run a business (Dustmann and Kirchkamp 2002; McCormick and Wahba 2001).

McCormick and Wahba (2001) find in the case of return migration to Egypt that the probability of starting up a business increases with the amount of time spent abroad and, thus, the amount of financial savings and/or entrepreneurial skills accumulated. This is, however, true only for relatively higher skilled migrants - who are in general more likely to become self-employed - and they explain this relationship by the fact that *ceteris paribus* the work experience of unskilled workers abroad would teach them little that is useful in running a business.

There is, however, no consensus on the way the general education/skill level of the return migrants affects business start-ups. Ilahi (1999) shows that among the returnees to Pakistan the unskilled workers exhibit a greater propensity for non-farm self-employment over wage employment, while high skilled and skilled workers do the opposite. Due to the failure of the Pakistani

economic system to create enough productive employment, unskilled workers are often left outside the labour market. Therefore, they choose to engage in self-employment activities that do not require labour market skills, like small retail and wholesale trade or small and medium sized workshops. This is consistent with the findings that returnees in developing countries set-up businesses in the retail and service sectors, rather than manufacturing (see Puri and Ritzema 1999).

The study conducted in Chapter 3 provides some reconciliation between the contradictory findings with regard to education. By explicitly differentiating between self-employment as either own account work (i.e. without hiring any employees) or entrepreneurship, I find that the own account workers have characteristics closer to non-participants in the labour market (i.e. lower education levels), while entrepreneurship is positively related to schooling, foreign language proficiency and savings accumulated abroad.

The fact that the accumulation of capital and/or skills is a process that takes several years, the age at emigration proves to be an important determinant of the occupation after return as well. Dustmann and Kirchkamp (2002) show that emigrating at a later stage in life significantly increases the probability of non-participation and with a similar percentage decreases the probability of being self-employed, since setup costs reduce utility from entrepreneurship, relative to non-employment.

1.1.3.2 Returns to human capital accumulation

Temporary migration produces human capital gains for the home economy if the return migrants accumulate more skills abroad or skills that are valued more in the home labour market compared to those they would have accumulated had

they not migrated. The most common way to assess the human capital gain is through an eventual wage premium. That is, everything else equal, do individuals having a past migration experience earn more in the home country labour market?

Empirical evidence differs from country to country. Using a maximum likelihood method with two correlated selection rules (in order to take into account the endogeneity of the migration and the labour market participation decisions), Co *et al.* (2000) find that the premium for migration experience is apparently zero for men but positive for women in the case of returnees to Hungary. They explain this through the fact that women take up employment mainly in the sectors where foreign experience matters (e.g. financial services), while men are employed in sectors that are rather neutral to skills accumulated abroad (e.g., heavy industries and construction).

Another way of estimating the wage premium is by counterfactual analysis. Using predicted wage equations de Coulon and Piracha (2005) show that Albanian non-migrants would have improved their earning potential, had they migrated and returned. Returnees seem also to have made the right decision, as their income is higher than what they would have earned if staying. The highest rewards to work experience abroad are for those in managerial and self-employment occupations. As the results suggest, returns to return migration take the form of access to better jobs rather than higher returns to the formal skills (i.e. education and experience). This is consistent with the findings of Carletto and Kilic (2009) that past migration experience has a significant effect on upward mobility in the Albania labour market.

In the case of Romanian return migration, Radu and Epstein (2007) report that returnees earn in general more compared to non-migrants because of better

observable characteristics. Moreover, keeping everything else equal, returnees still earn an income premium that can be explained in terms of human capital accumulation rather than in term of signalling. As returnees are negatively selected with regard to unobservable characteristics, employers would be unlikely to interpret their work experience abroad as a signal of higher productivity.

1.1.3.3 Identification issues

An important problem in the analysis of the effects of temporary migration is that migrants and return migrants might be non-randomly selected groups from the home country population, with regard to unobservable characteristics (e.g. risk aversion, cognitive abilities, etc.). Therefore, on the average, a better labour market performance of return migrants compared to non-migrants could rather be the result of better unobserved abilities that migrants might have than of the human capital accumulated abroad. Similarly, a higher likelihood of returnees to be entrepreneurs might not be an effect of accumulated business experience or financial capital while abroad, but rather be related to their willingness to take risks that affects both the decision to engage in migration and to start a business.

There are two ways to cope with this sort of bias: to treat it either as an endogeneity or as a sample selection problem. Choosing the appropriate model hinges on the way in which return migration is believed to affect the labour market performance (or occupational attainment after return). If migration (and return) is assumed to have only an intercept effect, the bias can be treated as an endogeneity problem. This was, for example, done by Co *et al.* (2000) to asses the labour market gains from migration for returnees in Hungary. They estimated Mincer type equations in which they included a dummy to control for past

migration experience (i.e. return migration). In order to identify the model, the wage equation was jointly estimated by maximum likelihood with two index functions to account for the endogeneity of the migration and the labour market participation decisions. In this model, the coefficients are, however, restricted to be the same for returnees and for non-migrants.

If the coefficients are assumed to differ (i.e. the effects of the observed individual characteristics on labour market performance are not the same for non-migrants and return migrants) then we have to deal with a sample selection bias. In this case, return migration will have not merely an intercept effect but a slope effect and the outcome equation has to be estimated separately for the two population groups. Such a model was used by de Coulon and Piracha (2005) to assess the wage effect of return migration in the Albanian context. For identification they used a maximum likelihood Heckman-type model in which the wage equation for each group is estimated jointly with a dichotomous selection equation in that respective group. The true effect of migration on earnings is then computed by comparing the conditional wages of return migrants to the counterfactual wages (i.e. the conditional wage of return migrants had they not migrated). The counterfactual wages are obtained by applying the coefficients estimated for returnees to the characteristics of non-migrants. A similar model was used in Chapter 3 for the assessment of the migration experience on the occupational attainment of return migrants in Albania.

An additional problem when dealing with selectivity issues in the return migration context is that data on emigration from and return migration to developing countries often do not permit an accurate description and analysis of a double selection process (i.e. first, the decision to migrate and, second, the decision

to return). Datasets in migrant sending countries often do not have information on the migrants that are abroad at the time of the survey. Therefore, the decisions to migrate and that to return can not be modelled distinctively but as one single decision (i.e. to migrate and return) and a most likely non-random selected group (i.e. the migrants abroad) is left out of the model (see Co *et al.* 2000; de Coulon and Piracha 2005; Radu and Epstein 2007).

1.2 International Migrants' Remittances

1.2.1 Data and Importance of Remittances

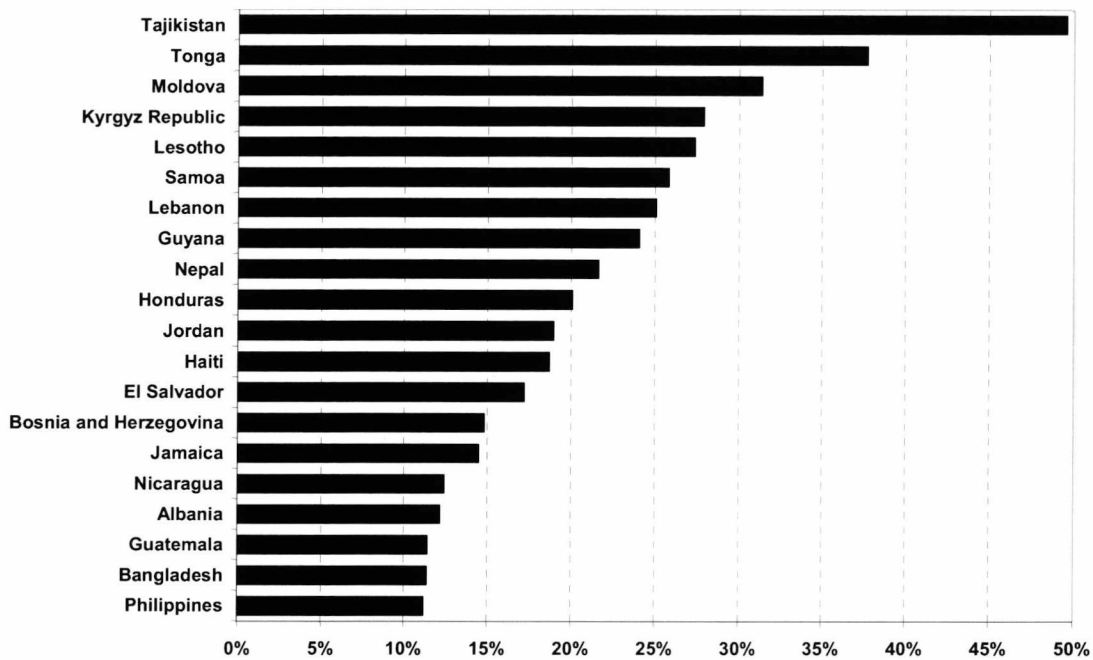
Balance of payments statistics illustrate that international migrants' remittances are an important source of foreign exchange for many developing countries. For all top 20 recipients in terms of GDP share the contribution is higher than 10 percent. In small countries like Tajikistan, Tonga, Moldova, Kyrgyz Republic, Lesotho, Samoa, and Jordan remittance inflows represent even more than a quarter of the GDP (see Figure 1.2; Ratha *et al.* 2009).

In 2004, recorded remittance receipts were equivalent to about 5.4 percent of developing countries' cumulated exports, 6.7 percent of cumulated imports and 7.5 percent of cumulated domestic investment. They were also larger than total exports of goods and services in Albania, Bosnia and Herzegovina, Cape Verde, Gaza, Haiti, Jamaica, Kiribati, Lebanon, Nepal, Samoa, Serbia and Montenegro, and Tonga. In another 28 countries, they were higher than the earnings from the most important commodity export: e.g. in Sri Lanka remittances were higher than tea exports, while in Morocco larger than tourism revenues (World Bank 2005a).

Another way to highlight the importance of remittances is by illustrating the extent to which they contribute to income and/or expenditures. Household

survey data show that remittances alleviate poverty and are often a crucial element for the survival for many poor households in developing countries (Rapoport and Docquier 2006). For example, 17 percent of households in the Philippines receive remittances from abroad, representing 8 percent of national income (Rodriguez 1996). In Peru, 25 percent of households receive remittances, contributing to about 22 percent of their income (Cox *et al.* 1998). The World Bank (2004) assesses that about 15 percent of the rural households in Afghanistan are dependent on remittances from abroad, covering about 20 percent of their daily expenditures.

Figure 1.2: Top 20 recipients of migrants' remittances (percent of GDP; 2008)



Source: Rataha *et al.* 2009.

1.2.2 Determinants of migrants' remittances

The level of migrants' remittances depends on both the migrants' capacity (i.e. their income and savings) and their motivation to remit to relatives and friends

living in the home country. As Stark (1991) points out, no general theory of remittances exists. The literature developed around the motives that migrants eventually have to remit money and has distinguished between pure altruism, pure self-interest, informal agreements with the family members left in the home country, and portfolio management decisions.

1.2.2.1 Pure altruism

The most obvious motive for remitting money back home is altruism, i.e. the migrant cares about his relatives and derives utility from their welfare (Lucas and Stark 1985). The migrant's utility function, as represented by (Rapoport and Docquier 2006), is:

$$U_M = (1-\gamma_H)V(y_M - T) + \gamma_H V(y_H + T), \tag{1.2}$$

with $V' > 0$ and $V'' < 0$; where y_M stands for the migrant's income, y_H is the income of the family members in the home country, T is the amount of remittances sent to the family members living in the home country. The optimal level of remittances being:

$$T^* = \gamma_H y_M - (1-\gamma_H) y_H \tag{1.3}$$

The model predicts that the amount of remittances should increase with the migrant's income and decrease with the recipient household's income. A very strong testable prediction of the pure altruism motive is that an increase by one dollar in the income of the migrant, coupled with a one-dollar drop in the receiver's income, should raise the amount transferred exactly by one dollar (see Rapoport and Docquier 2006). Nevertheless, this was hardly ever confirmed in empirical studies.

Remittances should also decrease over time as the attachment to the family gradually weakens (Merkle and Zimmermann 1992). The same should happen when the migrant settles permanently in the host country and family members follow him/her. However, as Lucas (2005) points out, migrants get better paid the longer they live in the destination country and, thus, their ability to remit increases. He argues that remittances may initially rise and then decline with the duration of stay, which suggests "an optimal length of stay to maximize remittance flows, balancing greater earning power against diminishing attachment".

Empirical evidence from Botswana gave, for example, support to the first prediction (Lucas and Stark 1985). *Ceteris paribus*, a one percent increase in the migrant's wage induced increases in remittances ranging from 0.25 percent, at low wage levels, to 0.73 percent, at high wage levels. However, the correlation between remittance levels and the income of the relatives back home was found to be insignificant. That being evidence that altruism alone is insufficient for explaining the motivation to remit.

1.2.2.2 Pure self-interest: inheritance and exchange

Another motive for remitting money to family members in the home country is self-interest. For example, migrants may remit money to their parents driven by the aspiration to inherit, if we assume that bequests are conditioned by behaviour (Bernheim *et al.* 1985). In this case, the amount of remittances should be positively determined by the recipients' income and wealth, the probability of inheriting (i.e. parents' age, number of siblings, etc.), and negatively affected by the degree of risk

aversion, providing that inheritance is more risky than other available forms of investment (see de la Brière *et al.* 2002).

Another selfish motive is exchange, if assumed that through remittances the migrant "buys" services such as taking care of the migrant's assets (e.g. real estate, cattle) or relatives (e.g. children, elderly parents) at home (see also Cox 1987). Empirical evidence from Kenya and Botswana shows that wealthier parents received a larger share of migrant earnings through remittances (Hoddinott 1994; Lucas and Stark 1985). However it could not be discerned whether the motives were to inherit or to "buy" certain services. Brown (1997), on the other hand, found evidence that Tongan and Western Samoan migrants in Sydney are motivated to remit out of self-interest, in particular for asset accumulation and investment in the home areas.[9]

Remittances for investments in the home country (e.g. real or financial assets) are often determined by the intention to return. Empirical evidence shows that Greek migrants in Germany remitted more (because experiencing a "return illusion") compared to Greek migrants in Australia and the United States (experiencing a "permanent settlement syndrome"; Glytsos 1988 and 1997). Immigrants in the United States exhibit the same remittance behaviour: each 1 percent increase in the time spent in the United States decreases the likelihood of remitting by 2 percent and immigrants that have their political focus in the United States are only half as likely to remit as the others (Lowell and de la Garza 2000). Canada, a country that receives mainly permanent immigrants, registers a similar experience, with immigrant households spending just a modest portion of their

[9] Self-interest might motivate also charity spending (e.g. donations to schools, religious organisations), if it enhances prestige and political influence in the local community.

budgets on remittances, on average 2 to 6 percent of their total household expenditures (see Chapter 4). Recent evidence from German household data confirms that the migrants intending to return are significantly more likely to remit and remit significantly more (both to family members and for saving purposes) compared to permanent migrants (Dustmann and Mestres 2009).

In contrast to remittances for consumption proposes, the amount of repatriated savings invested at home are expected to depend also on relative macroeconomic factors in the host and home countries, i.e. interest rates, exchange rates, inflation, and relative rates of return on different financial and real assets.

Relying on such assumptions, governments of migrant sending countries use to implement incentive schemes (e.g. premium exchange rates and foreign exchange deposits with higher returns) in order to attract remittances from their Diasporas. However, contrary to the conventional belief, empirical analysis reveals that incentives to attract remittances have not been very successful.

Empirical results for Turkey from the period 1963-1982 illustrate that neither variations in the exchange rate nor changes in the real interest rates affected the amounts of remittance flows (Straubhaar 1986). Remittances were, however, more sensitive to political instability (i.e. changes in government). An environment of confidence in the safety and liquidity of savings was much more important than options of possible higher returns. Similarly, evidence from the Philippines suggests that remittances became volatile and suffered a decline as the economy slipped into crisis in 1999 and 2000 (Ratha 2003).

1.2.2.3 Implicit family agreements: co-insurance and loan

Household arrangements, particularly within an extended family, may be considered more complex in the real world and certainly more balanced as under the two extremes: pure altruism and pure self-interest. Therefore, Lucas and Stark (1985) aimed to explain the motivations to remit by a more eclectic model labelled "tempered altruism and enlightened self-interest". In this model, remittance determination is placed in a family framework of decision-making, with remittances being endogenous to the migration process. For the household as a whole, there may be a Pareto-superior strategy to allocate certain members as migrants, and remittances is the mechanism for redistributing the gains. Two major sources for potential gain are taken into account: risk spreading and investment in education of young family members. In this context, the intra-family arrangement is regarded as an *implicit co-insurance agreement* or an *implicit family loan agreement*. The "contract" between migrant and family is safeguarded by the family specific assets (e.g. credit and loyalty) but also by self-seeking motives of the migrant (e.g. aspiration to inherit, maintenance of assets owned in the home area, and the intention to return home with dignity).

In the implicit co-insurance model, the high extent of uncertainty related to the implementation of a migration project may be minimised by the financial support from home. In turn, the migrant acts as an insurer for the family members back home in a second phase of the migration process, when the migrant has already a secure employment, high enough earnings and positive expectations about future income. By receiving remittances, the family will then have the opportunity to undertake investment projects including more risky ones and, thus, attain a higher level of utility. Lucas and Stark (1985) found support for this

hypothesis, given the evidence that Botswanan households having more cattle receive significantly more remittances in periods of drought.

The family loan agreement hypothesis considers remittances to be repayments of an informal and implicit loan contracted by the migrant for investment in his education and migration costs (Poirine 1997). Given the nature of the loan, remittances cannot be reduced over time - as predicted by the co-insurance or altruistic models - and are mainly used for consumption purposes. Evidence from Botswana's rural to urban migration showed that the number of the migrants' years of schooling and the number of years of schooling of the migrants' children are positively and significantly correlated to remittances, giving support to the loan agreement hypothesis (Lucas and Stark 1985). These findings were confirmed by evidence from Tonga and Western Samoa, given the regularity of remittance flows (Poirine 1997).

To sum up, it can be noted that these numerous hypotheses trying to explain migration decision and remittances are not always mutually exclusive. In fact, remittances might be driven by all of these motives at the same time, each one explaining one part of the remittance amount or period of remitting practice. One of the elements can dominate over the others for a period or for a sample of migrant workers, and their roles can be later interchanged. This illustrates the complexity of the remittance phenomenon and explains the challenges to the attempts to develop a universal theory (see El-Sakka and McNabb 1999). A further complexity, illustrated in Chapter 4, is that the remittance behaviour is affected by social and/or family norms that vary among immigrant groups originating from different cultural backgrounds.

1.2.3 The economic effects of migrants' remittances

There is a large economic literature on the effects of migrants' remittances on the remittance receiving countries.[10] Most of it focuses on three main issues: the impact of remittances on income distribution and poverty alleviation; the impact on employment, productivity, and growth; and the contribution of remittances to the balance of payments.

1.2.3.1 Remittances and income distribution

Using a dynamic model and data from two Mexican villages, Stark *et al.* (1986 and 1988) found evidence that the income distribution effect of remittances depends decisively on the migration history and the degree to which migration opportunities are diffused across households. They suggest that the dynamics of migration and income distribution might be represented by an inverse U-shape relationship. At early stages of local migration history, information about target destinations and employment opportunities in destination countries is limited. Because migration is costly, mainly wealthier households send migrants abroad and benefit from remittances, causing income inequality to rise. Later, as migration spreads over a greater range of income classes, poorer households benefit from migrant remittances too and remittances have an equalising effect on income distribution.

Evidence derived from dynamic models is, however, divergent. Using a similar approach to that of Stark *et al.* (1988) and inter-temporal data from the 1973, 1978, and 1983 Yugoslavian household surveys, Milanovic (1987) found no support for the U-shape relationship hypothesis. In contrast, his results showed

[10] A recent literature survey is Rapoport and Docqier (2006).

that remittances lead to income divergence. Furthermore, the effect differs according to the periods and social categories considered.

Static approaches lead to conflicting results as well. For example, evidence from Egypt shows that despite poverty reduction (i.e. less households below an estimated poverty line), remittances caused the Gini coefficient to rise by about 25 percent (from 0.23 to 0.29; Adams 1991). Rodriguez (1998) found that remittances contributed in the 1980s to a 7.5 percent rise in rural income inequality in the Philippines, in spite of their low share in the households' total income. Household survey data from Pakistan also confirm that the wealthier income groups were those which benefited the most from migrants' remittances (Adams 1998). Contrarily, studies such as Ahlburg (1996), Taylor and Wyatt (1996) and Taylor (1999) found confirmation for the equalizing effect of remittances on income distribution in Tonga and Mexico.

A recent theoretical study suggests that the conflicting results of the empirical literature may be reconciled if factoring in the effects of migration on domestic income sources (Shen *et al.* 2009). They show that the inequality impact of remittances and local wage adjustment tend to reinforce one another in the case of high initial inequality, but may compensate one another in the low initial inequality case. This could have important implications for empirical studies. For example, in case studies where inequality is high, the omission of wage adjustments may lead to an underestimation of the equalizing effect of remittances. Contrariwise, in situations with lower inequality, taking this labour market effect into account could reverse an inequality enhancing effect. However, the differences in empirical results could also be explained through the fact that societies were probably observed at different points of their dynamic paths.

1.2.3.2 Remittances and growth

The development impact of remittances on the receiving economies was often assumed to depend on the way they are used. A longstanding literature has suggested that most remittances are spent on basic consumption needs, health care, education and real estate, and only a small fraction on productive investments.[11] Castaldo and Reilly (2007) show, for example, that on average the budget share spent by Albanian households receiving remittances from abroad on durables is 25 percent higher and that spent on utilities 16 percent higher compared to those not receiving such transfers. One explanation for this spending pattern could be that many remittance receiving households are from the lower end of the income distribution (see section 1.2.1). Assuming that preferences are ordered, individuals probably consume to meet first their basic needs (i.e. food, shelter, clothing, and durables) and in many cases there is no income left to save or invest. Therefore, it is reasonable to expect that until the developing countries reach a certain level of welfare, households will continue to exhibit the same spending pattern (Lowell and de la Garza 2000).

Another way of looking at the remittances' use is whether they are spent in a different way than other sources of income. Some empirical evidence suggests that this is indeed often the case. Adams (1998) shows that in Pakistan a much larger part of international remittances are saved (71 percent) compared to domestic urban-rural remittances (49 percent) and rental income (8.5 percent). Similarly, Yang (2008) finds that Philippine migrant households that experienced favourable exchange rate shocks during the 1997 Asian financial crisis and a

[11] Remarkably, spending on education is generally categorised in the literature as consumption, despite the fact that economic theory regards human capital as one of the main determinants of endogenous economic growth.

positive change in remittances, kept children longer in school, took children out of the labour force, increased their hours working in self-employment and were more likely to start relatively capital-intensive enterprises.

Contrarily, Zhu *et al.* (2009a and b) report that Chinese rural households have a significantly greater marginal propensity to consume out of remittances than out of other income. They suggest that the use may depend on the type of income (i.e. permanent or transitory) the receiving household perceives remittances to be. The prevalence of circular and repeat migration in the case of the Chinese internal migration would make rural households regard remittances as permanent income and, thus, save less out of them.

Even if the migrant or his family do not invest the remitted money themselves, migration and remittances might have a positive impact on lowering the cost of capital and alleviating capital constraints, through informal micro-lending. Woodruff and Zenteno (2007) found that larger migration networks in the community are associated with larger investments and higher capital–output ratios – in the case of small enterprises in high-capital sectors also with higher sale levels – among microenterprises in Mexico.

Yet another part of the literature emphasised that even the disposition of remittances on consumption and real estate may produce various indirect growth effects in the economy. These include the release of other resources to investment and the generation of *multiplier effects*. One remitted dollar spent on basic needs is not necessarily a waste but might stimulate retail sales, which increase the aggregate demand for goods and services, and finally boost output and employment.

The empirical evidence indicates that multiplier effects can generate a substantial increase in GDP. For example, Glytsos (1993) estimated that in Greece remittance inflows in the 1970s had a gross output multiplier of 1.7,[12] accounting for more than half of the GDP growth rate. Furthermore, high proportions of employment were supported by remittances: 10.3 percent in mining, 5.2 percent in manufacturing, and 4.7 percent in construction. Remarkably, spending on consumption and investment produced similar multipliers of 1.8 and 1.9 respectively. And contrary to common opinion, expenditure on housing was found to be very productive, with a multiplier of 2.0.

These findings were confirmed by the results of Léon-Ledesma and Piracha (2004) that remittances have significantly contributed to the increase of the investment level in eleven Central and Eastern European countries. Similarly, Ratha (2003) showed that every remitted dollar spent in Mexico induced a GNP increase of US$2.69 for the remittances received by urban households and US$3.17 for the remittances received by rural households.

Nevertheless, remittances do not have only positive effects on the receiving economy. If remittances generate demand greater than the economy's capacity can meet, and this demand falls on non-tradable goods, remittances can have an inflationary effect. For example, due to remittances inflows, the price for agricultural land in Egypt rose between 1980 and 1986 by about 600 percent (Adams 1991). Other potential negative impacts are the encouragement of continued migration of the working age population and diminished labour supply among recipients (i.e. moral hazard). All these could perpetuate an economic dependency and undermine development prospects (Buch *et al.* 2002). Using panel

[12] One extra drachma of remittances generated 1.7 drachma of gross output.

methods on a large sample of countries Chami *et al.* (2005) found that remittances and economic growth are negatively correlated, which could indicate that the moral hazard problem is severe.

A reconciliation of these contradictory findings is given by Catrinescu *et al.* (2009), by pointing to the fact that institutions play an important role in how remittances affect economic growth. Their empirical findings on a dataset similar to that used by Chami *et al.* (2005) show that a sound institutional environment positively affects the volume and efficiency of investment. In the presence of good institutions, remittances are often channelled more efficiently, ultimately leading to higher output.

The effect of remittances can also be analysed simultaneously to those of emigration, with remittances considered as a possible compensation to the output decline caused by the loss of human capital and trade opportunities due to emigration. Quibria (1997) theorised that in the case of low-skilled emigration, the welfare of the source country rises if remittances compensate the domestic income loss. If high-skilled workers leave or emigration is accompanied by capital outflow, remittances have a welfare increasing effect for the non-migrants only when the capital/labour ratio remains unchanged or rises. If it falls, the welfare effect is ambiguous or even negative. These predictions are confirmed by the empirical results of Straubhaar and Wolburg (1998). They found that remittances have not compensated the welfare loss of Central and Eastern European emigration to Germany, mainly because the migrants were relatively high-skilled.

1.2.3.3 Balance of Payments effects of remittances

Remittances are an addition not only to the households' income but also to the credit side of the balance of payments. Remittances often offset chronic balance of payments deficits by reducing the shortage of foreign exchange. Moreover, these transfers can help ease the often-crucial restraint imposed on economic development by balance of payments deficits. They have a stronger positive impact on the balance of payments than other monetary inflows (such as development assistance, FDI or loans), because their use is not tied to particular investment projects with a high import content, bear no interest and do not have to be repaid. In addition, remittances are a much more stable source of foreign exchange than other private capital flows and in certain cases exhibit even an anti-cyclical character (Buch and Kuckulenz 2009; Nayyar 1994; Straubhaar 1988).

Developing countries recognised this straightforward effect of remittances and measures were implemented to increase inflows. Nevertheless, such measures must be implemented with care, because apart from the positive balance of payments effects, remittances have an impact on the economic activity in the home country as well.

As most remittances are spent on consumption of goods and services (see section 1.2.3.2), a crucial factor for their overall effect is the extent to which the aggregated demand generated can be met by domestic output. If the remittance-driven demand falls on tradable goods and this is not met by domestic production, imports will rise causing (or aggravating) a foreign exchange deficit (i.e. the so called "boomerang" effect). However, most economists disagree that it is the remittance-induced imports that cause trade balance problems. The propensity to import can also increase as a consequence of the general

development of the economy, a structural change in the production of consumer or investment goods, or of the international division of labour. The "boomerang" effect hypothesis could not be confirmed by empirical research. In South European countries, empirical evidence shows that remittance-induced imports between 1960 and 1981 accounted for 1 percent in Spain and Italy, to 4.9 percent in Greece and 6.2 percent in Portugal (Glytsos 1993; Straubhaar 1988).

When additional demand falls on non-tradable goods, remittances can have an appreciation effect on the real exchange rate. The overvalued exchange rate reduces the competitiveness of the domestic industries on foreign markets (by expensive exports), in the home markets (by cheap imports), and may shift resources from the tradable sector into the non-tradable sector; the so-called "Dutch disease" effect. This may further lead to balance of payments pressures, a slower growth of employment opportunities, and consequently to a further increase in the incentive to emigrate. Empirical evidence from Egypt, Portugal and Turkey supports such fears, but the effect was marginal in most of the observed cases (McCormick and Wahba 2003; Straubhaar 1988). A possible reason for the insignificant "Dutch disease" effect is that the additional import of cheap capital goods may increase productivity, and therefore improve the competitiveness of domestic products. Moreover, the imported capital goods may be used to substitute other imports and/or to produce exportable goods.

1.3 Synopsis of Essays

Determinants of Circular and Return Migration

While the socio-economic motivations and determinants of temporary migration have been extensively analysed in the literature most studies focus on the decision

of migrants to return to the home country and the amount of time spent abroad, irrespective of the form of temporary migration. The increased interest in circular migration gives rise, however, to questions about the differences in socio-economic characteristics between circular/repeat migrants and migrants who return permanently to the home country (usually after the first trip) and the determinants of these distinctive temporary migration forms. Assessing them could be fundamental in understanding the way in which migration can be more effectively managed for the benefit of both sending and receiving countries.

This chapter aims to fill this gap by analysing the correlates and determinants of different forms of temporary migration in a systematic way. Our main research questions are: To what extent do the socio-economic characteristics of circular/repeat migrants differ from migrants who return permanently to the home country after their first trip? And, what determines each of these distinctive temporary migration forms?

Using data from the Albanian Living Standard Measurement Survey 2005, the empirical results show that the form of migration is determined by gender, age, the labour market prospects for specific skills, family ties, urban/rural origin, and past migration experience. Being a male, having a lower education level, originating from a rural area and having a positive temporary migration experience in the past are factors that seem to determine circular migration.

The results also confirm the hypothesis and empirical findings of Borjas and Bratsberg (1996) that, given the relative returns to skills in the home country, return migration accentuates the type of selection that generated the initial migration flow. From the initial middle to low educated migrant population those with the highest education return to Albania, leaving abroad a permanent migrant

group with an even lower average education level. Additionally, the results provide evidence that re-migration of return migrants (i.e. circularity) follows the same selection rule: circular migrants being significantly less educated compared to migrants who return permanently to Albania after the first trip.

Return Migration and Occupational Attainment

Recent research on the occupational attainment of return migrants has tried to explain the propensity of returnees to become self-employed. A key element missing from the literature is, however, the distinction between different types of self-employment. This distinction is important since working on own account is likely to have a weaker direct impact on employment (and hence growth) compared to entrepreneurship. Moreover, empirical evidence shows that the two groups are distinctive in terms of characteristics as well.

In this chapter, therefore, we study the occupational attainment of return migrants by explicitly differentiating between the propensities of returnees to become self-employed as own account workers (i.e. without having any paid employees) and as entrepreneurs (i.e. owners of firms with paid employees). We do this by considering four occupational alternatives: non-participation, wage employment, own account work and entrepreneurship.

The results of multinomial logit estimation confirm that own account workers have characteristics closer to those non-participating in the labour market (i.e. lower education levels, failure of the migration target), while entrepreneurship is positively related to schooling, foreign language skills (i.e. Italian), better infrastructure, and target saving migration. Furthermore, with the time spent in Albania after return, returnees opting for non-participation and own

account work seem to re-integrate into the labour market and find a way into paid employment, supporting the "parking lot" hypothesis.

A decomposition analysis shows that the difference between returnees and non-migrants is almost solely due to the past migration experience and, thus, the human and/or financial capital accumulated abroad. This finding has important policy implications. Even after sorting out small self-employment activities and partial effects attributable to characteristics, migration is shown to have an important impact on job creating activities in Albania.

The results also show that the impact of return migration on occupational attainment needs to be differentiated not only by forms of self-employment but also by forms of migration: target savers having the highest odds of being entrepreneurs after return. This suggests that reducing financial constraints domestically could have positive effects for the economy.

On the Transfer Behaviour of Permanent Migrants: An Expenditure Demand System Analysis

In contrast to the extant literature on the determinants of migrants' remittances that models transfers in terms of motivations, this chapter aims to add a novel perspective by analysing the transfer behaviour of long-term/permanent migrants in the framework of a formal demand system. Transfers to persons are considered to be expenditures on social relations with relatives and/or friends, while transfers to charity/religious organisations expenditures which foster group membership.

Like Canadian-born, immigrants from North America and all of Europe consider transfers to persons outside the household a luxury and, therefore, adjust

more efficiently their transfers to changes in total expenditures (or income). The more stable expenditure portions transferred to persons by Asian immigrant households (i.e. elasticities closer to unity), could be evidence of closer ties to the extended family that characterise the family norms in this world region but also of unobserved socio-economic characteristics of the receivers (e.g. relatively lower income). The particular transfer behaviour of Asian households is confirmed by the fact that they send to persons a greater share of their expenditures at time of arrival, with no evidence of convergence to the Canadian-born norm over time.

The differential response with respect to changes in total expenditures (or income) suggests that during periods of economic downturn in migrant host countries migrants originating from countries with a nuclear family tradition (and/or with more developed social systems) would probably decrease their private monetary transfers more dramatically. Given these differences in transfer behaviour, the economic downturn we are currently passing trough will certainly change the geography of international remittance flows.

Migrants' Skills and the Use of Remittances

This chapter aims to provide insight into the way in which the education and skill level of migrants affect the remittance habits, purpose, and use, in the context of Afghan, Egyptian and Serbian immigrant groups in Germany. The information about the remittance patterns of the immigrants was collected through semi-structured interviews with key stakeholders of the immigrant groups, identified by a snowball sampling technique. Interviews were carried out in various German cities and Belgrade and Cairo.

The study provides evidence that the skill level significantly affects the purpose of remittances towards more productive investment: low skilled migrants mainly remit for securing the consumption need of their family members; the remittances of middle skilled migrants are more often used for investment saving (e.g. buying of real estate or bank account deposits); while high skilled migrants make also productive investments in their home countries.

The migrant's endowment with human capital often assures that he/she earns more money than he/she and his/her family require for meeting their basic needs and money is left for savings and investments. Moreover, the skills and expertise accumulated through education and work experience are also very important for the implementation of investment projects. Nevertheless, the migrant's decision to invest seems to be strongly conditioned by the political and macroeconomic climate in the home country.

CHAPTER 2: DETERMINANTS OF CIRCULAR AND RETURN MIGRATION

2.1 Introduction

The last two decades have seen a significant increase in temporary migration as compared to the more "traditional" long term/permanent migration which had been prevalent before 1990s. For instance, in 2006 alone nearly 2.5 million individuals were admitted into the OECD countries on temporary contracts, which is over three times the number of legally admitted permanent migrants (OECD 2008). Most of the temporary migration is repeat or circular in nature (i.e. the repeated back and forth movements between the home country and one or more countries of destination) but since there is no systematic tracking of migrants' movements, it is often quite difficult to estimate its magnitude. One exception is Constant and Zimmermann (2007) who found using the German Socio-Economic Panel data that more than 60 percent of the guest-workers exited and re-entered Germany at least once between 1984 and 1994.[13]

With recent migration programmes aiming to encourage short-term contracts not only in the EU but in other industrialised countries as well, temporary labour movement is likely to increase even further, especially repeat migration, as the new programmes introduce "assurances" of re-employment upon return to the host country after spending some time in the home country.[14] Furthermore, host countries have recognised the necessity to remove certain rules

[13] It is, however, difficult to tell whether the guest-workers who left actually returned to their countries of origin or spent some time in a third country.

[14] For example, France introduced a new type of permit in 2006, targeted at seasonal workers, allowing them to hold a job for less than six months during three consecutive years, provided they maintain their residence outside France

applying for long-term foreign residents that prevent them from returning temporarily to their home countries.[15] Given the policy emphasis on circular/repeat nature of temporary migration, it is important to understand the different dimensions of these movements and the characteristics and correlates linked to the varied temporary migration forms.

Circular migration is frequently linked to expectations of mutual gains for migrant sending and receiving countries and migrants and their families. The general idea is that circularity of skilled workers would allow industrialised countries to fill labour market gaps with the simultaneous compensation of possible "brain drain" in developing migrant sending countries, through transfers of know-how and technology. Moreover, circular migration at all skill levels should have a positive effect on sustained remittance flows; these private money transfers being often perceived to make an important contribution to poverty alleviation and investments in the home country.

While the socio-economic motivations and determinants of temporary migration have been extensively analysed in the literature (e.g. Djajic and Milbourne 1988; Stark 1991; Borjas and Bratsberg 1996; Dustmann 1995, 1997, and 2003; and Mesnard 2004), most studies focused mainly on the decision of migrants to return to the home country and the amount of time spent abroad, irrespective of the form of temporary migration.[16] The increased interest in circular migration gives rise, however, to questions about the differences in socio-economic

[15] The European Commission, for instance, is considering amendments to the directive on the status of long-term residents (Directive 109/2003) to allow migrants to return to their home countries for more than 12 months without putting their rights at risk (OECD 2008)

[16] There are a few exceptions. Massey and Espinosa (1997) analyse the re-migration decision of return migrants in Mexico but without taking into account the possible sample selection bias (i.e. return migrants may be a non-random selected group of the total population). Constant and Zimmermann (2007) study the topic from the host country perspective. They analyse the frequency of exits and the amount of time spent outside Germany by guest-workers who entered the country before 1984.

characteristics between circular/repeat migrants and migrants who return permanently to the home country (usually after the first trip) and the determinants of these distinctive temporary migration forms. Assessing them could be fundamental in understanding the way in which migration can be more effectively managed for the benefit of both sending and receiving countries.

We attempt to fill this gap in the literature by analysing the correlates and determinants of different forms of temporary migration in a systematic way. First, using a multinomial logit model, we analyse the choice of individuals from four alternatives: no migration, long-term/permanent migration, return migration, and circular migration.[17] Then, using a maximum simulated likelihood (MSL) probit model with two sequential selection equations, we investigate the probability of returnees to re-migrate after their first trip, by controlling for sample selection bias into initial migration and return migration. Along with the socio-economic and regional characteristics, we also take into consideration the effect of own migration history (e.g. past migration movements, legal vs. illegal residence, success in finding work and return reasons) on the re-migration intentions of returnees, as previous experience is assumed to strongly affect subsequent migration decisions. Our main research questions are: To what extent do the socio-economic characteristics of circular/repeat migrants differ from migrants who return permanently to the home country after their first trip? And, what determines each of these distinctive temporary migration forms?

We aim to answer these questions using data from the Albanian Living Standard Measurement Survey (ALSMS) 2005. This dataset contains a rich set of

[17] In our analysis return migration refers to permanent return to the home country after a single migration episode whereas circular migration refers to multiple (two or more) trips, i.e. repeat or seasonal migration. Temporary migration includes both migration forms.

information on the past trips of return migrants as well as information on both the non-migrant, migrant and temporary migrant population groups, allowing us to conduct a reasonable analysis of the self-selection of individuals into different migration forms.[18] To our knowledge this is the first study to analyse circular migration in the context of the European East-West migration experience.

Our results show that education, gender, age, geographical location and the return reasons from the first migration trip significantly affect the choice of migration form. Compared to return migrants, circular migrants are more likely to be male, have only primary education and originate from rural, less developed areas. Moreover, permanent return after the first trip seems to be determined by family reasons, a failed migration attempt but also the fulfilment of a savings target. The results also confirm the hypothesis that return migration accentuates the type of selection that generated the initial migration flow (see Borjas and Bratsberg 1996). Moreover, circular migration seems to occur along the same pattern, with circular migrants being significantly less educated compared to permanent returnees.

The remainder of the paper is organised as follows. The next section presents a general framework for analysis. Some background information and stylised facts on the different forms of Albanian migration are presented in section 3. Section 4 presents the econometric specification, while Section 5 discusses the empirical results of the multivariate analysis of the determinants of migration forms. The last section concludes the paper.

[18] Datasets from migrant sending countries usually have information only on non-migrants and return migrants, but not on the characteristics of migrants that are abroad, while migrant host country data lack information on the characteristics of the population from which immigrants are selected (i.e. the non-migrants).

2.2 Framework for Analysis

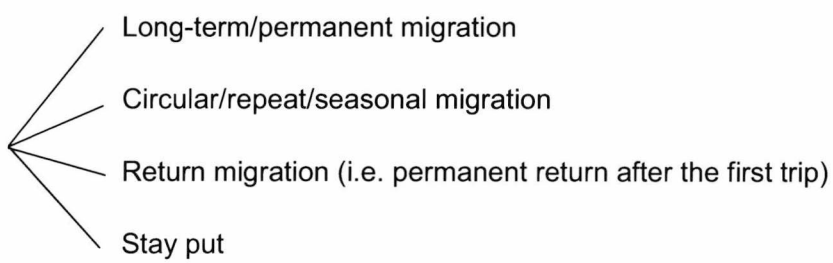
Inherent in the concept of temporary migration is the decision to return to the home country after spending a period of time in the host country. However, the idea of return migration is at odds with the perceived notion of migration which is seen as a strategic choice by individuals to move from a low-wage, high unemployment region/country to the one which has relatively higher wages and employment rates. Since agents make a life-time, utility maximising decision based on perceived net benefits from migration, migrants should intuitively remain abroad until retirement. However, many recent papers have explored the possibility of return migration before the end of the individual's active life cycle (i.e. retirement) and despite persistent income differences between the home and host countries.

Arguments used for explaining the decision to return are, for example, location-specific preferences (i.e. higher utility for consumption at home), differences in purchasing power between the host and home country currencies, higher returns at home to the human capital accumulated in the host country, or higher returns at home to the capital accumulated abroad in the presence of capital constraints (e.g. Djajic and Milbourne 1988; Dustmann 1995, 1997, and 2003; and Mesnard 2004).

Alternatively, return may occur due to a revision of the initial migration decision. For example, a migrant may return as a result of failure in achieving an initial migration target (i.e. does not find job or finds a job only at a lower wage than expected; Borjas and Bratsberg 1996) or because of ranking higher in the income distribution in the home reference group compared to the reference group in the host country (i.e. relative deprivation; Stark 1991).

The empirical analysis conducted in this paper is based on two decision frameworks. On the one hand, as in Hill (1987), the choice of circular migration can be considered integral to the initial migration decision, i.e. made before the migrant leaves the home country (see Decision Tree 1). Given higher income opportunities abroad and preference for living in the country of origin, individual utility is assumed to depend on a time path of residence in the home and host country and is maximised by choosing the optimal amount of time spent abroad as well as the frequency of trips.

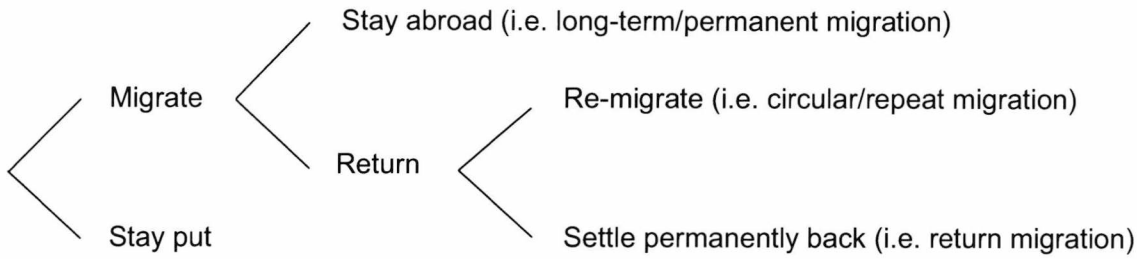
Decision Tree 1: Return and re-migration integral to the initial migration decision



On the other hand, the decision process can be, for example, altered by the presence of uncertainty or imperfect information about the prospects in the destination country (and, while abroad, about the prospects in the home country). In this setup, a migrant decides while abroad, based on the realities he faces, whether he should return or not.[19] However, once back home, there is another layer in the decision process regarding re-migration, perhaps due to problems of re-integration, the failure to find a suitable job or having to acquire more capital for the business started after return. In this case, the decision process would have the following form:

[19] Note that, for the purpose of our analysis, long-term and permanent migration is treated in the same way. Based on this we will use the two words interchangeably throughout the text.

Decision Tree 2: Multiple revisions of the migration decision



Another complexity of the migration process comes from the character of the migration decision: is it a choice or an outcome? If we consider return as endogenous then the migrant decides about the form of migration, the duration of stay abroad and the frequency of trips (Radu and Epstein 2007). Temporary migration might, however, be induced exogenously by host country policies as well. In recent years, there has been a proliferation of immigrant employment schemes in industrial countries for sectors with jobs avoided by natives, with strong seasonal fluctuations (e.g. farming, road repairs and construction), and in the service industry (e.g. hotels and restaurants). These employment schemes offer a variety of pre- and post-admission conditions and incentives, designed to keep flows temporary (Dayton-Johnson *et al.* 2007).

Nevertheless, migrants do have the option among different immigration regimes, e.g. those which are more open to permanent migration (i.e. US, Canada, Australia, and New Zealand), those with temporary migration programmes (i.e. West European countries and the Gulf States), and/or those that are more lax with respect to immigration offences (i.e. irregular migration, overstaying of temporary residence permits; e.g. South European countries). Therefore, in the majority of cases the form of migration can be assumed to be a choice.

2.3 Background and Data

Existing estimates suggest that since 1990 over a million Albanians (i.e. about 30 percent of the population) have either settled or worked for short time periods abroad, which is by far the highest proportion amongst the Central and East European countries (Vullentari 2007; ETF 2007). Own estimates based on data from the 2005 Albanian Living Standard Measurement Survey (ALSMS), led to similar figures. Using direct information on the migration history of the individuals surveyed and indirect information on the present migration status and migration history of the spouses and children living outside the household and the siblings of the household head and spouse, we found that in 2005 about 24.6 percent of the Albanian population aged 15 to 64 was either currently migrant (16.5 percent) or had a past migration experience (8.1 percent). In addition, part of the migrants living abroad at the time of the survey will also return and hence the asserted proportion of one third temporary migrants should be seen as a lower bound.

The main reason for migration is for employment purposes. The collapse of the industrial sector in the early transition years and the absence of a welfare state have pushed many workers outside the labour market and into poverty. By 2004, around 30 percent of Albanians were estimated to live below the poverty line; half of them in extreme poverty, subsisting on less than US$ 1 per day (Barjaba 2004). In face of these harsh realities, many have sought employment abroad, mainly in neighbouring EU countries.

Because of their geographical proximity, the main destination countries are Greece and Italy, hosting almost 80 percent of Albania's migrants in 2005. About 600,000 worked and/or lived in Greece, about 250,000 in Italy, while another

approximately 250,000 were scattered among industrialised countries in Western Europe and North America (Vullentari 2007). The sector of employment and, thus, the form of migration is varying significantly among destinations: seasonal employment in construction, farming and tourism in Greece; temporary employment in manufacturing, construction and services in Italy; and predominantly permanent migration of skilled migrants to Western Europe, the US, and Canada (ETF 2007; Barjaba 2004).

The data used for the empirical analysis are from the 2005 Albanian Living Standards Measurement Survey (ALSMS), collected by the Albanian Institute for Statistics (INSTAT) with technical support from the World Bank. The data are based on a survey of 3,640 households (17,302 individuals) and contains a detailed module on migration.[20] The sampling frame was divided in four regions (i.e. Coastal, Central, Mountain, and the capital city, Tirana). The households were selected by using a stratified two stage cluster design, in which the 455 primary sampling units (PSUs; 125 in the Coastal [60 urban and 65 rural], Central [60 urban and 65 rural] and Mountain areas [50 urban and 75 rural], and 80 in Tirana) were represented by the 2001 census enumeration areas. Eight households were then selected from each PSU, in order to assure representativeness at the national as well as regional and urban/rural level.

We drew the information on migrants from two parts of the migration module. The first is on the migration history of the household members present (e.g. country of last migration episode, year of migration, time spent abroad, legal residence abroad, legal work abroad, reasons for returning to Albania, previous

[20] A migrant is defined as a person who migrated abroad for at least one month, for non-visits purposes, since turning age 15.

migration episodes since turning 15, etc.). The second part provides detailed information on the spouse and/or children that are currently abroad and we added these absent household members to the sample.

Since the focus of the paper is the analysis of the determinants of labour migration movements, we restricted our sample to individuals in the potential labour force (i.e. not enrolled in education, not a housewife/husband, not retired, not handicapped, and not in military service) and aged 20 to 60. Moreover, in order to select the permanent migrants from our second group, we excluded all migrants that were abroad at the time of the survey for three years or less (i.e. 539 observations). For the purpose of this analysis, our definition for a permanent migrant is, hence, an individual who has spent 37 months or more abroad since the last time he/she left the country.[21]

Given the above screening and after excluding all observations with missing values for the variables included, our sample contains 7,280 individuals: of which 4,756 (65.3 percent) are non-migrants, 1,430 (19.6 percent) permanent migrants, 536 (7.4 percent) return migrants (i.e. individuals who migrated only once and were back in Albania at the time of the survey), and 558 (7.7 percent) circular migrants (i.e. individuals who migrated more than once in the past and were back in Albania at the time of the survey).[22]

Group mean values of the data described above show that Albanian migration, and in particular temporary migration, is predominantly male (see Table 2.1; a succinct description of the variables used in the empirical analysis of this chapter is presented in the Appendix: Table A1, p. 204). Females represent 35

[21] Percentile statistics show that 90 percent of the temporary migrants returned to Albania after spending a maximum of three years abroad during their first migration episode.
[22] For definitions of the different migrant groups and measurement issues see Table 2.7.

percent of the permanent migrants, but only 8.2 percent of the return migrants and just 1.4 of the circular migrant group.

Migrants in all groups are on average younger compared to non-migrants. In order for migration to be financially rewarding (i.e. additional income from employment abroad to exceed the migration costs) it has to take place early in the active lifetime. Taking into account that migration costs are highest if resettling permanently to another country, it is not surprising that permanent migrants are on average the youngest at time of migration with an average age of 25.1 compared to 29.4 in the case of return migrants.

Regarding the educational composition of the different groups, permanent and return migrants have the highest secondary education rate: 45.9 and 49.4 percent respectively, compared to 38.9 percent for non-migrants (see also Figure 2.1). The most affected during the economic transition were secondary educated workers who lost their jobs after uncompetitive state owned factories were put into administration or were closed. Many of them used migration as a strategy to improve their standard of living. Moreover, 55.7 percent of circular migrants have at most primary education (which probably explains also why they are on average younger at their first migration trip than the return migrants). The majority of them are probably small (subsistence) farmers who supplement their income through seasonal work abroad. Tertiary educated individuals are least likely to migrate, mostly because of relatively better job opportunities for this group in Albania. With 12.6 percent, the tertiary education rate of non-migrants is about 3 percentage points higher compared to permanent and return migrants and 8.3 percentage points higher compared to circular migrants.

Migrants were significantly more likely to have spoken at least one foreign language in 1990, with the form of migration being related to the language of the destination countries. It seems that permanent migration was driven by the proficiency in English (9.2 percent) and/or Italian (12.3 percent); return migration by the knowledge of Italian (8.6 percent) and/or Greek (7.1 percent); while circular migration by the knowledge of Greek (6.4 percent). The main destination country for circular migrants has been Greece (88.0 percent); for return migrants Greece (74.8 percent) and Italy (16.6 percent), while many permanent migrants have also settled, besides Greece (41.1 percent) and Italy (37.9 percent), in other West European or North American countries (21.0 percent).

In terms of marital status, permanent migrants had the lowest marriage rate in 2005. Nevertheless, at the time they left the country, they had the highest marriage rate (72.3 percent) compared to the other migrant groups (63.2 percent for return and 51.3 percent for circular migrants). Migrating for longer periods without the spouse imposes, in many cases, considerable strain on the relationship of a couple, often leading to separation and divorce. On the other hand, the savings accumulated abroad made it easier for temporary (i.e. return and circular) migrants to start up a family after return. Temporary migrants were significantly more likely to have children at the time of their first migration but they were less likely to migrate with them.

Return migration seems to be more common among members of relatively richer households. Many in this group are target savers originating from middle or upper middle class families who, through migration and investment of the repatriated savings after return, significantly improved their economic situation above the Albanian average (see also Chapter 3). Compared to permanent

migrants, they might also have decided to return permanently back because of their relatively better social and economic position in Albania (Stark and Taylor 1991). Contrarily, circular migrants are members of poorer and relatively larger families.

Permanent migrants originate from households with less social connections (i.e. friends), which probably means they had lower social and emotional relocation costs. However, they left from communities that have more individuals as current or past migrants. As found in other studies, that could be evidence of the fact that migrant networks and/or the culture of migration in the community are important for the migration decision (see Azzarri and Carletto 2009).

Geographically, most permanent and return migrants are from urban areas (56.6 percent and 57.6 percent respectively), while circular migrants originate from rural areas (62.7 percent), regions closer to Greece (i.e. the Central and the Mountain regions), and districts with lower average wages.[23]

Regarding the migration history, circular migrants were least likely to have legal residence during their first migration trip (only 23.8 percent of them) but that increased considerably in time to 54.5 percent for the last migration trip. This is certainly due to the large legalisation programs in Greece and Italy after 1999. As for return migrants, they are also quite likely to have migrated illegally: only 36.4 percent of them had legal residence abroad. Borjas and Bratsberg (1996) argued that the failure of a migrant to obtain legal residence while abroad might determine his decision to return back permanently. Nevertheless, if a migrant does intend to return to his home country but does not intend to migrate again in the

[23] Using data from the ALSMS 2002, Carletto et al. (2006) show similar geographical patterns of permanent and temporary migration.

future, he is certainly more likely to overstay a work or tourist visa in order to fulfil, for example, his savings target.

With paid employment being the main reason for temporary migration, return and circular migrants were significantly more likely to work while abroad compared to permanent migrants. Nevertheless, they were also considerably more likely to work illegally.

The majority of permanent migrants (55.5 percent) had already set up an own family before migration and migrated with both spouse and children, while most of the temporary migrants had at the time of their first migration trip either no spouse and children (36.8 percent of the return migrants and 48.7 of the circular migrants) or left their spouse and children at home (40.3 percent of the return migrants and 43.4 percent of the circular migrants).

The reason for returning differs notably between the forms of temporary migration. While the majority of return migrants moved back because of failing their migration target (45.9 percent; i.e. have not found work, have not obtained legal residence or have been deported) or after having accumulated enough savings (21.8 percent), 25.3 percent of the circular migrants have returned from the first trip because of the expiry of a seasonal/temporary work permit (compared to only 10.6 percent in the case of return migrants). These different migration experiences seem to be reflected also in the occupational attainment of the temporary migrants: circular migrants – often working and saving more while abroad and enjoying more leisure while at home – have a 7.3 percentage points higher non-participation rate compared to return migrants, while those settling

permanently back after the first trip have a 9.8 percentage points higher self-employment rate.[24]

Finally, there seems to be quite a strong state dependency in circular migration: in 2005, 54.3 percent of the individuals that migrated repeatedly in the past (i.e. circular migrants) intend to migrate again during the next 12 months. In contrast, only 19.2 percent of the return migrants expressed their intention to re-migrate.

2.4 Econometric Specification

The migration decision processes described in Section 2 lead to alternative econometric models. If assuming a single utility maximisation migration decision over the life-time (i.e. Decision Tree 1 in Section2), the form of migration may be determined by a pairwise comparison of the indirect utilities of the given alternatives:

- no migration: $U_N > U_P, U_N > U_R, U_N > U_C,$
- permanent migration: $U_P > U_N, U_P > U_R, U_P > U_C,$
- return migration: $U_R > U_N, U_R > U_P, U_R > U_C,$
- circular migration: $U_C > U_N, U_C > U_P, U_C > U_R,$ (2.1)

where *N*, *P*, *R*, and *C* stand for no migration, permanent migration, return migration, and circular migration respectively. The unordered choice settings can be motivated by a random utility model (Greene 2002). For the ith individual faced with $k = \{N, P, R, C\}$ choices, the utility of choice j is given by:

$$U_{ij} = \beta_j x_i + \varepsilon_{ij} \tag{2.2}$$

[24] For more on the occupational choice of temporary migrants see Chapter 3.

where U_{ij} is the indirect utility of choice j for individual i, x_i a vector of characteristics which affect the choice of the migration form, and β_j a vector of choice-specific parameters.

Assumptions about the disturbances (ε_{ij}) determine the nature of the model and the properties of its estimator. We assume that ε_{ij} are independent and identically distributed with type I extreme value distribution, which leads to the multinomial logit (MNL) model (Greene 2002; McFadden 1974). The probability of choosing alternative j is specified as:

$$\Pr(y_i = j) = \frac{e^{\beta_j x_i}}{\sum_{k=N,P,R,C} e^{\beta_k x_i}} \tag{2.3}$$

Not all β_j in Eqn. (2.3) are identified and we normalise by setting $\beta_N = 0$.

The dynamics among the possible choices in the estimation results of the MNL model are illustrated by computing odds ratios. The factor change in the odds of outcome m versus outcome n for a marginal increase in x_k and the other independent variables in the model held constant is given by:

$$\frac{\Omega_{m|n}(\mathrm{x}, x_{k,m|n}+1)}{\Omega_{m|n}(\mathrm{x}, x_{k,m|n})} = e^{\beta_{k,m|n}}. \tag{2.4}$$

The limit of analysing the determinants of the migration form in the framework of a MNL model is that one can control only for variables observed for all alternatives. One problem arising from that is the difficulty in some cases to infer the direction of causality. Many of the individuals' socio-economic characteristics observed for all population groups (e.g. age, marital status, household size, or household income) are collected at the time of survey (i.e. in 2005). However, for migrants these might have been different at the time of their

first migration episode, their return, or the subsequent migration trips. Therefore, some of the observed socio-economic characteristics may in fact be determined by the migration experience and the form of migration chosen.

In addition, the MNL model does not allow to control for the effect of a previous migration experience (e.g. found work while abroad for the first time, legal residence while abroad, or reason for returning) on the decision to re-migrate, since non-migrants have no such experience. Nevertheless, if we assume that the individual revises his initial migration decision after each migration step (Decision Tree 2 in Section 2), the migration experience should significantly influence future migration movements.

Running separate regressions only for migrants will give biased and inconsistent results, as migrants might be a non-randomly selected group. A more consistent model is a probit with two sequential self-selection equations: the first equation controls for selection into migration while the second – including only migrants – for the selection into return. This model can be estimated stepwise (i.e. the inverse Mill's ratio – IMR – of the first selection probit is introduced as a covariate in the second selection equation and the IMR from the second selection equation is then used as a covariate in the outcome probit) or by maximum likelihood. Relative to the maximum likelihood approach, the stepwise method is often perceived to give inconsistent results (Lahiri and Song 2000). In particular, this is the case when there is strong multicolliniarity between covariates in the outcome equation and the selection controls (i.e. covariates of the selection equations). If there are no overlapping covariates in the outcome and selection equations, then multicolliniarity can be assumed insignificant (see Stolzenberg and Relles 1997 and Nawata and Nagase 1996).

The equations for the probit model with two sequential selections have the following form for each observation:

- Migrant: $M^* = W'\beta + m$, where $M = I(M^* > 0)$ (2.5)
- Temporary migrant[25]: $T^* = Y'\delta + t$, where $T = I(T^* > 0)$ if $M = 1$ and missing otherwise (2.6)
- Circular migrant: $C^* = Z'\theta + c$, where $C = I(C^* > 0)$ if $T = 1$ (and $M = 1$) and missing otherwise. (2.7)

The variables denoted by asterisks are the latent outcomes, and those without are binary indicators summarising the observed outcomes. $I(.)$ is the indicator function equal to one if its argument is true, and zero otherwise. We assume the error terms $(m,t,c) \sim N_3(0,V)$, where V is a symmetric matrix with typical element $\rho_{kl} = \rho_{lk}$ for $k,l \in \{m,t,c\}$ and $k \neq l$, and $\rho_{kk} = 1$ for all k. The errors in each equation are assumed to be orthogonal to the predictors (elements of the vectors W, Y, and Z respectively).

We define a set of signs variables $\kappa_\tau = 2\tau - 1$ for $\tau \in \{M,T,C\}$. The likelihood contribution for a temporary migrant, i.e. with $M = 1$ and $T = 1$ is:

$$L_3 = \Phi_3(\kappa_M W'\beta, \kappa_T Y'\delta, \kappa_C Z'\theta, \kappa_M \kappa_T \rho_{mt}, \kappa_M \kappa_C \rho_{mc}, \kappa_T \kappa_C \rho_{tc}), \quad (2.8)$$

the likelihood contribution for a permanent migrant (i.e. $M = 1$ and $T = 0$) is:

$$L_2 = \Phi_2(\kappa_M W'\beta, \kappa_T Y'\delta, \kappa_M \kappa_T \rho_{mt}), \quad (2.9)$$

while the likelihood contribution for a non-migrant (i.e. $M = 0$) is:

$$L_1 = \Phi_1(\kappa_M W'\beta) \quad (2.10)$$

It follows that the log-likelihood contribution to be calculated by the evaluator function for each observation is:

[25] Temporary migration includes circular migration and return migration (i.e. permanent return after the first trip).

$$\ln L = (1-M)\ln L_1 + M(1-T)\ln L_2 + MR\ln L_3 \qquad (2.11)$$

In order to avoid multicolliniarty due to overlapping covariates in the outcome and selection equations, the model is estimated using maximum simulated likelihood (MSL) in Stata. We evaluate multivariate standard normal probabilities with 200 random draws using the mvnp() function by Cappellari and Jenkins (2006), a function based on the Geweke-Hajivassiliou-Keane (GHK) smooth recursive conditioning simulator.[26] For the maximization, we used Stata's modified Newton-Raphson algorithm (see Gould *et al.* 2003).[27]

2.5 Empirical Results

Despite the limits of the MNL model discussed in the previous section, it offers a good starting point for the analysis. The estimation results give information on variables that affect similarly the choice of all migration forms and variables that only affect the choice of particular forms of migration. Thus, besides theoretical arguments, the estimation results can be used as additional justification for the selection instruments used in the probit model with two sequential equations. The estimation results of the MNL model are given in Table 2.2 and the respective factor changes in odds in Table 2.3.[28]

The variables chosen to describe the selection into migration (first equation in Table 2.4)[29] are: three language variables (i.e. speaking English, Italian, and Greek in 1990), the household subjective economic situation in 1990, and the

[26] See Appendix (A2, p. 205) for details on the Stata programming.
[27] We would like thank Lorenzo Cappellari and Stephen Jenkins for advice on the Stata programming.
[28] The Small-Hsiao test for independence of irrelevant alternatives (IIA) holds for all subsets. Furthermore, the likelihood ratio tests for combining alternatives show that no pair of alternatives should be collapsed. Test results are available from the author upon request.
[29] Standard errors were adjusted for cluster sampling in the 12 Albanian counties, i.e. Berat, Dibër, Durrës, Elbasan, Fier, Gjirokastër, Korçë, Kukës, Lezhë, Shkodër, Tirana, and Vlorë.

number of migrants in the community. Since speaking the language of the destination country decreases the costs of migration (e.g. makes it easier to access information about opportunities on foreign labour markets and to find a job), language proficiency in 1990 should positively affect the likelihood of migration (see Sjaastad 1962; Borjas 2001; Chapter 1, pp. 9-10). Nevertheless, only a small number of Albanians spoke a foreign language in 1990 and many migrants learned the language of the host country while abroad. The likelihood of returning and then re-migrating is, hence, less likely to be affected by the language proficiency before migration took place. This is also confirmed by the results of the MNL estimation: the odds of return vs. permanent migration and of circular vs. return migration are insignificant for proficiency in all three languages.[30]

Individuals from poorer households should have had stronger incentives to migrate after 1990 in order to improve their situation. Therefore, the household subjective economic situation in 1990 is expected to negatively affect the probability to migrate. Finally, by decreasing migration costs through network effects, the number of migrants in the community should positively affect the migration decision. Nonetheless, the specific migration form could be eventually influenced by the preponderance of migrants of a particular form in the community (i.e. herd effect) but not by the aggregate migration.[31]

[30] A further reason for not introducing the language proficiency variables in the temporary migration and circular migration equations is to avoid multicollinearity with the covariates controlling for the country of destination.

[31] A further test on the variables chosen to identify the selection into migration is whether their coefficients in the temporary migration and the circular migration equations are insignificantly different from zero when introduced in all the three equations of the three-variate probit model (see also de Coulon and Piracha 2005). For example, the p-value for the "number of migrants in the community" is 0.417 in the temporary migration equation and 0.345 in the circular migration equation; for the "household's subjective economic situation in 1990": 0.567 in the temporary migration equation and 0.361 in the circular migration equation; while for "speaking Greek in 1990": 0.081 in the temporary migration equation and 0.661 in the circular migration equation.

Most variables chosen to identify the selection into migration are significant and have the expected signs (see Table 2.4). From the three languages considered, speaking at least some Greek in 1990 has the strongest effect on migration. The common border of about 282 km and a shared culture and history made Greece the most important destination. Temporary migration was probably mainly encouraged by the relatively low cost of crossing the Greek border (in particular illegally) during the 1990s, while permanent migration was mainly fuelled by the large exodus at the beginning of the 1990s of ethnic Greeks living in the Southern part of Albania, who were rapidly nationalised in Greece (see Barjaba 2004). Speaking Italian or English had a positive effect on being a migrant as well but to a lesser extent. This is not surprising because of the relatively greater distance and, thus, higher financial migration cost to Italy, Western Europe and North America, compared to Greece.

The household's subjective economic situation in 1990 has a negative effect on being a migrant, though not significant. It seems, therefore, that migration is used as a strategy to improve the standard of living by individuals across social strata. Finally, the number of migrants in the community is positively and significantly correlated with the probability of initial migration. This would confirm the social capital hypothesis and previous empirical findings, as for example Massey and Espinosa (1997), that the existence of a strong community migrant network proves essential for the reduction of the costs and risks of finding a good job abroad and, thus, the success of the migration project.

For the selection into temporary migration (i.e. being return or circular vs. permanent migrant; the second equation in Table 2.4) we used instruments observed only for migrants. First, compared to settling permanently abroad,

temporary migration should be positively affected by age at migration. As predicted by various migration models and confirmed by empirical findings, permanent migration should be a decision taken at a younger age as social and financial relocation costs are lower and the larger time span until the end of the active lifetime allows for higher gains (see for example Radu and Epstein 2007). Nevertheless, re-migration should be rather determined by the age after return (included in the circular migration equation), since even if migrated for the first time at the same age, the age after return depends on the amount of time spent abroad.

Further, having obtained legal residence should give migrants access to legal and better employment and, thus, increasing the probability of staying permanently abroad. Contrarily, finding no or only illegal employment should increase migration costs (e.g. forgone earnings) and/or income risk and, therefore, the probability to return as well (Borjas and Bratsberg 1996; see Chapter 1, pp. 14-15). While the residence status variable is significant and has the expected sign, only having worked illegally is significantly and positively correlated with the likelihood of returning. Permanent migrants (compared to temporary) seem to either work legally or not participate in the labour market, giving evidence that besides better access to the labour market the legal residence status eventually gave migrants the opportunity to access the host countries' social security system and stay (at least temporarily) outside the labour market.

The preference for residence in the home country is often strengthened by family links. Individuals, who had migrated with close family members (i.e. spouse or children) should be less likely, while those who left close family members behind more likely, to return (Constant and Massey 2002 and 2003; see

Chapter 1, p. 14).[32] The estimation results confirm that compared to being single during the first migration trip, married migrants without children were significantly more likely to return if they had a spouse back in Albania. However, the direction of causality is not straightforward: the spouse's decision not to follow the partner abroad might have motivated the migrant to return; but likewise, the spouse's decision not to migrate could have been influenced by the migrant's choice to stay only temporarily abroad. Unsurprisingly, we find that having migrated with both spouse and children strongly decreased the likelihood of returning to Albania, confirming that permanent migrants are more likely to reunite with close family members in the host country (Faini 2007). Nonetheless, having children back home is positively correlated to the decision to return, irrespective of having migrated with or without the spouse.

A formal test for whether sample selection is ignorable is based on the null hypothesis that the cross-equation correlations are jointly different from zero. The test results show that the estimation results would have been biased and inconsistent, had we not corrected for selection.[33] Mainly, the error terms of the first and second equation are significantly negative correlated. This might be due, for example, to the unobserved preference for living in the home country that is hypothesised to decrease the likelihood of an initial migration, but, if having migrated, to increase the likelihood of returning to the home country (Hill 1987; Djajic and Milbourne 1988; Dustamnn 1995, 1997 and 2003; see Chapter 1, pp. 10-14).

[32] Since successful young migrants would be more likely to marry after return and start a family (i.e. have children), the decision to re-migrate after return would rather depend on the new family structure and we have tried to capture that by the variables "marital status in 2005" and "household size in 2005" included in the circular migration equation (see third equation in Table 2.4).

[33] Test results are available from the authors upon request.

As expected from the descriptive statistics, being a female decreases significantly the probability of being a migrant; if a migrant, the probability to have returned; and finally, the probability to have re-migrated, if having returned after the first migration trip. Given the more traditional gender roles in the Albanian context, women are often in charge of taking care of children and household, while the men are the bread-earners (King *et al.* 2006).[34] Therefore, it is not surprising that Albanian women often follow their husband in case he settles abroad, but are significantly less likely to engage in temporary migration for employment purposes. The gender difference between return and circular migration can be further explained through the gender difference in terms of the type of jobs they engage in, with men taking jobs with a more seasonal character, e.g. in construction, farming and tourism (ETF 2007).

Regarding the education level, our estimation results show that secondary education slightly increases the probability of initial migration, while tertiary education strongly decreases it. These confirm the findings of de Coulon and Piracha (2005) that Albanian migration is not associated with higher educated individuals. They explain this by the fact that more educated individuals would face higher assimilation costs in the foreign labour markets (i.e. problems regarding recognition of diplomas or practising the profession in a foreign language), situation that mainly applies for such professions as medical doctors, lawyers or teachers.

Moreover, as hypothesised by Borjas and Bratsberg (1996), we find that return migration to Albania accentuates the selection type of the initial migration

[34] Litchfield and Reilly (2009) also describe that Albanian women are significantly less likely to have attempted to migrate abroad. Moreover, they find that this gap between men and women is attributable rather to unobservables (e.g. culture and traditions) than to observed characteristics.

flow (see Chapter 1, pp. 14-15). From the initial middle to low educated migrant population, those with the highest education return to Albania, leaving abroad a permanent migrant group with an even lower average education level. In the framework of Borjas and Bratsberg's relative returns to skills hypothesis, lower skilled individuals would migrate if the returns to skills are relatively higher in the home compared to the destination country. Moreover, the most skilled in the migrant group being the marginal migrants would also be the first to return, because the human capital accumulated abroad would give them relatively higher earnings in the home compared to host labour market.[35]

Additionally, we observe that re-migration of returnees occurs along the same pattern, with the lowest educated from the return migrants engaging in repeat/circular migration, most certainly taking advantage of the relatively higher earnings abroad for their (lower) education level. As observed also from the coefficients of the occupational choice variables, circular migrants are more likely to stay outside the labour market, probably because of the poor opportunities and/or low paid jobs available to them on the Albanian labour market. Only the better educated returnees seem to settle permanently back, probably enjoying the returns from the human and/or financial capital accumulated abroad in higher earning jobs and/or self-employment.[36]

Social relations have conflicting effects on the temporary migration decision. On the one hand, being married is significantly and positively related to circular migration movements, giving probably evidence to the fact that a married

[35] They tested for their hypothesis by proxying the relative returns to skills by the income inequality in the US immigrants' host countries. Albania's Gini index was at every point between 1990 and 2005 below that of Greece and Italy (i.e. the main destination countries). However, considering arguments such as "more educated individuals face relatively higher assimilation costs in foreign labour markets" (de Coulon and Piracha 2005), the real returns to education (i.e. netted of assimilation costs) could be indeed relatively higher in Albania.

[36] For more on occupational choice of return migrants in Albania see Chapter 3.

couple can reduce income risk if one spouse works abroad, as predicted by the NELM theory (see Chapter 1, pp. 17-18). But as argued by Hill (1987), migrants seem to prefer to smooth the emotional cost of being parted from their loved ones by splitting the total amount of time spent abroad into several, shorter migration trips (see Chapter 1, p. 10). On the other hand, the household size is rather unimportant in the decision process about the type of temporary migration. The re-migration decision is negatively related to the extra-household social capital (i.e. the number of friends). Friends are eventually better placed compared to other household members (i.e. housewife and children) to provide information about job and business opportunities at home. Moreover, having good friends at home might also increase the preference for residence at home, thus negatively affecting the average number of trips abroad (see Thom 2010).

The average wage at district level has a negative effect on the decision to re-migrate, confirming the findings of Castaldo *et al.* (2007) that the economic conditions and labour market opportunities in the region of origin significantly affect the migration decision. Furthermore, individuals from rural areas are more prone to choose circular migration. Majority of them are most probably farmers, who add to small incomes from subsistence farming through seasonal work in Greece. Contrarily, migrants from urban areas and districts with higher average wages are more likely to return permanently to Albania as their chances of finding suitable jobs or to start up a business with the savings accumulated abroad are probably higher.

Finally, the return reason has a strong and robust effect on the likelihood of having migrated repeatedly vs. having settled permanently in Albania after the first migration trip. Failing the migration target is a negative experience that not

only determines return migration (Borjas and Bratsberg 1996) but seems to act as a deterrent for future migration movements as well. Similarly, everything else being equal, having accumulated enough savings during the first migration trip has a strong negative effect on the probability of being a circular migrant. Target savers may have intended from the very beginning to return permanently back after the first trip and start a business with the capital accumulated abroad, as argued by Mesnard (2004); see Chapter 1, pp. 19-20. Nevertheless, family reasons seem to be equally important in deterring further migration movements.

As for circular migration, it seems to be a choice made before leaving the country for the first time. Having returned from the first trip because of the expiry of a temporary/seasonal work permit significantly increases the likelihood of an additional migration episode.

The MSL probit with double selection is run under three specifications of the dependent variable of the outcome equation. The first (third equation in Table 2.4) considers repeat migration movements in the past vs. having migrated only once. However, some of the temporary migrants who have migrated only once (i.e. return migrants) may migrate again in the future and could be, in fact, circular migrants, even if we do not observe that. Assuming that individuals in this subgroup of return migrants have characteristics similar to circular migrants, our results could be biased. Therefore, in order to test the robustness of our results, in a second specification (third equation in Table 2.5), we consider the return migrants who intend to re-migrate in the next 12 months as circular migrants as well, while in the third specification (third equation in Table 2.6) they are excluded from the analysed sample. With the exception of the marital status we find all results discussed above to be quite robust.

2.6 Conclusions

Theoretical and empirical evidence on the determinants of circular migration is still very limited and this paper is an attempt to fill the literature gap. We think the results obtained in this paper could be used as an aid in understanding the migration patterns and processes in order to design policies to more effectively manage migration for the benefit of both sending and receiving countries. Although the analysis is conducted using Albanian household data, the results could be generalised to other developing migrant sending countries as well, especially East European countries like Moldova, Bosnia and Herzegovina or Kosovo.

The main objective of the paper was to study the correlates and determinants of different forms of migration with a particular emphasis on circular migration. We chose Albania for our empirical analysis because it is a country of mass emigration and about one third of its aggregate migration movements are temporary. Furthermore, as in other East European countries, Albanian temporary migration hides different realities: about 50 percent of the temporary migrants are permanent returnees (i.e. have migrated abroad only once), while the others are circular/repeat migrants.

Our empirical results show that the form of migration is determined by gender, age, the labour market returns to specific education levels, family ties, urban/rural origin, and past migration experience. For example, women and tertiary educated are more likely to stay put in Albania. The amount of time spent abroad, legal residence, and accompanying family are positively related to permanent migration, while age, secondary education, failed migration or fulfilment of a savings target determine permanent return after the first trip. Being

a male, having a lower education level, originating from a rural area and having a positive temporary migration experience in the past are factors affecting circular migration.

Given that majority of the circular migrants are primary educated, their main contribution to development in Albania is probably through increasing the aggregate demand via remittances and repatriated savings. Nevertheless, development gains from transfers of skills and technology could probably be achieved through return migration. As will be shown in Chapter 3, many successful returnees start up their own businesses and become entrepreneurs after settling back to Albania.

Probably the most notable result is the confirmation of the hypothesis and empirical findings of Borjas and Bratsberg (1996) that return migration accentuates the type of selection - in our case negative selection - that generated the initial migration flow. Additionally, our results provide evidence that re-migration of return migrants (i.e. circularity) occurs along the same pattern: circular migrants being significantly less educated compared to migrants who return permanently to Albania after the first trip.

Given the limits of the data it was not possible to capture all the important aspects of different migration forms. More research is needed on the selection patterns into circular migration. Of particular interest is the assessment of the possibility that in the case of relative lower returns to skills in the home country, individuals with higher skills/education are motivated to migrate circularly and contribute to the economies of both origin and destination countries, as often expected by policy makers.

Table 2.1: Descriptive statistics by form of migration

	Non-migrants		Permanent migrants		Return migrants		Circular migrants
	Mean value	*difference*	Mean value	*difference*	Mean value	*difference*	Mean value
Individual Characteristics							
Gender (female=1)	0.522	*0.171****	0.350	*0.268****	0.082	*0.068****	0.014
Age	39.422	*6.623****	32.799	*-4.492****	37.291	*1.744****	35.547
Education level: primary	0.485	*0.040****	0.445	*0.027*	0.418	*-0.139****	0.557
Education level: secondary	0.389	*-0.070****	0.459	*-0.035*	0.494	*0.095****	0.400
Education level: tertiary	0.126	*0.030****	0.096	*0.008*	0.088	*0.045****	0.043
Speaks English (1990)	0.050	*-0.042****	0.092	*0.034***	0.058	*0.038****	0.020
Speaks Italian (1990)	0.057	*-0.066****	0.123	*0.037***	0.086	*0.052****	0.034
Speaks Greek (1990)	0.009	*-0.051****	0.059	*-0.011*	0.071	*0.006*	0.065
Married	0.799	*0.165****	0.634	*-0.165****	0.799	*-0.008*	0.806
Household Characteristics							
HH subjective economic status in 1990	3.571	*0.095**	3.476	*-0.171*	3.647	*0.438****	3.210
HH subjective economic status in 2005	3.818	*-0.200****	4.018	*-0.038*	4.056	*0.294****	3.762
HH size	4.859	*1.681****	3.178	*-1.618****	4.797	*-0.354****	5.151
Number of friends	1.953	*0.224****	1.729	*-0.426****	2.155	*0.322****	1.833
Community and Regional Characteristics							
Urban area	0.529	*-0.037***	0.566	*-0.011*	0.576	*0.204****	0.373
Region: Coastal	0.250	*-0.165****	0.415	*0.098****	0.317	*0.045*	0.272
Region: Central	0.286	*0.011*	0.276	*-0.010*	0.285	*-0.048**	0.333
Region: Mountain	0.288	*0.138****	0.150	*-0.050****	0.200	*-0.121****	0.321
Region: Tirana	0.176	*0.016*	0.160	*-0.038***	0.198	*0.124****	0.073
Average wage at district level (LEK)	30,886.23	*297.60***	30,588.63	*-607.68****	31,196.31	*1,743.90****	29,452.41
Number of migrants in community (PSU)	6.920	*-3.715****	10.635	*1.822****	8.813	*-0.545***	9.358
Migration history (first migration trip)							
Age at first migration trip			25.126	*-4.270****	29.396	*2.919****	26.477
Months remained away (1st trip)			92.081	*70.012****	22.069	*12.610****	9.459
Obtained legal residence (1st trip)			0.899	*0.535****	0.364	*0.125****	0.238
Obtained legal residence (last trip)			0.899	*0.535****	0.364	*-0.181****	0.545

Table 2.1: Descriptive statistics by form of migration (continued)

	Non-migrants		Permanent migrants		Return migrants		Circular migrants
	Mean value	*difference*	Mean value	*difference*	Mean value	*difference*	Mean value
Work during first migration trip: no			0.160	*0.071****	0.090	*0.029**	0.061
Work during first migration trip: legally			0.748	*0.399****	0.349	*0.050**	0.299
Work during first migration trip: illegally			0.092	*-0.469****	0.562	*-0.078****	0.640
Not married, no children			0.277	*-0.091****	0.368	*-0.120****	0.487
Married w/o children: migrated with spouse			0.071	*0.037****	0.034	*0.030****	0.004
Married w/o children: spouse in Albania			0.005	*-0.053****	0.058	*0.015*	0.043
Migrated with spouse and children			0.555	*0.465****	0.090	*0.075****	0.014
Migrated with children, spouse in Albania			0.007	*-0.006*	0.013	*0.006*	0.007
Migrated with spouse, children in Albania			0.015	*-0.021****	0.035	*0.025****	0.011
Spouse and children in Albania			0.071	*-0.332****	0.403	*-0.031*	0.434
Country of destination (1st trip): Greece			0.411	*-0.337****	0.748	*-0.132****	0.880
Country of destination (1st trip): Italy			0.379	*0.213****	0.166	*0.100****	0.066
Country of destination (1st trip): other country			0.210	*0.124****	0.086	*0.032***	0.054
Age at return from 1st migration trip					31.235	*3.970****	27.265
Occupational choice: not working					0.160	*-0.073****	0.233
Occupational choice: wage employment					0.416	*-0.021*	0.437
Occupational choice: self-employment					0.424	*0.094****	0.330
Return reason: family/non-economic					0.216	*0.095****	0.122
Return reason: unsuccessful					0.459	*-0.046*	0.505
Return reason: temporary/seasonal permit					0.106	*-0.146****	0.253
Return reason: accumulated enough savings					0.218	*0.098****	0.120
Re-migration intention: yes					0.192	*-0.351****	0.543
Re-migration intention: no					0.646	*0.362****	0.283
Re-migration intention: don't know					0.162	*-0.012*	0.174
Observations	4,756		1,430		536		558

** significant at 10%; ** significant at 5%; *** significant at 1%*

Notes: The sample included is the potential labour force (i.e. not enrolled in education, not a housewife/-husband, not retired, not handicapped, and not in military service) aged 20 to 60. HH subjective economic status: 1=poor to 10=rich. The differences are computed between the mean values in the adjoining columns.

Table 2.2: Multinomial Logit estimation of choice among migration forms

	Permanent migrant vs. Non-migrant	Return migrant vs. Non-migrant	Circular migrant vs. Non-migrant
Individual Characteristics			
Gender (female = 1)	-1.16001	-2.96162	-4.98761
	[0.13634]***	[0.19971]***	[0.42093]***
Age	-0.10814	-0.0647	-0.09308
	[0.00729]***	[0.00533]***	[0.00714]***
Education level: secondary	0.15244	0.20663	0.01752
	[0.10275]	[0.08121]**	[0.08146]
Education level: tertiary	-0.68525	-0.44185	-0.57404
	[0.24132]***	[0.29003]	[0.28535]**
Speaks English (1990)	0.40394	0.02481	-0.19694
	[0.31354]	[0.23567]	[0.34043]
Speaks Italian (1990)	0.50185	0.47912	0.16864
	[0.32705]	[0.28007]*	[0.45261]
Speaks Greek (1990)	1.72834	2.03414	2.10866
	[0.34696]***	[0.18069]***	[0.51933]***
Married	0.53196	1.07557	1.60809
	[0.19997]***	[0.15940]***	[0.20682]***
Household Characteristics			
HH subjective economic status in 1990	-0.04367	0.01181	-0.02296
	[0.03793]	[0.02589]	[0.04327]
HH size	-0.77753	-0.06617	-0.02224
	[0.02711]***	[0.02489]***	[0.02562]
Number of friends	-0.02129	0.07319	-0.03991
	[0.02819]	[0.02030]***	[0.05393]
Regional Characteristics			
Number of migrants in the community	0.19938	0.14632	0.15929
	[0.00951]***	[0.01840]***	[0.02095]***
Urban area	0.16214	0.27318	-0.12512
	[0.10524]	[0.09816]***	[0.11110]
Log of average wage (district level)	-0.40163	0.64509	-2.59168
	[0.23697]*	[0.34892]*	[1.49510]*
Constant	8.34078	-7.75753	26.64024
	[2.35848]***	[3.61103]**	[15.51550]*
Observations		7,280	
Pseudo R-sq		0.29	

Robust standard errors in brackets; adjusted for 12 clusters (i.e. counties)
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: HH subjective economic status 1990: 1=poor to 10=rich. The control group for the education level is "Primary or less".

Table 2.3: Odds ratios for choice among migration forms

	Gender	Age	Education level: secondary	Education level: tertiary	Speaks English (1990)	Speaks Italian (1990)	Speaks Greek (1990)
P vs. N	0.31***	0.90***	1.16	0.50***	1.50	1.65	5.63***
R vs. N	0.05***	0.94***	1.23**	0.64	1.03	1.61*	7.65***
R vs. P	0.17***	1.04***	1.06	1.28	0.68	0.98	1.36
C vs. N	0.01***	0.91***	1.02	0.56**	0.82	1.18	8.24***
C vs. P	0.02***	1.02	0.87	1.12	0.55	0.72	1.46
C vs. R	0.13***	0.97***	0.83**	0.88	0.80	0.73	1.08

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 2.3: Odds ratios for choice among migration forms (continued)

	Married	Subjective econ. status 1990	HH size	No. of friends	No. of migrants in community	Urban area	Log of av. wage (district)
P vs. N	1.70***	0.96	0.46***	0.98	1.22***	1.18	0.67*
R vs. N	2.93***	1.01	0.94***	1.08***	1.16***	1.31***	1.91*
R vs. P	1.72***	1.06	2.04***	1.10***	0.95***	1.12	2.85***
C vs. N	4.99***	0.98	0.98	0.96	1.17***	0.88	0.07*
C vs. P	2.93***	1.02	2.13***	0.98	0.96**	0.75*	0.11
C vs. R	1.70*	0.97	1.04	0.89*	1.01	0.67***	0.04*

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Odds ratios computed based on the estimation in Table 2.2. HH subjective economic status 1990: 1=poor to 10=rich.

Table 2.4: MSL three-variate probit with two selections of the decision to migrate circularly

Migration equation	
Gender (female = 1)	-0.91973
	[0.10259]***
Education level: secondary	0.12118
	[0.03889]***
Education level: tertiary	-0.318
	[0.07497]***
Speaks English (1990)	0.30884
	[0.02519]***
Speaks Italian (1990)	0.47507
	[0.04518]***
Speaks Greek (1990)	1.0658
	[0.07640]***
HH subjective econ. status in 1990	-0.01951
	[0.01560]
Number of migrants in the community	0.10232
	[0.00595]***
Constant	-0.93551
	[0.17973]***
Temporary migration equation	
Gender (female = 1)	-0.38552
	[0.11062]***
Age at 1st migration trip	0.01221
	[0.00699]*
Education level: secondary	0.31984
	[0.09872]***
Education level: tertiary	0.78719
	[0.14547]***
Urban location	0.26868
	[0.08172]***
Log of average wage (district level)	1.5512
	[1.72603]
Months remained away (1st trip)	-0.03081
	[0.00449]***
Obtained legal residence (1st trip)	-0.64919
	[0.10551]***
Work during 1st migration trip: legally	0.09404
	[0.14898]
Work during 1st migration trip: illegally	0.43439
	[0.13281]***
Married w/o children: mig. with spouse	-0.03396
	[0.27415]
Married w/o children: spouse in Albania	0.63277
	[0.13695]***
Mig. with spouse and children	-0.70885
	[0.14655]***
Mig. with children, spouse in Albania	0.03286
	[0.54167]
Mig. with spouse, children in Albania	0.35861
	[0.12125]***
Spouse and children in Albania	0.2946
	[0.14297]**
Country of destination (1st trip): Greece	1.26645
	[0.15638]***
Country of destination (1st trip): Italy	0.22255
	[0.18163]
Constant	-15.3382
	[17.69421]

Circular migration equation	
Gender (female = 1)	-0.9797
	[0.29066]***
Age at return from 1st migration trip	-0.04237
	[0.00402]***
Education level: secondary	-0.12562
	[0.06262]**
Education level: tertiary	0.01866
	[0.26178]
Married	0.54729
	[0.12475]***
Occ. choice: wage employment	-0.29507
	[0.12391]**
Occ. choice: self-employment	-0.62165
	[0.16893]***
HH size	-0.02171
	[0.01518]
Number of friends	-0.11309
	[0.03504]***
HH subjective econ. status in 2005	0.05299
	[0.04534]
Urban location	-0.27238
	[0.09893]***
Log of average wage (district level)	-1.86451
	[0.79664]**
Months remained away (1st trip)	-0.01378
	[0.00212]***
Country of destination (1st trip): Greece	0.28767
	[0.28719]
Country of destination (1st trip): Italy	-0.3151
	[0.34798]
Return reason: family/non-economic	-0.61794
	[0.23282]***
Return reason: unsuccessful	-0.52414
	[0.19882]***
Return reason: acc. enough savings	-0.56279
	[0.19982]***
Constant	21.39878
	[8.39567]**
Cross-equation correlations	
r21	-0.28083
	[0.12835]**
r31	-0.27005
	[0.15023]*
r32	0.187141
	[0.17342]
Total number of observations	7,280
Number of migrants	2,524
Number of temporary migrants	1,094
Number of circular migrants	558
Log of pseudo likelihood	-4894.81
Robust standard errors in brackets; adjusted for 12 clusters (i.e. counties)	
* significant at 10%; ** significant at 5%; *** significant at 1%	

Notes: HH subjective economic status: 1=poor to 10=rich. The control group for the education level is "Primary or less"; for working abroad during 1st migration trip is "No", for the family structure is "Single", and for the countries of destination is "Other"; for occupational choice is "Not working", and for the return reasons is "Seasonal/temporary migration".

Table 2.5: MSL three-variate probit with two selections of the decision to migrate circularly (returnees who migrated only once but intend to re-migrate considered also as circular migrants)

Migration equation	
Gender (female = 1)	-0.91992
	[0.10273]***
Education level: secondary	0.11977
	[0.03930]***
Education level: tertiary	-0.32307
	[0.07595]***
Speaks English (1990)	0.31756
	[0.02664]***
Speaks Italian (1990)	0.47612
	[0.04458]***
Speaks Greek (1990)	1.06505
	[0.07700]***
HH subjective econ. status in 1990	-0.01929
	[0.01567]
Number of migrants in the community	0.10223
	[0.00606]***
Constant	-0.93489
	[0.18040]***
Temporary migration equation	
Gender (female = 1)	-0.39951
	[0.11192]***
Age at 1st migration trip	0.01133
	[0.00683]*
Education level: secondary	0.31844
	[0.09832]***
Education level: tertiary	0.77434
	[0.15305]***
Urban location	0.27346
	[0.08621]***
Log of average wage (district level)	1.51915
	[1.74863]
Months remained away (1st trip)	-0.03096
	[0.00449]***
Obtained legal residence (1st trip)	-0.64698
	[0.10974]***
Work during 1st migration trip: legally	0.08541
	[0.14589]
Work during 1st migration trip: illegally	0.4264
	[0.13198]***
Married w/o children: mig. with spouse	-0.03055
	[0.27377]
Married w/o children: spouse in Albania	0.64162
	[0.14515]***
Mig. with spouse and children	-0.67536
	[0.13330]***
Mig. with children, spouse in Albania	0.05391
	[0.55243]
Mig. with spouse, children in Albania	0.35283
	[0.11355]***
Spouse and children in Albania	0.29359
	[0.14468]**
Country of destination (1st trip): Greece	1.26557
	[0.15346]***
Country of destination (1st trip): Italy	0.21721
	[0.18201]
Constant	-14.9689
	[17.95151]

Circular migration equation	
Gender (female = 1)	-0.68564
	[0.35213]*
Age at return from 1st migration trip	-0.03339
	[0.00322]***
Education level: secondary	-0.13474
	[0.07522]*
Education level: tertiary	-0.10377
	[0.27096]
Married	0.05373
	[0.13475]
Occ. choice: wage employment	-0.4843
	[0.17152]***
Occ. choice: self-employment	-0.79218
	[0.16110]***
HH size	0.00479
	[0.02729]
Number of friends	-0.08811
	[0.04283]**
HH subjective econ. status in 2005	-0.00384
	[0.03855]
Urban location	-0.34499
	[0.09344]***
Log of average wage (district level)	-0.79975
	[0.67083]
Months remained away (1st trip)	-0.00948
	[0.00519]*
Country of destination (1st trip): Greece	0.23958
	[0.23667]
Country of destination (1st trip): Italy	-0.34379
	[0.36970]
Return reason: family/non-economic	-0.56235
	[0.18798]***
Return reason: unsuccessful	-0.7112
	[0.18118]***
Return reason: acc. enough savings	-0.84397
	[0.19065]***
Constant	10.9935
	[7.16252]
Cross-equation correlations	
r21	-0.28681
	[0.12131]**
r31	-0.03251
	[0.13408]
r32	0.22637
	[0.22284]
Total number of observations	7,280
Number of migrants	2,524
Number of temporary migrants	1,094
Number of circular migrants	661
Log of pseudo likelihood	-4891.62
Robust standard errors in brackets; adjusted for 12 clusters (i.e. counties)	
* significant at 10%; ** significant at 5%; *** significant at 1%	

Notes: HH subjective economic status: 1=poor to 10=rich. The control group for the education level is "Primary or less"; for working abroad during 1st migration trip is "No", for the family structure is "Single", and for the countries of destination is "Other"; for occupational choice is "Not working", and for the return reasons is "Seasonal/temporary migration".

Table 2.6: MSL three-variate probit with two selections of the decision to migrate circularly (returnees who migrated only once but intend to re-migrate excluded from the sample)

Migration equation	
Gender (female = 1)	-0.89881
	[0.10181]***
Education level: secondary	0.13534
	[0.03642]***
Education level: tertiary	-0.29402
	[0.07165]***
Speaks English (1990)	0.31384
	[0.01982]***
Speaks Italian (1990)	0.48033
	[0.04357]***
Speaks Greek (1990)	1.07779
	[0.07839]***
HH subjective econ. status in 1990	-0.02055
	[0.01397]
Number of migrants in the community	0.10418
	[0.00556]***
Constant	-0.99128
	[0.16645]***
Temporary migration equation	
Gender (female = 1)	-0.45105
	[0.13940]***
Age at 1st migration trip	0.00546
	[0.00825]
Education level: secondary	0.28045
	[0.08206]***
Education level: tertiary	0.76549
	[0.15310]***
Urban location	0.35154
	[0.09646]***
Log of average wage (district level)	1.49579
	[1.67047]
Months remained away (1st trip)	-0.034
	[0.00383]***
Obtained legal residence (1st trip)	-0.66411
	[0.13050]***
Work during 1st migration trip: legally	0.07271
	[0.16837]
Work during 1st migration trip: illegally	0.41373
	[0.15935]***
Married w/o children: mig. with spouse	0.10059
	[0.26654]
Married w/o children: spouse in Albania	0.73376
	[0.18248]***
Mig. with spouse and children	-0.45655
	[0.15951]***
Mig. with children, spouse in Albania	0.34431
	[0.56918]
Mig. with spouse, children in Albania	0.40121
	[0.16767]**
Spouse and children in Albania	0.39294
	[0.15225]***
Country of destination (1st trip): Greece	1.31392
	[0.10982]***
Country of destination (1st trip): Italy	0.24129
	[0.15164]
Constant	-14.5516
	[17.06961]

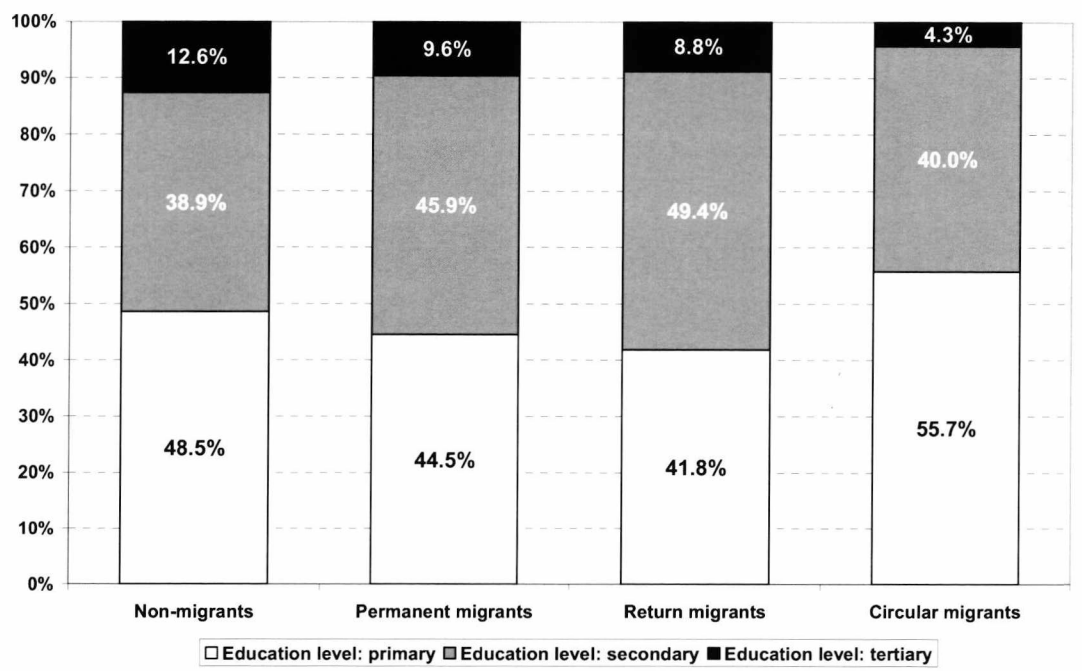
Circular migration equation	
Gender (female = 1)	-1.07557
	[0.25392]***
Age at return from 1st migration trip	-0.04302
	[0.00479]***
Education level: secondary	-0.14049
	[0.07297]*
Education level: tertiary	-0.05251
	[0.29667]
Married	0.36897
	[0.12068]***
Occ. choice: wage employment	-0.50982
	[0.17797]***
Occ. choice: self-employment	-0.8443
	[0.17983]***
HH size	0.0034
	[0.02093]
Number of friends	-0.12967
	[0.04124]***
HH subjective econ. status in 2005	0.02628
	[0.03953]
Urban location	-0.30528
	[0.09541]***
Log of average wage (district level)	-1.58441
	[0.87677]*
Months remained away (1st trip)	-0.0171
	[0.00299]***
Country of destination (1st trip): Greece	0.28406
	[0.29841]
Country of destination (1st trip): Italy	-0.4294
	[0.41280]
Return reason: family/non-economic	-0.70411
	[0.23335]***
Return reason: unsuccessful	-0.75954
	[0.20599]***
Return reason: acc. enough savings	-0.80683
	[0.19300]***
Constant	19.17225
	[9.32517]**
Cross-equation correlations	
r21	-0.34605
	[0.12729]***
r31	-0.14700
	[0.14983]
r32	0.32111
	[0.21016]
Total number of observations	7,177
Number of migrants	2,421
Number of temporary migrants	991
Number of circular migrants	558
Log of pseudo likelihood	-4654.30
Robust standard errors in brackets; adjusted for 12 clusters (i.e. counties)	
* significant at 10%; ** significant at 5%; *** significant at 1%	

Notes: HH subjective economic status: 1=poor to 10=rich. The control group for the education level is "Primary or less"; for working abroad during 1st migration trip is "No", for the family structure is "Single", and for the countries of destination is "Other"; for occupational choice is "Not working", and for the return reasons is "Seasonal/temporary migration".

Table 2.7: Typology of migration forms and measurement issues

		Definition	Measurement issues
Non-migrants		Individuals who have never left their country of birth for reasons other than visits	Some of the individuals observed in the survey as non-migrants might migrate abroad temporarily or permanently in the future
Permanent migrants		Individuals who have left the country of origin for at lest one month for non-visit purposes and have not returned	Some of the migrants observed to be abroad at the time of survey might return and, thus, be in fact temporary migrants; we excluded from this group the individuals residing abroad at the time of survey for 36 months or less as descriptive statistics show that 90% of temporary migrants have spent less than 36 months abroad
Temporary migrants	**Return migrants**	Individuals who have left the country of origin for at least one month for non-visit purposes and have returned permanently to the country of origin after that (first) trip	Some of the temporary migrants observed to have migrated only once by the time of survey (i.e. return migrants) might re-migrate in the future and, thus, become circular migrants; as a robustness test we have run additional estimations: in the first, the return migrants who explicitly state their intention to re-migrate are considered circular migrants, while in the second, return migrants who explicitly state their intention to re-migrate are excluded from the analysis
	Circular migrants	Individuals who have left the country of origin at least two times for at least one month each for non-visit purposes	

Figure 2.1: Educational composition of migrant groups



Notes: The sample included is the potential labour force (i.e. not enrolled in education, not a housewife/-husband, not retired, not handicapped, and not in military service) aged 20 to 60.

CHAPTER 3: RETURN MIGRATION AND OCCUPATIONAL ATTAINMENT

3.1 Introduction

Many studies in economics focus on analysing whether return migration and remittances are economically beneficial for emigration countries. Returning migrants are assumed to bring with them additional human capital, while migrants' remittances often help to ease poverty and provide a means of investment in small- and medium-size businesses, in the presence of capital constraints (see OECD 2008). Consequently, return migration and remittances are perceived to have an important potential for promoting growth and development, which prompted policymakers in both migrant host and home countries to encourage efforts to understand and facilitate return/circular migration, channel a bigger share of remittances through the formal financial systems, as well as encourage their use for productive investment (see Dayton-Johnson *et al.* 2007; World Bank 2005a).

This chapter adds to the existing literature by analyzing the impact of migration on Albania's labour market by looking at the economic activities of return migrants. Recent research on the occupational attainment of return migrants has tried to explain the propensity of returnees to become self-employed. The arguments used, for example, are the role of remittances and repatriated savings in overcoming capital constraints (Ilahi 1999; Mesnard 2004) and the accumulation of human capital (i.e. business skills and ideas) through exposure to

the host country's market economy environment (McCormick and Wahba 2001; Dustmann and Kirchkamp 2002).

A key element missing from the existing literature is the distinction between different types of self-employment. This distinction is important since working on own account is likely to have a weaker direct impact on employment (and hence growth) compared to entrepreneurship. de Mel *el al.* (2008) show that the two groups of self-employed are distinctive also in terms of observed characteristics: over two-thirds of the own account workers in Sri Lanka have cognitive ability, personality, and ambition more similar to (or even below) wage workers rather than business owners with paid employees (i.e. entrepreneurs). They show that despite equal access to micro-lending only a minority of own account workers are likely to expand by adding paid employees, the main reason for that being the lack of ambition and business skills. Studies on occupational attainment also point to the fact that self-employment activities in developing countries are mostly in the form of own account work.[34] If this is also true for return migrants, then their economic impact on the home economy would be weaker than expected.[35]

In this chapter, therefore, we study the occupational attainment of return migrants by explicitly differentiating between the propensities of returnees to become self-employed as own account workers (i.e. without having any paid employees) and as entrepreneurs (i.e. owners of firms with paid employees). We

[34] de Mel *et al.* (2008) note that the self-employed make up around a third of the non-agricultural labour force in low income countries, with a substantial majority of them working alone (i.e. hiring no paid employees). Ilahi (1999) also mentions that most self-employment activities in developing countries are of small scale and mainly in the informal sector.

[35] Kilic *et al.* (2007) report that close to 60 percent of the non-farm businesses owned by past migrant Albanian households in 2005 are one person enterprises. Similarly, using survey data of return migrants from Germany to Turkey, Dustmann and Kirchkamp (2002) show that only about 40 percent of the self-employed returnees in 1988 were employers (i.e. had paid employees in their companies) and only 24 percent employed individuals from outside the family.

do this by considering four occupational alternatives: non-participation, wage employment, own account work and entrepreneurship.

The consideration of the other alternatives has policy relevance as well. Considering that they earn abroad and consume in Albania, return migrants not participating in the labour market could have a marginal positive impact on the economy, at least at the regional level, as long as the increased demand is met by an increase in production capacities and/or output. However, if the local production capacities fail to adjust, the increased demand might generate inflation and/or have an adverse effect on the current account (see World Bank 2005a). Wage employees could have a positive effect on labour markets too, if they meet shortages that hinder the development of the economy and/or bring with them additional skills accumulated abroad. Therefore, our main research questions are: How does migration affect the occupational attainment of returnees? How is the aggregated effect on self-employment divided between own account work and entrepreneurship? Which of these two effects is stronger? What are the differences in characteristics among returnees in the various occupational groups and how do these differ compared to non-migrants?[36]

The empirical results show that own account workers have characteristics closer to the non-participants in the labour market (i.e. lower education levels), while entrepreneurship is related to secondary and tertiary education levels, proficiency in Italian (i.e. the language of Albania's main trading partner), and target saving migration. Albanian own account workers, irrespective of their past migration experience, have lower average incomes compared to both

[36] The effect of migration on non-farm self-employment has been explored by Kilic *et al.* (2007), however, without differentiating between own account work and entrepreneurship.

entrepreneurs and wage employees, indicating that they are rather a marginalized group. Nevertheless, our results show that with the time spent in Albania after return, returnees opting for non-participation or own account work do re-integrate into the labour market and find a way into paid employment, confirming Harris-Todaro's "parking lot" hypothesis.[37]

Furthermore, the results provide some reconciliation for the divergent empirical findings with respect to the characteristics of self-employed returnees. For example, McCormick and Whaba (2001) found evidence that self-employed returnees in Egypt are literate but with a low education level. Similarly, Ilahi (1999) showed that higher skilled returnees to Pakistan exhibit a greater propensity for wage employment over self-employment as they command higher wages in the labour market. He argues that unskilled workers are often left outside the labour market and choose to engage in own account activities that do not require labour market skills, e.g. small trade or workshops. On the other hand, Dustmann and Kirchkamp (2002) and Radu and Epstein (2007) found a positive relationship between schooling and self-employment activities in the case of return migrants to Turkey and Romania respectively, and explain this by the fact that education may have a positive effect on the returns to self-employment activities and, therefore, increase the probability of higher skilled returnees to choose this option. A priori, such a positive relationship between schooling and self-employment is more likely to be present in the case of entrepreneurs rather than own account workers.

[37] According to dualist and Harris-Todaro models of labour markets in developing countries, in the absence of sufficient employment opportunities in the formal sector, small (and often informal) self-employment activities are used to bide time by those aspiring to move into formal employment (Harris and Todaro 1970).

The remainder of the chapter is structured as follows. The next section gives an overview on the developments in the Albanian labour market that led to international migration, return migration, and occupational structure to which our data refer. Furthermore, it gives some stylized facts on the occupational attainment of non-migrants and return migrants. Section 3.3 presents the empirical approach while section 3.4 discusses the results. Concluding remarks appear in the final section.

3.2 Background and Data

Since the fall of the Iron Curtain, Albania has become a country of mass emigration. It is estimated that at any given time more than 25 percent of its population lives abroad, which is by far the highest proportion amongst the Central and East European countries. Although Albanians have migrated to several countries around the world including the United States, Canada, Australia, and a number of EU countries, the biggest two recipients of Albanians have been by far Greece and Italy. Estimates suggest that Greece and Italy together account for approximately 80 percent of the migrants, with Greece as the leading destination because of its geographical proximity (Vullnetari 2007).

One of the main reasons for migration is for employment opportunities, with the majority of those who were unemployed in Albania (53 percent) intending to migrate for a short spell abroad (ETF 2007). The main push factor for migration is the lack of demand for labour, particularly in the formal sector, which has forced people to start their own income-generating activities. However, in the presence of credit constraints and the lack of entrepreneurial abilities this is not always possible. Hence migration serves two purposes: to obtain gainful

employment, which could contribute directly or indirectly toward human capital accumulation[38] and/or to raise financial capital from higher wage income abroad in order to start up a business upon return.

Return migration in Albania is a relatively recent phenomenon. According to estimates, over 70 percent of the returnees came back to Albania after 2001, when the socio-economic and political situation started to improve (ETF 2007). Own estimates show that return migration is an important phenomenon - about one-third of the individuals who migrated after 1990 returned by 2005 - and this hides different realities too. Almost 36 percent of the returnees expressed their intention to re-migrate, while about 50 percent of them intended to resettle permanently.

The dataset used is the 2005 Albanian Living Standards Measurement Survey (ALSMS), a survey conducted by the Albanian Institute of Statistics (INSTAT) with technical support from the World Bank. The data are based on a representative survey of 3,640 households (17,302 individuals) and contains detailed information about the individual characteristics (e.g. gender, age, education, occupation, income [if working], and migration history), household characteristics (e.g. subjective economic status, marital status, and number of children), community and regional characteristics (e.g. regional location; rural/urban location; access to banking, electricity, and piped water) and non-farm business activity (e.g. type of business, employment of household, and non-household labour).[39]

[38] Direct acquisition could be through formal training in vocational programmes whereas indirect training could be ideas picked up from working in a market economy.
[39] For details on the sampling design see Chapter 2, p. 54.

The individual's main occupation is self-reported and contains the following categories: (1) employee of someone who is not a member of the household; (2) paid worker in household farm or non-farm business of a household member; (3) employer/entrepreneur; (4) worker on own account; and (5) unpaid worker in a household farm or non-farm business. We merged the first two categories under "wage employee" and excluded from the sample the unpaid workers (i.e. 459 observations).[40]

A migrant is defined as a person who migrated abroad for at least one month, for non-family visits, since turning age 15. Migration from Albania is predominantly male: only about 11.3 percent of the return migrants are female (see also Azzarri and Carletto 2009). The proportion of females in the potential labour force returnees[41] is even lower (6.5 percent), confirming evidence from a survey conducted by the ETF (2007). Due to the small sample size and the different participation rates, females are excluded from the analysis. After excluding also all observations with missing values for the variables included, the sample contains 962 return migrants, representing about 32 percent of the male potential labour force aged 20 to 64 (i.e. 3,011 males).

Return migrants are on average five years younger than non-migrants, significantly less educated (i.e. the tertiary education rate is 7.0 percentage points lower and the primary education rate is 6.5 percentage points higher), and unsurprisingly significantly more likely to speak Italian or Greek, the languages of

[40] The exclusion of "unpaid workers in HH farms or non-farm businesses" is mainly for keeping a closer focus on the comparison between own account workers and entrepreneurs. The exclusion, however, does not affect the estimation results for the other occupational groups as shown by the results of an IIA test (test results available from author upon request). See Mendola and Carletto (2009) for an analysis of the effect of migration on the unpaid labour supply of Albanian women.

[41] By potential labour force we mean a person who is not enrolled in education, not retired, not handicapped, and not in military service.

the two main destination countries (see Table 3.1).[42] In terms of occupation, return migrants have a relatively higher non-participation rate (+5.8 percentage points), most likely due to a higher number of circular/seasonal migrants in the returnees' group (e.g. 36 percent of the returnees expressed their intention to migrate again). These migrants often work abroad in the harvest, holiday, and/or construction season and spend the rest of the year at home, consuming from the savings accumulated. On the other hand, return migrants are significantly less likely to participate in wage employment (-5.5 percentage points) but their entrepreneurship rate is about 45 percent higher compared to that of non-migrants (7.9 percent vs. 5.4 percent respectively).

We also note the high own account working rate (i.e. over 20 percent) for both population groups. Using an argument from Ilahi (1999), the failure of the Albanian economic system to create enough productive employment might have left an important part of the workforce outside the labour market. In developing countries like Albania, many unskilled workers in this situation choose to engage in self-employment activities that do not require labour market skills, for instance small retail trading or small workshops. Moreover, in transition countries land reform legislations in the early 1990s caused subsistence farming to become a "parking-lot" for certain categories of workers who lost their jobs in the non-agricultural sector (Voicu 2002).

The household subjective economic status of return migrants in 1990 is slightly but significantly lower compared to that of non-migrants (3.55 vs. 3.80

[42] A description of the variables used in the empirical analysis of this chapter is presented in the Appendix: Table A3, p. 206.

respectively)[43], pointing to evidence that individuals from relatively poorer households have used migration as a strategy to improve their standard of living. And it seems that they have succeeded in catching up: both their subjective economic status and their average monthly income (if working) are statistically similar to non-migrants in 2005.

Regionally, return migrants are more likely to be located in the Coastal and Central region, the main sources of temporary migration to Italy and Greece. Moreover, return migrants are significantly less likely to be located in urban areas (-12.1 percentage points) compared to their non-migrant counterparts.

When differentiating between the characteristics of the different occupational groups, we note that for both non-migrants and return migrants, younger age and a low education level are strongly related to not working (see Tables 3.2 and 3.3). Moreover, the educational composition of the own account worker group is strikingly similar to that of the non-working group, irrespective of the past migration experience. Individuals with secondary/vocational and tertiary education are over-represented in wage employment and entrepreneurship. Furthermore, own account workers are significantly less fluent in foreign languages.

These differences in human capital endowment are reflected in the average monthly incomes. Irrespective of the migration experience, own account workers earn, on average, significantly less compared to both wage employees and entrepreneurs, confirming the "marginalization" hypothesis.[44]

[43] A question is asked in the ASLMS 2005 about the subjective economic status in 1990. The household subjective economic status is self-assessed on an index scale from 1=poor to 10=rich.
[44] The significance in differences between sample means is confirmed by t-tests.

There are important geographical disparities in occupational attainment. While non-participants, wage employees, and entrepreneurs mainly live in urban areas, over 50 percent of the own account workers are in rural areas, illustrating the importance of farming for individuals in this occupational category. Regionally, most of the non-participants are located in the poorer Mountain region (33 percent of the non-participant non-migrants and 50 percent of the non-participant returnees); so are 34 percent of the own account working non-migrants. In the absence of other employment activities in the Mountain region, small self-employment activities seem to be a popular alternative to unemployment, for the individuals unwilling or lacking the means to migrate. On the contrary, the majority of the non-migrant wage employees (35 percent) and non-migrant entrepreneurs (34 percent) are located in the relatively more developed capital city, Tirana. Return migrant wage employees are quite evenly distributed across the country: 27 percent in Tirana, 29 and 27 percent, respectively, in the Coastal and the Central regions, while return migrant entrepreneurs seem to have a clear preference for the Coastal region (43 percent), where the fast growing tourism industry creates attractive business opportunities.

Returnees seem to be inclined to work in sectors in which migrants are typically employed abroad (i.e. agriculture, constructions, and tourism). Continuing to work in the same sector certainly makes the transferability of skills easier. About 19 percent of the wage-employed returnees are in agriculture (compared to only 6 percent in the case of non-migrants) and 40 percent in the construction sector (25 percent in the case of non-migrants). At the same time, non-migrant wage employees are mainly in "other services" (35 percent; i.e. public services, healthcare, financial services, and communications). Compared to non-

migrants, return migrants working on own account are more active in the construction sector (17 vs. 10 percent), while return migrant entrepreneurs are more active in tourism (26 vs. 21 percent; i.e. hotels and restaurants).

Finally, the intention to re-migrate and the return reason also seem to affect the occupational attainment of individuals. The majority of the own account workers (65 percent) and entrepreneurs (85 percent) are selected from those who intend to resettle permanently back in Albania. There is, however, an important difference in return reasons between the two self-employment groups. While 45 percent of the own account workers have returned because of failing in their migration target, a majority of the entrepreneurs declared to have returned after having accumulated enough savings in the host country (40 percent; see Table 3.3).

Returnees not participating in the labour market have returned because of failing in their initial migration target (34 percent), due to family reasons (27 percent) or are circular/seasonal migrants (27 percent); with the vast majority intending to re-migrate (62 percent). Many of them are probably circular migrants who cover their daily expenses during the periods spent in Albania from savings accumulated abroad and, if at all, work only occasionally in Albania (see also Germenji and Milo 2009).

3.3 Empirical Approach

The occupational attainment is assumed to be determined by a pairwise comparison of the indirect utilities of the given alternatives:

- non-participation: $U_N > U_W, U_N > U_O, U_N > U_E,$
- wage employment: $U_W > U_N, U_W > U_O, U_W > U_E,$

- own account working: $U_O > U_N, U_O > U_W, U_O > U_E$,
- entrepreneurship: $U_E > U_N, U_E > U_W, U_E > U_O$, (3.1)

where *N*, *W*, *O*, and *E* stand for not working, wage employment, own account working, and entrepreneurship, respectively.[45] Such settings can be motivated by a random utility model (see Greene 2002). For the ith consumer faced with $k = \{N, W, O, E\}$ alternatives, the utility of alternative j is:

$$U_{ij} = \beta_j x_i + \varepsilon_{ij} \tag{3.2}$$

where U_{ij} is the indirect utility of alternative j for individual i, x_i a vector of characteristics which are assumed to affect the occupational attainment, and β_j a vector of parameters.

Assumptions about the disturbances (ε_{ij}) determine the nature of the model and the properties of its estimator. We assume that ε_{ij} are independent and identically distributed with type I extreme value distribution, which leads to the multinomial logit model (see Greene 2002; McFadden 1973). The probability of alternative j is given by:

$$\Pr(y_i = j) = \frac{e^{\beta_j x_i}}{\sum_{k=N,W,O,E} e^{\beta_k x_i}} \tag{3.3}$$

Not all β_j in Eqn. (3.3) are identified and we normalize by setting $\beta_W = 0$.

One problem when estimating the occupational attainment of return migrants is that they might not be a random sample from the total population. The selection problem might occur from the fact that the decision made by returnees with respect to occupation might differ from that of non-migrants due to the fact

[45] The main reason for considering non-participation as one of the alternatives is the fact that migrants, due to preference of consumption at home (see for example Stark 1991; Hill 1987), often increase work effort abroad and have consumption of leisure and goods at home. Therefore, the observed non-participation at home may be a decision linked to the work activity abroad (see also Dustmann and Kirchkamp 2002).

that they are a self-selected group with regard to unobservable characteristics (e.g. lower risk aversion). Therefore, the higher likelihood of returnees to be entrepreneurs might not be an effect of accumulated business experience or financial capital while abroad, but rather be related to their willingness to take risks that affects both the decision to engage in migration and to start a business after return.

Another problem relates to the assumption made about the sequence of the decisions with respect to migration and occupational attainment. These assumptions are mainly related to the modelling approach of the return migration decision. An important part of the literature regards migration and return as distinctive optimal residential location plans, with the decision to return taken after a time spent abroad on considerations of relative deprivation, location-specific preferences, differences in purchasing power between host and home countries' currencies, or returns to the human capital accumulated in the host country (e.g. Hill 1987; Djajic and Milbourne 1988; Stark 1991; and Dustmann 1995, 1997, and 2003). Moreover, migrants who experience outcomes worse than expected (i.e. do not find job or find a job only at a lower wage than expected) may decide to return as well (Borjas and Bratsberg 1996). In all these cases, the occupation upon return would either be a decision made after migration has already occurred, simultaneous to the decision to return to the home country or even after having returned.

Return migration can, however, be a part of a life cycle plan to accumulate capital for self-employment activities. This is often the case when capital constraints in the home economy hinder individuals from starting an enterprise, and migration is used as a strategy to accumulate the needed start-up funds

(Mesnard 2004). The decision to be an entrepreneur would be made simultaneous to the decision to migrate and return. Similarly, seasonal migrants might decide from the very beginning to work abroad in the harvest, construction, and/or holiday season and for the rest of the year to work on own farms or just consume from the savings accumulated abroad.

In order to take into account the eventual endogenous nature of migration and capture the possible simultaneous decisions with regard to occupation and migration, we estimate also a model in which the occupational categories for non-migrants are considered alternatives to the occupational categories for returnees:

$$\Pr(y_i = j) = \frac{e^{\beta_j x_i}}{\sum_{k=SN,SW,SO,SE,RN,RW,RO,RE} e^{\beta_k x_i}} \tag{3.4}$$

where S stands for stayers (i.e. non-migrants), with other letters explained above, and R stands for return migrants. Eqn. (3.4) is normalized by setting $\beta_{SW} = 0$.

The dynamics among the possible alternatives in the estimation results of the multinomial logit models (i.e. Eqns. (3.3) and (3.4)) are illustrated by computing odds ratios. The factor change in the odds of outcome m versus outcome n for a marginal increase in x_k and the other independent variables in the model held constant is given by:

$$\frac{\Omega_{m|n}(\mathrm{x}, x_{k,m|n} + 1)}{\Omega_{m|n}(\mathrm{x}, x_{k,m|n})} = e^{\beta_{k,m|n}}. \tag{3.5}$$

An important objective of the empirical work is to explore the differences in occupational attainment between return migrants and non-migrants. This can be done by computing the predicted probability differentials by migrant status and assign any difference to 'treatment' (i.e. difference due to coefficients) and 'endowment' (i.e. difference due to characteristics) components. The

decomposition is relatively straightforward in the linear regression context (see Oaxaca 1973). The approach was extended by Bauer and Sinning (2010) for tobit models, Gomulka and Stern (1990) for binary dependent variable models, and Lichfield and Reilly (2009) for bivariate probit models. I follow and approach outlined by Gill (1989) applicable for MNL models.

The sample average predicted probability for attaining occupation *j* in the case of return migrants can be expressed as:

$$\frac{1}{N_R}\sum_{i=1}^{N_R}\frac{e^{\hat{\beta}_{jR}x_{iR}}}{\sum_{k=N,W,O,E}e^{\hat{\beta}_{kR}x_{iR}}} \tag{3.6}$$

where N_R denotes the sample size of the return migrants and ($\hat{\beta}_{j_R}$) denote the coefficients obtained for the occupational alternative *j* from estimating Eqn. (3.3) for the return migrant's subsample.

The corresponding sample average predicted probability for attaining occupation *j* in the case of non-migrants is expressed as:

$$\frac{1}{N_S}\sum_{i=1}^{N_S}\frac{e^{\hat{\beta}_{jS}x_{iS}}}{\sum_{k=N,W,O,E}e^{\hat{\beta}_{kS}x_{iS}}} \tag{3.7}$$

where N_S denotes the sample size of the return migrants and ($\hat{\beta}_{j_S}$) denotes the coefficients obtained for the occupational alternative *j* from estimating Eqn. (3.3) for the non-migrant's subsample.

Two counterfactual predicted probabilities are introduced for the decomposition analysis. The first provides the sample average predicted probability for non-migrants if subjected to the return migrants' coefficient structure (i.e. the non-migrants' predicted probability of attaining occupation j if the had migrated and returned):

$$\frac{1}{N_S}\sum_{i=1}^{N_S}\frac{e^{\hat{\beta}_{jR}x_{iS}}}{\sum_{k=N,W,O,E}e^{\hat{\beta}_{kR}x_{iS}}} \tag{3.8}$$

The second counterfactual is constructed for the return migrant sub-sample and provides the sample average predicted probability for return migrants if confronted by the non-migrants' coefficient structure (i.e. the return migrants' predicted probability of attaining occupation *j* if they had not migrated):

$$\frac{1}{N_R}\sum_{i=1}^{N_R}\frac{e^{\hat{\beta}_{jS}x_{iR}}}{\sum_{k=N,W,O,E}e^{\hat{\beta}_{kS}x_{iR}}} \tag{3.9}$$

These four measures allow the computation of the total difference in sample average predicted probabilities between the two population groups as: (3.6) - (3.7). Using return migrants' coefficients, the difference due to characteristics (i.e. endowment effect) can be compute as (3.6) - (3.8) and the difference due to coefficients (i.e. treatment effect) as (3.8) - (3.7). Alternatively, using non-migrants' coefficients, the endowment effect is (3.9) - (3.7) and the treatment effect is (3.6) - (3.9). The approach is subject to the standard index number problem and is sensitive to which coefficients are used to weight the characteristics. A desirable approach is thus to report both estimates and assess the degree of sensitivity.

3.4 Estimation Results

The estimation results of the occupational attainment equation estimated separately for return migrants and non-migrants (Eqn. 3.3) are presented in Table 3.4, while the results for Eqn. (3.4), in which the occupations of returnees are considered alternative to the occupations of non-migrants are presented in Table 3.5. We conduct LR-tests for combining alternatives. The tests show that none of

the pairs of alternatives should be collapsed (i.e. the coefficients associated with all given pairs of alternatives are significantly different). The Hausman and Small-Hsiao tests of the independence of irrelevant alternatives (IIA) assumption hold also for all occupational subsets.[46] Finally, I run Hausman tests comparing the results of the separate occupational attainment estimations for non-migrants and return migrants (Eqn. (3.3)) with the estimations of Eqn. (3.4). The χ^2 values are 61.88 for non-migrants and 48.87 for returnees. Both values are smaller than the 95 percent critical value, confirming that the estimation results are significantly similar.[47]

The factor changes in the odds between the occupational subsets of Eqn. (3.4) are presented in Table 3.6. There is a significant age effect on occupation in the case of non-migrants. Each additional year increases the odds of being an own account worker compared to those of a non-participant or wage employee by about 1 to 2 percent and the odds of being an entrepreneur *versus* non-participant or wage employee by 3 to 4 percent. This age pattern is consistent with evidence of higher self-employment rates at the end of the active lifetime, which reflects higher rates of retirement out of wage employment compared to self-employment as well as transitions to self-employment at an older age (Zissimopoulos and Karoly 2007).

The same relationship would be true also for return migrants. However, the odds are not significant. For all occupational subsets, a marginal increase in age decreases the odds of being return migrant vs. non-migrant by 6 to 7 percent, confirming the findings from other studies that migration occurs at a younger age.

[46] The results of all tests are available upon request.
[47] This may be a confirmation that the occupational choice estimation can be run separately for non-migrants and return migrants without introducing a bias.

There is also quite a strong positive relationship between education level and occupational attainment. Having secondary/vocational or tertiary education significantly increases the odds of wage employment and entrepreneurship over non-participation and own account work in the case of non-migrants. As expected, the effect of tertiary education is stronger. In the case of return migrants, having tertiary education increases the odds of wage employment both over non-participation and own account work. Like tertiary educated non-migrants, returnees with university degrees seem to be attracted by relatively better wages and/or higher status government jobs, confirming the findings of Ilahi (1999) in the case of Pakistan (see Chapter 1, pp. 20-21). Nevertheless, the likelihood of entrepreneurship is significantly increased by having secondary/vocational education, validating that a certain level of education is needed for being able to accumulate business related skills while abroad (McCormick and Wahba 2001; see Chapter 1, p. 20).[48]

Even after controlling for other characteristics, the human capital content of the Albanian own account workers' group is significantly below that of wage employees and entrepreneurs, supporting the "parking-lot" hypothesis.

Using foreign language proficiency as a further control for labour market skills, we find that speaking Italian significantly increases the odds of being an entrepreneur for both non- and return-migrants.[49] With Italy being Albania's main

[48] The tertiary education odds ratios of 2.72 for entrepreneurship over non-participation and 2.41 for entrepreneurship over own account work are also quite high. They are, however, not significant due to the small sample size of tertiary educated in the return migrants group. As seen from the descriptive statistics (Table 3.1), tertiary educated individuals rather choose not to migrate. See Chapter 2 for more on the selection process of Albanian migrants into migration and return.

[49] By exploring the occupational mobility of Albanian return migrants, Carletto and Kilic (2009) also find that migration experience in Italy has a stronger effect on the upward mobility compared to migration experience in Greece.

trading partner, this effect is most likely related to activities in the foreign trade and/or the tourism sectors.

Consistent with the existence of capital constraints, the estimated odds ratios imply that the amount of initial wealth positively affects the probability of being self-employed over wage employed (Blanchflower and Oswald 1998). Social capital (proxied by the number of friends) has an effect only on own account work in the case of non-migrants, probably because it provides only a small amount of cheap labour and financial capital (Sanders and Nee 1996). Nevertheless, in the case of returnees, friends might provide information about business opportunities that seems to be helpful for both own account work and entrepreneurship.

The occupational attainment seems also to be affected by the household's migration assets too (i.e. past or current migration status of other household members). Each additional household member with a past migration experience increases the odds of entrepreneurship, giving eventually evidence of additional information about foreign markets and business opportunities and/or access to cheaper credit (from repatriated savings) within the family. However, having household members living abroad (who eventually send remittances) increases the likelihood of staying outside the labour market and enjoying leisure, indicating a possible moral hazard problem.

The availability of infrastructure (i.e. piped water) significantly increases the odds of being an entrepreneur in the case of return migrants but does not affect the probability of self-employment as an own account worker. de Mel *et al.* (2008) observe that for a substantial part of the self-employed in Sri Lanka, the lack of growth from working on own account compared to a small- or medium-sized enterprise is more likely to be due to the lack of entrepreneurial abilities.

Nevertheless, for the individuals having the abilities and skills to be entrepreneurs, infrastructure seems to be important for running and developing the businesses. This effect is positive also in the case of non-migrants. However, the odds ratios are not significant most probably because all non-migrants, irrespective of their occupation, are located in areas with good infrastructure (i.e. urban areas). Self-employment activities in rural areas are, as expected, more likely to be in own account work for both return migrants and non-migrants.

Compared to being located in Tirana, residing in the less developed Central and Mountain region significantly decreases the odds of participating in the labour market for both non-migrants and migrants. Nevertheless, a Coastal region location, with its expanding tourism industry, significantly increases the likelihood of entrepreneurship over wage employment in the case of return migrants. In the Coastal areas return migrants are even more likely to be self-employed compared to non-migrants. Their exposure to western culture probably helps them to better understand the tastes and expectations of foreign tourists, giving them a comparative advantage in providing tourism services over their non-migrant counterparts.

In order to capture eventual differences in occupational attainment among different types of returnees, we run estimations of the occupational attainment model (Eqn. (3.3)) with return migrants only, with additional controls for return reason and a variable measuring the time spent in Albania since the last return. These interaction terms should capture the reintegration dynamics of return migrants in the home country labour market. The estimation results are presented in Table 3.7 and the factor changes in the odds for the additional explanatory variables in Table 3.8.

For migrants who have returned after the expiry of a temporary/seasonal work contract, each additional month spent in Albania after return increases the odds of working as self-employed by 2 to 3 percent; with the effect being stronger for own account work. The limited amount of time repeat/seasonal migrants spend at home (about 70 percent of them intending to re-migrate) probably prevent them from taking up more long term, binding commitments like wage employment. On the other hand, a small own account business or an "enterprise" (i.e. with non-household employees) might also be managed by a close relative during the months spent abroad.

At time of arrival, unsuccessful migrants and those who had accumulated enough savings are about four times more likely to be self-employed over wage employed compared to seasonal migrants: unsuccessful returnees only as own account workers, while target savers also as entrepreneurs. With the passing of time, those initially becoming own account workers seem to switch into wage employment. This result supports the Harris-Todaro's "parking lot" hypothesis which states that in developing countries small self-employment activities are often used to bide time until formal wage employment is found (Harris and Todaro 1970). Returning after having accumulated enough savings gives the highest odds of being an entrepreneur over a wage employee.[50] This behavior is consistent with the hypothesis that in the presence of capital constraints nascent entrepreneurs are likely to use migration as a strategy to accumulate the needed funds to start a business (Mesnard 2004; see Chapter 1, p. 17).

[50] The odds ratio is significant only at the 10 percent level because of the small number of observations on entrepreneurship in the respective groups when differentiating also by type of return migrant. The standard error is, therefore, quite high.

Unsuccessful migrants and target savers are also less likely to return to wage employment over non-participation at the time of return in Albania. However, there is evidence that they eventually reintegrate into the labour market, which probably means that some of the returnees need some re-settling time before making their occupational decision. Every month spent in Albania increases their odds of finding a paid job by about 1 to 2 percent; the odds ratios being, however, not significant.

The difference in predicted probabilities of occupational attainment presented in Table 3.9 show that return migrants are more likely to end up in non-participation (+5.8 percentage points) and entrepreneurship (+2.6 percentage points) compared to non-migrants, and less likely and less likely to end up in wage employment (-5.7 percentage points) and own account work (-2.9 percentage points). The highest relative difference accounts for entrepreneurship, with return migrants having an about 48 percent higher rate compared to non-migrants.

By comparing the predicted probabilities to the counterfactuals (i.e. Eqn. 3.6 with 3.8), we note that compared to having not migrated, 28.3 percent more likely not to participate in the labour market, 6.7 percent less likely to be wage employees, 18.2 percent less likely to work on own account, and 71.8 percent more likely to be entrepreneurs. It seems, therefore, that the migration experience had an important impact on the occupational attainment of returnees, in particular on entrepreneurship.

The question, however, remains if the difference in occupational attainment between returnees and non-migrants is due to the difference in characteristics (i.e. family background, education, etc.) or the migration experience (i.e. human and/or financial capital accumulated abroad). The decomposition in 'endowment'

and 'treatment' seems to be quite sensitive to the coefficients used to weight the characteristics (see Table 3.9). Mainly, when using the return migrants' coefficients (MNL 2, Table 3.4) the endowment effect dominates, while the treatment effect dominates when using the non-migrants' coefficients (MNL 1, Table 3.4). The only exception is with respect to entrepreneurship: the 'treatment' effect dominating irrespective of the coefficients used. The geometric average of the two 'treatment' effects is 2.6 percentage points and account for almost the entire total difference in the predicted probabilities. This result shows that characteristics are rather unimportant for explaining the difference in entrepreneurship rates between return migrants and non-migrants. The higher likelihood of returnees to be entrepreneurs is almost entirely due to the financial and/or human capital accumulated abroad (McCormick and Wahba 2001; Dustmann and Kirchkamp 2002; Mesnard 2004; see Chapter 1, pp. 19-21).

3.5 Conclusions

We have analyzed the occupational attainment of return migrants and non-migrants in the Albanian context. Our results confirm empirical evidence from other developing countries that an important part of the labour force is employed as own account workers. Moreover, own account workers earn on average significantly less compared to both wage employees and entrepreneurs, pointing to the fact that own account workers are rather a marginalized group.

In our empirical approach, we investigated the occupational attainment of returnees and non-migrants for non-participation, wage employment, own account work, and entrepreneurship, taking into consideration the eventual sample selection bias into return migration. Our results show that own account

workers have characteristics closer to those not participating in the labour market (i.e. lower education levels, failure of the migration target), while entrepreneurship is positively related to schooling, foreign language skills (i.e. Italian), better infrastructure, and target saving migration. Furthermore, with the time spent in Albania after return, returnees opting for non-participation and own account work seem to re-integrate into the labour market and find a way into paid employment, supporting the "parking lot" hypothesis.

The results of the decomposition analysis show that return migrants are less likely to work on own account and more likely to be entrepreneurs, both compared to non-migrants and to a simulated situation in which return migrants would have not migrated. Moreover, the difference between returnees and non-migrants is almost solely due to the past migration experience and, thus, the human and/or financial capital accumulated abroad. These findings have important policy implications. Even after sorting out small self-employment activities, migration is shown to have an important impact on entrepreneurship. This could include the expansion of a small own account business to a small- or medium-sized enterprise with paid employees.

Finally, our results show that the impact of return migration on occupational attainment needs to be differentiated not only by forms of self-employment but also by forms of migration: target savers having the highest odds of being entrepreneurs after return. This suggests that reducing financial constraints domestically could have positive effects for the economy.

Table 3.1: Descriptive statistics by past migration experience; males

	Return Migrants	Non-Migrants		
	Mean value	Mean value	difference	p-values
Individual Characteristics				
Age	36.94	41.98	-5.040***	0.000
Education level: primary or less	0.45	0.38	0.065***	0.001
Education level: secondary	0.48	0.47	0.005	0.810
Education level: tertiary	0.08	0.15	-0.070***	0.000
Speaks English	0.09	0.10	-0.006	0.582
Speaks Italian	0.20	0.14	0.062***	0.000
Speaks Greek	0.44	0.04	0.408***	0.000
Married	0.81	0.81	0.000	0.991
Occupation: not working	0.21	0.15	0.058***	0.000
Occupation: wage employee	0.51	0.57	-0.055***	0.005
Occupation: own account worker	0.20	0.22	-0.028*	0.085
Occupation: entrepreneur	0.08	0.05	0.025***	0.009
Monthly income (if working; LEK)	247,355	228,730	18,625	0.264
Household Characteristics				
HH subjective economic status in 1990	3.55	3.80	-0.25***	0.001
HH subjective economic status in 2005	4.01	3.98	0.027	0.693
Household size	5.07	4.94	0.123*	0.073
Social Capital				
No. of friends	2.05	2.04	0.012	0.871
Migration Assets				
No. of other HH members a past migrant	0.301	0.122	-0.179***	0.000
No. of HH members living abroad	0.407	0.335	-0.072**	0.015
Community and Regional Characteristics				
Temp. migration rate at district level in 1995	0.08	0.06	0.015***	0.000
Community has piped water	0.71	0.80	-0.095***	0.000
Community has banking service	0.50	0.62	-0.115***	0.000
Urban area	0.57	0.69	-0.121***	0.000
Region: Tirana	0.20	0.29	-0.091***	0.000
Region: Coastal	0.29	0.22	0.076***	0.000
Region: Central	0.26	0.22	0.038**	0.022
Region: Mountain	0.24	0.27	-0.023	0.177
Migration history				
Time since returned (months)	55.70	n.a.		
Re-migration intention: No	0.50	n.a.		
Re-migration intention: Yes	0.36	n.a.		
Re-migration intention: Don't know	0.14	n.a.		
Return reason: family	0.25	n.a.		
Return reason: unsuccessful	0.35	n.a.		
Return reason: temporary/seasonal permit	0.21	n.a.		
Return reason: accumulated enough savings	0.19	n.a.		
Observations	962	2,049		

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: The sample included is the potential labour force (i.e. not enrolled in education, not retired, not handicapped, and not in military service) aged 20 to 64. HH subjective economic status: 1=poor to 10=rich.

Table 3.2: Descriptive statistics by occupational attainment: male non-migrants (mean values)

	Not working	Wage employee	Own account worker	Entrepreneur
Individual Characteristics				
Age	35.63	42.57	43.90	45.91
Education level: primary or less	0.51	0.30	0.52	0.24
Education level: secondary	0.45	0.49	0.42	0.56
Education level: tertiary	0.04	0.21	0.05	0.20
Speaks English	0.07	0.13	0.04	0.12
Speaks Italian	0.15	0.16	0.05	0.22
Speaks Greek	0.04	0.04	0.03	0.04
Married	0.52	0.86	0.87	0.92
Monthly income (if working; old LEK)	n.a.	259,138	207,111	645,081
Household Characteristics				
HH subjective economic status in 1990	3.71	3.85	3.68	4.01
HH subjective economic status in 2005	3.14	4.10	3.89	5.42
Household size	5.09	4.85	5.14	4.72
Social Capital				
No. of friends	1.95	1.99	2.20	2.11
Migration Assets				
No. of other HH members a past migrant	0.15	0.10	0.14	0.18
No. of HH members living abroad	0.39	0.30	0.39	0.32
Community and Regional Characteristics				
Community has piped water	0.84	0.82	0.72	0.90
Community has banking service	0.69	0.68	0.42	0.76
Urban area	0.78	0.75	0.46	0.78
Region: Tirana	0.25	0.35	0.17	0.34
Region: Coastal	0.15	0.21	0.28	0.25
Region: Central	0.26	0.22	0.21	0.22
Region: Mountain	0.33	0.23	0.34	0.19
Sector of employment				
Agriculture	n.a.	0.06	0.43	0.03
Manufacturing	n.a.	0.15	0.04	0.12
Construction	n.a.	0.25	0.10	0.12
Wholesale and retail trade	n.a.	0.08	0.25	0.42
Hotel and restaurant	n.a.	0.04	0.02	0.21
Transportation	n.a.	0.07	0.11	0.05
Other services	n.a.	0.35	0.05	0.05
Observations	314	1,167	457	111

Notes: The sample included is the potential labour force (i.e. not enrolled in education, not retired, not handicapped, and not in military service) aged 20 to 64. HH subjective economic status: 1=poor to 10=rich.

Table 3.3: Descriptive statistics by occupational attainment: male return migrants (mean values)

	Not working	Wage employee	Own account worker	Entrepreneur
Individual Characteristics				
Age	32.72	37.11	39.65	40.43
Education level: primary or less	0.52	0.45	0.49	0.16
Education level: secondary	0.44	0.44	0.49	0.77
Education level: tertiary	0.04	0.11	0.03	0.08
Speaks English	0.12	0.10	0.04	0.14
Speaks Italian	0.22	0.20	0.10	0.34
Speaks Greek	0.56	0.42	0.35	0.51
Married	0.61	0.83	0.93	0.92
Monthly income (if working; LEK)	n.a.	327,028	223,262	445,792
Household Characteristics				
HH subjective economic status in 1990	3.45	3.45	3.64	4.29
HH subjective economic status in 2005	3.31	4.02	4.24	5.18
Household size	5.45	4.93	5.09	4.91
Social Capital				
No. of friends	2.09	1.89	2.18	2.64
Migration Assets				
No. of other HH members a past migrant	0.38	0.29	0.21	0.38
No. of HH members living abroad	0.50	0.36	0.41	0.48
Community and Regional Characteristics				
Community has piped water	0.70	0.69	0.67	0.94
Community has banking service	0.53	0.51	0.37	0.78
Urban area	0.54	0.60	0.43	0.75
Region: Tirana	0.10	0.27	0.16	0.18
Region: Coastal	0.15	0.29	0.39	0.43
Region: Central	0.25	0.27	0.25	0.25
Region: Mountain	0.50	0.17	0.21	0.14
Sector of employment				
Agriculture	n.a.	0.19	0.39	0.04
Manufacturing	n.a.	0.09	0.06	0.08
Construction	n.a.	0.40	0.17	0.11
Wholesale and retail trade	n.a.	0.06	0.19	0.37
Hotel and restaurant	n.a.	0.04	0.03	0.26
Transportation	n.a.	0.05	0.14	0.07
Other services	n.a.	0.16	0.03	0.08
Migration history				
Time since returned (months)	25.00	54.49	74.74	85.68
Re-migration intention: No	0.24	0.50	0.65	0.84
Re-migration intention: Yes	0.62	0.36	0.21	0.08
Re-migration intention: Don't know	0.15	0.14	0.14	0.08
Return reason: family	0.27	0.27	0.19	0.21
Return reason: unsuccessful	0.34	0.33	0.45	0.29
Return reason: temporary/seasonal permit	0.27	0.22	0.17	0.10
Return reason: accumulated enough savings	0.12	0.18	0.19	0.40
Observations	203	495	187	77

Notes: The sample included is the potential labour force (i.e. not enrolled in education, not retired, not handicapped, and not in military service) aged 20 to 64. HH subjective economic status: 1=poor to 10=rich.

Table 3.4: Estimation results of occupational attainment; separately for Non-Migrants and Return Migrants

	Multinomial Logit (1): Non-Migrants			Multinomial Logit (2): Returnees		
	Not working vs. Wage employment	Own acc. work vs. Wage employment	Entrepreneur vs. Wage employment	Not working vs. Wage employment	Own acc. work vs. Wage employment	Entrepreneur vs. Wage employment
Individual Characteristics						
Age	-0.00436	0.01434	0.02846	-0.00459	0.01663	0.02818
	[0.00949]	[0.00702]**	[0.01263]**	[0.01340]	[0.01157]	[0.01552]*
Education level: secondary	-0.7169	-0.53911	0.2165	0.01695	0.04772	1.20633
	[0.14105]***	[0.13935]***	[0.23147]	[0.21622]	[0.19527]	[0.34192]***
Education level: tertiary	-2.40888	-1.67209	-0.22279	-1.18726	-1.39652	-0.48076
	[0.38169]***	[0.25905]***	[0.34202]	[0.49773]**	[0.56081]**	[0.64029]
Speaks English	-0.19409	-0.07534	-0.24506	0.63386	0.17164	0.53301
	[0.32348]	[0.31496]	[0.41081]	[0.37718]*	[0.50946]	[0.57932]
Speaks Italian	0.13368	-0.38041	0.77923	0.2115	-0.53284	0.65737
	[0.25372]	[0.25516]	[0.29408]***	[0.25734]	[0.29254]*	[0.32736]**
Speaks Greek	-0.00496	-0.02848	-0.3208	0.46726	-0.18358	0.29468
	[0.38848]	[0.36464]	[0.50426]	[0.20385]**	[0.18750]	[0.29520]
Married						
	-1.72686	-0.25714	0.30146	-0.84279	0.52674	0.81658
Household Characteristics	[0.22629]***	[0.23140]	[0.42603]	[0.26110]***	[0.35560]	[0.55589]
HH subjective economic status in 1990	0.04013	0.09821	0.00499	0.02091	0.11438	0.17075
	[0.04695]	[0.03904]**	[0.06797]	[0.06225]	[0.05578]**	[0.07973]**
Household size	0.04579	0.00386	-0.01503	0.10606	0.01824	0.08771
	[0.04640]	[0.03974]	[0.07680]	[0.06107]*	[0.05505]	[0.09731]
Social Capital						
No. of friends	0.02661	0.07142	0.02744	-0.01897	0.08778	0.1349
	[0.04534]	[0.03086]**	[0.04838]	[0.05575]	[0.05917]	[0.07207]*
Migration Assets						
No. of other HH members a past migrant	0.13789	0.06481	0.43234	-0.06219	-0.18934	0.20185
	[0.17849]	[0.16864]	[0.21079]**	[0.18266]	[0.19561]	[0.24289]
No. of HH members living abroad	0.17365	0.04319	-0.08202	0.29614	0.10305	0.14966
	[0.10699]	[0.08073]	[0.17335]	[0.11672]**	[0.12147]	[0.15669]

Table 3.4: Estimation results of occupational attainment; separately for Non-Migrants and Return Migrants (continued)

	Multinomial Logit (1): Non-Migrants			Multinomial Logit (2): Returnees		
	Not working vs. Wage employment	Own acc. work vs. Wage employment	Entrepreneur vs. Wage employment	Not working vs. Wage employment	Own acc. work vs. Wage employment	Entrepreneur vs. Wage employment
Community and Regional Characteristics						
Community has piped water	0.14308	0.23867	0.5611	0.32656	0.31383	1.66344
	[0.27932]	[0.23942]	[0.43902]	[0.33839]	[0.26243]	[0.50622]***
Urban area	0.86215	-1.00255	-0.06967	0.3148	-0.67216	-0.08148
	[0.22364]***	[0.19030]***	[0.31441]	[0.32511]	[0.27959]**	[0.35232]
Region: Coastal	0.399	0.32384	0.18505	0.47175	0.42788	1.04126
	[0.26987]	[0.21199]	[0.29829]	[0.35233]	[0.32813]	[0.41447]**
Region: Central	0.86432	0.01602	0.0199	1.10412	0.0112	0.55458
	[0.23674]***	[0.22398]	[0.30388]	[0.32605]***	[0.35604]	[0.43767]
Region: Mountain	1.12958	0.42273	-0.01012	2.26923	0.26698	0.82283
	[0.23409]***	[0.23362]*	[0.31138]	[0.35801]***	[0.37414]	[0.52475]
Constant	-1.21249	-1.17968	-4.56739	-2.62389	-2.61127	-8.26427
	[0.53120]**	[0.47788]**	[0.85920]***	[0.70281]***	[0.66592]***	[1.01229]***
Observations		2049			962	
Wald chi-sq		461.69			294.35	
Pseudo R-sq		0.12			0.14	

Robust standard errors in brackets; adjusted for 454 regional clusters (i.e. panel sampling units)

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: The control group for the regional dummies is "Tirana". HH subjective economic status: 1=poor to 10=rich.

Table 3.5: Estimation results of occupational attainment; jointly for Non-Migrants (NM) and Return Migrants (RM)

	Multinomial Logit (3)						
	Not working NM vs. Wage employed NM	Own acc. worker NM vs. Wage employed NM	Entrepreneur NM vs. Wage employed NM	Not working RM vs. Wage employed NM	Wage employed RM vs. Wage employed NM	Own acc. worker RM vs. Wage employed NM	Entrepreneur RM vs. Wage employed NM
Individual Characteristics							
Age	-0.00881	0.01447	0.02983	-0.06941	-0.06769	-0.05626	-0.04739
	[0.00961]	[0.00707]**	[0.01287]**	[0.01194]***	[0.00763]***	[0.00975]***	[0.01370]***
Education level: secondary	-0.65	-0.52451	0.22738	-0.54743	-0.4498	-0.41828	0.70163
	[0.14116]***	[0.13735]***	[0.23099]	[0.19544]***	[0.14512]***	[0.17708]**	[0.34617]**
Education level: tertiary	-2.23776	-1.63377	-0.19088	-2.30394	-0.7592	-2.18092	-1.30214
	[0.37418]***	[0.25549]***	[0.33645]	[0.49706]***	[0.26557]***	[0.52954]***	[0.61740]**
Speaks English	-0.31424	-0.03359	-0.21735	0.29043	-0.57504	-0.47495	-0.07107
	[0.30309]	[0.30286]	[0.40701]	[0.39628]	[0.28000]**	[0.48614]	[0.54501]
Speaks Italian	0.06411	-0.49766	0.72619	0.78034	0.60442	0.13943	1.24363
	[0.22834]	[0.23610]**	[0.28094]***	[0.29568]***	[0.21462]***	[0.30033]	[0.32718]***
Speaks Greek	-0.20986	-0.2127	-0.10299	3.15458	2.64913	2.46138	2.81853
	[0.34351]	[0.34612]	[0.52348]	[0.24302]***	[0.19455]***	[0.22968]***	[0.29042]***
Married	-1.65569	-0.26523	0.30584	0.35025	1.29294	1.89345	2.12309
	[0.21272]***	[0.22746]	[0.42385]	[0.26368]	[0.22162]***	[0.34831]***	[0.56967]***
Household Characteristics							
HH subjective economic status in 1990	0.0347	0.08393	0.00392	0.00327	-0.04005	0.09843	0.13159
	[0.04478]	[0.03796]**	[0.06549]	[0.05363]	[0.04000]	[0.05364]*	[0.07637]*
Household size	0.05342	-0.00202	-0.0087	-0.03972	-0.13641	-0.10139	-0.07842
	[0.04411]	[0.03930]	[0.07746]	[0.06033]	[0.04308]***	[0.05152]**	[0.07492]
Social Capital							
No. of friends	0.0207	0.07447	0.0299	-0.01233	0.00122	0.10151	0.15223
	[0.03931]	[0.02835]***	[0.04308]	[0.04854]	[0.06647]	[0.04048]**	[0.03722]***
Migration Assets							
No. of other HH members a past migrant	0.15063	0.14676	0.44289	0.69057	0.80674	0.56515	1.057
	[0.18145]	[0.18228]	[0.22080]**	[0.18186]***	[0.16761]***	[0.18762]***	[0.23313]***
No. of HH members living abroad	0.17906	0.06027	-0.07649	0.48852	0.21022	0.28056	0.37765
	[0.10267]*	[0.07836]	[0.16668]	[0.10657]***	[0.08177]**	[0.11122]**	[0.15938]**

Table 3.5: Estimation results of occupational attainment; jointly for Non-Migrants (NM) and Return Migrants (RM) (continued)

	Multinomial Logit (3)						
	Not working NM vs. Wage employed NM	Own acc. worker NM vs. Wage employed NM	Entrepreneur NM vs. Wage employed NM	Not working RM vs. Wage employed NM	Wage employed RM vs. Wage employed NM	Own acc. worker RM vs. Wage employed NM	Entrepreneur RM vs. Wage employed NM
Community and Regional Characteristics							
Community has piped water	0.12061	0.24415	0.58298	-0.06065	-0.39133	-0.09091	1.13278
	[0.27306]	[0.23879]	[0.44178]	[0.31952]	[0.19229]**	[0.26648]	[0.49913]**
Urban area	0.82986	-1.00813	-0.08442	0.00691	-0.38198	-1.06872	-0.36998
	[0.22180]***	[0.19207]***	[0.31651]	[0.29997]	[0.20372]*	[0.26829]***	[0.32923]
Region: Coastal	0.39451	0.32109	0.16935	0.88069	0.31603	0.69458	1.37182
	[0.26464]	[0.21079]	[0.29291]	[0.35475]**	[0.22190]	[0.31822]**	[0.37399]***
Region: Central	0.82652	0.02082	0.02089	1.49829	0.2592	0.19699	0.83544
	[0.22833]***	[0.21839]	[0.29823]	[0.33337]***	[0.20794]	[0.35145]	[0.41625]**
Region: Mountain	1.02949	0.39724	-0.01403	2.07702	-0.39014	-0.18334	0.54113
	[0.22635]***	[0.22918]*	[0.30407]	[0.33605]***	[0.25275]	[0.37413]	[0.46782]
Constant	-1.0325	-1.10978	-4.68328	-1.12061	1.66805	-0.9064	-6.08478
	[0.52960]*	[0.48693]**	[0.89302]***	[0.63395]*	[0.46244]***	[0.60682]	[0.89108]***
Observations				3011			
Wald chi-sq				1615.23			
Pseudo R-sq				0.18			

Robust standard errors in brackets; adjusted for 454 regional clusters (i.e. panel sampling units)

* significant at 10%; ** significant at 5%; *** significant at 1%

Note: The control group for the regional dummies is "Tirana". HH subjective economic status: 1=poor to 10=rich.

Table 3.6: Odds ratios for occupational attainment

	Age	Education level: secondary	Education level: tertiary	Speaks English	Speaks Italian	Speaks Greek	Married	Subjective econ. status 1990	HH size
				Return Migrants					
RW vs. RN	1.00	1.10	4.69***	0.42**	0.84	0.60**	2.57***	0.96	0.91
RO vs. RN	1.01	1.14	1.13	0.47	0.53*	0.50***	4.68***	1.10	0.94
RO vs. RW	1.01	1.03	0.24**	1.11	0.63	0.83	1.82*	1.15**	1.04
RE vs. RN	1.02	3.49***	2.72	0.70	1.59	0.71	5.89***	1.14	0.96
RE vs. RW	1.02	3.16***	0.58	1.66	1.90*	1.18	2.29	1.19**	1.06
RE vs. RO	1.01	3.06***	2.41	1.50	3.02***	1.43	1.26	1.03	1.02
				Non-Migrants					
SW vs. SN	1.01	1.92***	9.37***	1.37	0.94	1.23	5.24***	0.97	0.95
SO vs. SN	1.02**	1.13	1.83	1.32	0.57*	1.00	4.02***	1.05	0.95
SO vs. SW	1.01**	0.59***	0.20***	0.97	0.61**	0.81	0.77	1.09**	1.00
SE vs. SN	1.04***	2.40***	7.74***	1.10	1.94*	1.11	7.11***	0.97	0.94
SE vs. SW	1.03**	1.26	0.83	0.80	2.07**	0.90	1.36	1.00	0.99
SE vs. SO	1.02	2.12***	4.23***	0.83	3.40***	1.12	1.77	0.92	0.99
				Return Migrants vs. Non-Migrants					
RN vs. SN	0.94***	1.11	0.94	1.83	2.05**	28.92***	7.43***	0.97	0.91
RW vs. SW	0.93***	0.64***	0.47***	0.56**	1.83***	14.14***	3.64***	0.96	0.87***
RO vs. SO	0.93***	1.11	0.58	0.64	1.89*	14.50***	8.66***	1.01	0.91*
RE vs. SE	0.93***	1.61	0.33	1.16	1.68	18.57***	6.15**	1.14	0.93

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3.6: Odds ratios for occupational attainment (continued)

	No. of friends	No. of oth. HH memb. a past mig.	No. of HH memb. living abroad	Piped water	Urban area	Coastal region	Central region	Mountain region
				Return Migrants				
RW vs. RN	1.01	1.12	0.76**	0.72	0.68	0.57	0.29***	0.08***
RO vs. RN	1.12**	0.88	0.81	0.97	0.34***	0.83	0.27***	0.10***
RO vs. RW	1.11	0.79	1.07	1.35	0.50**	1.46	0.94	1.23
RE vs. RN	1.18***	1.44	0.90	3.30**	0.69	1.63	0.52	0.22***
RE vs. RW	1.16**	1.28	1.18	4.59***	1.01	2.87***	1.78	2.54*
RE vs. RO	1.05	1.64**	1.10	3.40**	2.01*	1.97	1.89	2.06
				Non-Migrants				
SW vs. SN	0.98	0.86	0.84*	0.89	0.44***	0.67	0.44***	0.36***
SO vs. SN	1.06	1.00	0.89	1.13	0.16***	0.93	0.45***	0.53**
SO vs. SW	1.08***	1.16	1.06	1.28	0.36***	1.38	1.02	1.49*
SE vs. SN	1.01	1.34	0.77	1.59	0.40**	0.80	0.45**	0.35***
SE vs. SW	1.03	1.56**	0.93	1.79	0.92	1.18	1.02	0.99
SE vs. SO	0.96	1.34	0.87	1.40	2.52***	0.86	1.00	0.66
				Return Migrants vs. Non-Migrants				
RN vs. SN	0.97	1.72***	1.36**	0.83	0.44**	1.63	1.96*	2.85***
RW vs. SW	1.00	2.24***	1.23**	0.68**	0.68*	1.37	1.30	0.68
RO vs. SO	1.03	1.52*	1.25*	0.72	0.94	1.45	1.19	0.56
RE vs. SE	1.13**	1.85**	1.57**	1.73	0.75	3.33***	2.26*	1.74

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Odds ratios computed based on the estimation in Table 3.5. The control group for the regional dummies is "Tirana". SN, SW, SO, and SE stand for being a non-migrant and not working, being a non-migrant and working as wage employee, being a non-migrant and working on own account, and being a non-migrant and working as entrepreneur respectively. RN, RW, RO, and RE stand for being a return migrant and not working, being a return migrant and working as wage employee, being a return migrant and working on own account, and being a return migrant and working as entrepreneur respectively.

Table 3.7: Estimation results of occupational attainment: return migrants

	Multinomial Logit (4)		
	Not working vs. Wage employment	Own acc. Work vs. Wage employment	Entrepreneur vs. Wage employment
Individual Characteristics			
Age	0.0083	0.00591	0.01363
	[0.01365]	[0.01292]	[0.01788]
Education level: secondary	0.20126	-0.05776	1.0027
	[0.22230]	[0.20722]	[0.35046]***
Education level: tertiary	-1.00018	-1.4314	-0.73908
	[0.50660]**	[0.57700]**	[0.70166]
Speaks English	0.56418	-0.02795	0.3689
	[0.36166]	[0.52499]	[0.63841]
Speaks Italian	0.19402	-0.45723	0.64657
	[0.26643]	[0.29936]	[0.34627]*
Speaks Greek	0.40404	0.01914	0.33733
	[0.20966]*	[0.20172]	[0.31190]
Married			
	-0.75923	0.49138	0.67397
Household Characteristics	[0.26865]***	[0.37882]	[0.58377]
HH subjective economic status in 1990	0.0124	0.12327	0.19911
	[0.06440]	[0.05667]**	[0.08227]**
Household size	0.14127	0.03098	0.09481
	[0.06320]**	[0.05712]	[0.09299]
Social Capital			
No. of friends	0.03298	0.04738	0.1147
	[0.05662]	[0.05560]	[0.06588]*
Migration Assets			
No. of other HH members a past migrant	-0.13166	-0.11858	0.26499
	[0.18776]	[0.20312]	[0.23612]
No. of HH members living abroad	0.24325	0.11022	0.19908
	[0.11636]**	[0.12770]	[0.17619]
Community and Regional Characteristics			
Community has piped water	0.38618	0.26344	1.65163
	[0.34582]	[0.27950]	[0.52694]***
Urban area	0.33343	-0.85022	-0.35723
	[0.33172]	[0.28772]***	[0.38015]
Region: Coastal	0.42571	0.27723	0.84071
	[0.36813]	[0.33063]	[0.42278]**
Region: Central	0.94801	-0.01646	0.53892
	[0.33849]***	[0.36808]	[0.43649]
Region: Mountain	2.2068	0.59657	1.25294
	[0.39593]***	[0.39703]	[0.54295]**
Migration			
Months since return: temporary/seasonal permit	-0.00846	0.01803	0.01365
	[0.00797]	[0.00565]***	[0.00954]
Return reason: family	0.4326	0.35996	0.64265
	[0.38197]	[0.43230]	[0.79036]
Months since return: family reason	0.00181	-0.00694	-0.00307
	[0.00929]	[0.00635]	[0.01063]
Return reason: unsuccessful	1.21133	1.46215	0.20616
	[0.40901]***	[0.43974]***	[0.86377]
Months since return: unsuccessful returnee	-0.01054	-0.01718	-0.00313
	[0.00880]	[0.00600]***	[0.01026]
Return reason: accumulated enough savings	1.13627	1.32398	1.44759
	[0.49913]**	[0.54337]**	[0.82375]*
Months since return: accumulated enough savings	-0.01581	-0.01277	-0.00435
	[0.01222]	[0.00693]*	[0.01066]
Constant	-3.45713	-3.36181	-8.72779
	[0.77118]***	[0.74659]***	[1.23179]***
Observations		962	
Wald chi-sq		346.49	
Pseudo R-sq		0.18	

Robust standard errors in brackets; adjusted for 454 regional clusters (i.e. panel sampling units)
* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: The control group for the regional dummies is "Tirana", for re-migration intention dummies - "Re-migration intention: Yes"; and for the return reason dummies - "Return reason: temporary/seasonal permit". HH subjective economic status: 1=poor to 10=rich.

Table 3.8: Odds ratios for occupational attainment; return reasons of return migrants

	Months since return: seasonal migration	Return out of family reasons vs. seasonal migration	Months since return: family reasons	Failure of the migration target vs. seasonal migration	Months since return: failure of the migration target	Accumulated enough savings vs. seasonal migration	Months since return: accumulated enough savings
RW vs. RN	1.01	0.65	1.00	0.30***	1.01	0.32**	1.02
RO vs. RN	1.03***	0.93	0.99	1.29	0.99	1.21	1.00
RO vs. RW	1.02***	1.43	0.99	4.32***	0.98***	3.76**	0.99*
RE vs. RN	1.02**	1.23	1.00	0.37	1.01	1.37	1.01
RE vs. RW	1.01	1.90	1.00	1.23	1.00	4.25*	1.00
RE vs. RO	1.00	1.33	1.00	0.28	1.01	1.13	1.01

* significant at 10%; ** significant at 5%; *** significant at 1%

Notes: Odds ratios computed after estimation in Table 3.7. RN, RW, RO, and RE stand for being a return migrant and not working, being a return migrant and working as wage employee, being a return migrant and working on own account, and being a return migrant and working as entrepreneur respectively.

Table 3.9: Decomposition of differences in predicted probabilities between return migrants and non-migrants

	Predicted probabilities		Counterfactuals		Total difference	Endowment effect	Treatment effect	Endowment effect	Treatment effect
	return migrants' coefficients; return migrants' characteristics	non-migrants' coefficients; non-migrants' characteristics	return migrants' coefficients; non-migrants' characteristics	non-migrants' coefficients; return migrants' characteristics		return migrants' coefficients		non-migrants' coefficients	
	Eqn. (3.6)	Eqn. (3.7)	Eqn. (3.8)	Eqn. (3.9)	(3.6) - (3.7)	(3.6) - (3.8)	(3.8) - (3.7)	(3.9) - (3.7)	(3.6) - (3.9)
Occupation: non participation	0.211	0.153	0.169	0.164	0.058	0.042	0.016	0.011	0.047
Occupation: wage employment	0.515	0.570	0.542	0.551	-0.055	-0.027	-0.028	-0.018	-0.037
Occupation: own account work	0.194	0.223	0.215	0.238	-0.029	-0.020	-0.008	0.015	-0.043
Occupation: entrepreneurship	0.080	0.054	0.074	0.047	0.026	0.006	0.020	-0.008	0.033

CHAPTER 4: ON THE TRANSFER BEHAVIOUR OF PERMANENT MIGRANTS: AN EXPENDITURE DEMAND SYSTEM ANALYSIS

4.1 Introduction

Due to the increasing relevance of international migration, the economic behaviour of migrants has become an important issue for both migrant host and origin countries. Over 200 million people (about 3 percent of the world's population) are estimated to live outside the country of their birth (IOM 2008), generating a massive yearly aggregate remittance flow that reached US$444 billion in 2008; with US$338 billion going to developing countries (Ratha *et al.* 2009). Given the important potential of migrants' remittances in easing poverty and sustaining development in migrant sending countries, a substantial part of the migration literature has concentrated on analysing the determinants of this type of transfers. This paper adds to the literature by incorporating for the first time transfers made by permanent migrants explicitly into a formal demand system and assessing their sensitivity with respect to the total expenditures of the household.[54]

The transfer behaviour of migrants has been mostly studied in terms of motivations, which are generally categorised to be either altruism, self-interest, exchange, or an informal contractual agreement between the migrant and his

[54] The term "remittances" is in general used in the literature for in kind and monetary transfers made by migrants to relatives, friends or NGOs in the home country/region. Because the data used for the empirical investigation in this study does not allow for the distinction between transfers made in the country of residence (i.e. Canada) and abroad, we will use the more general term "transfers". We assume, however, that

family (i.e. co-insurance or loan; see Bernheim *et al.* 1985, Brown 1997, Cox 1987, Cox *et al.* 1998, Ilahi and Jafarey 1999, Lucas and Stark 1985, and Poirine 1997). The altruism hypothesis, for example, assumes that transfers are motivated by the fact that the migrant cares about the relatives left behind. However, migrant' transfers can be also motivated by self-interest: to maintain favour in line of inheritance or, in case of an intended return, for investments in home country/region physical (i.e. land, cattle, housing, etc.) or social assets (i.e. relationships with family and/or friends). Alternatively, transfers could represent "payments" for various types of services like attention, social contact, and/or taking care of the migrant's dependants (i.e. children or elderly parents) or his assets owned in the home country.

More recently the focus of the analysis has shifted towards the long-term economic situation of the migrants, with several studies investigating the transfer activity alongside the savings behaviour. For example, Bauer and Sinning (2005) found that immigrants in Germany save in general less compared to natives. However, if considering remittances as a form of saving as well, the difference between temporary migrants (i.e. migrants intending to return to their home countries) and natives disappears. Amuedo-Dorantes and Pozo (2006) show that the riskiness of earnings and employment in the host community determines Mexican immigrants in the US to be more likely to remit and remit a greater part of their earnings to their families (i.e. "buy" family-provided insurance) and/or accumulate more precautionary savings at home. Evidence from Germany partly confirms these findings: Sinning (2010) describes that the variation of past income

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the transfers made by immigrants are rather remittances, i.e. made to persons or NGOs in their country of origin.

streams have a positive effect on remittances for other purposes than supporting family members; while Piracha and Zhu (2007) show that income and/or employment uncertainty due to legal residence can result in a higher stream of precautionary savings to the home country as well.

The amount of migrants' transfers/remittances has been theoretically modelled as being also related to the senders' consumption (see Rapoport and Docquier 2006). Surprisingly, notwithstanding the vast literature on transfer/remittance behaviour, none of the aforementioned studies has analysed them within the general expenditure decisions of a household. Compared to temporary migrants, who often save more abroad in order to consume at home, the link between transfers and consumption should be even more important for long-term/permanent migrants. They should eventually have an economic behaviour more similar to that of the natives and, thus, relate their transfers to the households' general expenditures.

This study shall add to the above literature by analysing the transfer behaviour of permanent migrants in the framework of a demand system. Using Canadian household survey data, we distinguish between two types of transfers: to persons and to charities, and assume that they represent expenditures on social relations with relatives and/or friends and contributions to membership in social/religious organisations respectively.[55] Moreover, in order to capture an eventual assimilation process regarding the transfer behaviour, we compare the transfer activity of immigrants to the transfer activity of natives.

[55] Migrants' transfers are not restricted to family members only but also include charities and for community development purposes (e.g. home town associations; see Iskander 2005). As described by Lucas and Stark (1985), such remittances are sent with the intention to enhance the migrant's prestige and/or his political influence in the local community.

Our empirical results show that both Canadian-born and immigrants from North America and Europe consider transfers to persons outside the household a luxury. On the other hand, transfers to relatives and/or friends of Asian immigrant households are much less sensitive to variations in total expenditures (i.e. elasticities being closer to unity). Moreover, Asian households transfer to persons a greater share of their expenditures at time of arrival with no evidence of convergence to the Canadian-born norm over time; behaviour that eventually provides evidence of closer ties to the extended family. As for group membership, households in the top income half across all population groups seem to consider it an inferior good, while poorer households seem to value community relations relatively more.

The remainder of the chapter is organised as follows. Section 4.2 discusses theoretical considerations related to the modelling of household transfers in the framework of a demand system and sets up the econometric model. Section 4.3 gives the general background of Canadian immigration and presents the dataset. Section 4.4 discusses the empirical results and Section 4.5 concludes.

4.2 The demand system

4.2.1 Theoretical considerations

In contrast to the traditional approach to analyse the transfer (or remittance) behaviour in terms of motivations, we embed transfers in a formal demand system and suggest that they represent expenditures on social relations with relatives and/or friends and contribute to membership in social/religious organizations respectively.

This modelling is, nevertheless, consistent with the transfer/remittance motivation theory in which transfers are expected to influence the social relations between the migrant and their relatives as well. For instance, in the altruistic model the degree of altruism of the relatives towards the migrant may influence and be influenced by the amount transferred (Rapoport and Doquier 2006). However, self-interest is probably the strongest motivation to invest in social relations. In the inheritance model, the migrant is assumed to send transfers to maintain a good relationship with the parent and, thus, retain favour in terms of inheritance; while in the case of an intended return, transfers sent to the relatives are assumed to preserve a close relationship with the family. Similarly transfers sent to local charities and/or community projects enhance prestige or political influence in the community (Lucas and Strak 1985). The investment in social relations through transfers could further provide a safety net to the migrant (i.e. financial support in case of temporary income losses) as assumed by the co-insurance models (see Ilahi and Jafarey 1999).

In order to characterise the household's transfer decisions with respect to consumption, we allow for a two-stage budgeting process (see Deaton and Muellbauer 1993). In the first stage, the household may allocate total expenditures on consumption and on the composite good "social relations outside the household". In the second stage, the expenditures on "social relations outside the household" determined in the first stage are distributed between expenditures on social relations with relatives and/or friends and contributions to group membership (i.e. membership in a religious, charitable, professional group, etc.). The differentiation between the expenditures on the two types of social relationships is not only of sociological relevance. The costs involved are also

different: while contributions to group membership are in the majority of cases tax deductible, transfers to relatives are not.

4.2.2 Empirical Approach

It is a basic premise of this study that the act of private transfers is embedded in the household's utility maximization framework and is, thus, a part of the household's allocation process across a general expenditure system. The chosen demand system estimated is the Linear Approximate/Almost Ideal Demand System (LA/AIDS) proposed by Deaton and Muellbauer (1980) as it satisfies the microeconomic theory of demand (i.e. allows for exact aggregation and imposition of homogeneity and symmetry restrictions) and permits for the two-stage budgeting procedure.

For the i^{th} commodity, the model can be specified as follows:

$$w_i = \alpha_i + \sum_j \gamma_{ij} \ln p_j + \beta_i \ln(y / p^*) + \varepsilon_i \qquad (4.1)$$

where $w_i = p_i \times q_i / y$ is the budget share of the i^{th} good, p_j is the price of the j^{th} good, y represents total expenditures, and p^* is a Stone price index (i.e. $\ln p^* = \sum w_i \ln p_i$). To ensure that this demand system conforms to the utility maximization properties, Eqn. (4.1) must satisfy the adding up, homogeneity and symmetry conditions:

$$\textit{adding up:} \quad \sum_{i=1}^{n} \alpha_i = 1; \sum_{i=1}^{n} \beta_i = 0; \sum_{i=1}^{n} \gamma_{ij} = 0 \qquad (4.2)$$

$$\textit{homogeneity:} \quad \sum_{j=1}^{n} \gamma_{ij} = 0 \qquad (4.3)$$

$$\textit{symmetry:} \quad \gamma_{ij} = \gamma_{ji} \qquad (4.4)$$

The adding up conditions are ensured by the fact that the budget shares of the goods in the system add up to one: $\sum w_i = 1$. Homogeneity and symmetry have to be tested and they can be also parametrically imposed.

According to Deaton and Muellbauer (1993), a necessary and sufficient condition for the second stage of a two-stage budgeting process is weak separability. Weak separability of a utility function over a given set of commodities implies that the marginal rate of substitution between any two goods within one group of goods is independent of the level of consumption of any other group of goods. If this condition holds, then it is correct to specify the demand for these product groups separately. The sole connection between the commodity groups is via the income or expenditure effect.

Following Hansen (1993), Allen's partial elasticities of substitution allow us to test for the existence of weak separability. The utility function is weakly separable into the commodity groups A and B if two conditions are satisfied: (a) the partial substitution elasticities between different commodities of the group A and of group B are identical, i.e. $\sigma_{lm} = \sigma$ for all $l \in A$ and $m \in B$, and (b) the utility sub-functions are homothetic:

$$\sum_l \beta_l = 0 \text{ and } \sum_m \beta_m = 0. \tag{4.5}$$

From the relation between substitution elasticities and compensated price elasticities we have: $\sigma_{lm} = 1/\overline{w}_m \times \Theta^*_{lm}$. The compensated price elasticities are calculated as $\Theta^*_{ij} = \overline{w}_j + \gamma_{ij}/\overline{w}_i$ for $i \neq j$. Thus, from condition (a) we obtain the testable restriction:

$$1 + \gamma_{lm}/\overline{w}_l\overline{w}_m = \sigma. \tag{4.6}$$

To test if the conditions (4.5) and (4.6) are satisfied, we apply a likelihood ratio (LR) test comparing the system of equations with and without the restrictions imposed.

The LA/AIDS is simple to interpret. In the case of constant relative prices and "real" expenditure (y/p^*), the budget shares are constant. This is the natural starting point for the predictions using the model. Changes in real expenditures operate through β_i; these add to zero and are positive for luxuries and negative for necessities. Using the estimate β_i, Engel elasticities can be calculated as follows:

$$e_i = 1 + (\beta_i / \overline{w}_i) \tag{4.7}$$

where e_i is the Engel elasticity and $\overline{w}_i$ is the mean share of expenditures on the i^{th} good for the entire sample. The Engel elasticity is greater than unity for luxuries, less than unity for necessities, and equal to one for normal goods.

In the demand analysis for various commodities the LA/AIDS is often supplemented with demographic variables in order to reduce the bias due to unobserved household characteristics (see Teklu 1996; Adrangi and Raffiee 1997; Meenakshi and Ray 1999). Following this approach, we additionally estimate a demographically enhanced demand system:

$$w_i = \alpha_i + \sum_{j=1}^{n} \gamma_{ij} \ln p_j + \beta_i \ln(y/p^*) + \delta_{ik} X_k + \varepsilon_i \tag{4.8}$$

where X_k represents a set of demographic control variables that depict the life-cycle stage of the immigrant and Canadian households, i.e. gender, age, education, marital status, household size, home ownership, and net change in assets and liabilities (i.e. savings).

Finally, based on the model of Caroll *et al.* (1994), the demand system is further augmented in order to capture eventual immigration entry and assimilation effects with respect to the transfer behaviour of households:

$$w_i = \alpha_i + \sum_{j=1}^{n} \gamma_{ij} \ln p_j + \beta_i \ln(y / p^*) + \delta_{ik} X_k + \sum_s (\phi_{is} + \theta_{is} D) \times IG_s + \varepsilon_i \qquad (4.9)$$

where IG_s is a dummy variable that is equal to one if the household belongs to immigrant group s and zero otherwise. D denotes the duration of the foreign-born household residence in Canada. Immigrants are assumed to arrive with a set of cultural values and tastes which are different from those of the natives; this is reflected by possible non-zero values for ϕ_{is}. Thus, the set of parameters ϕ_{is} can be interpreted first as a general *immigration entry effect*. If ϕ_{is} differs significantly across immigrant groups, we consider this an evidence for country/region specific *cultural effects* as well. Over time, via assimilation, the behaviour of immigrants may become more similar to that of the host group. In our model this would be the case when the sign of θ_{is} is opposite to the sign of ϕ_{is}. In this case, the immigration entry and/or cultural effects would vanish after ϕ_{is}/θ_{is} years of residence in the host country.

4.3 Background and Descriptive Statistics

4.3.1 Canadian immigrant population

Canada's foreign-born resident population is large: 6.5 million or about 20.5 percent of the total population in the 2006 census; the vast majority (96 percent) of these foreign-born residents are admitted into Canada on a permanent basis and due to quick accession to citizenship, over 75 percent of Canada's foreign-born

population is naturalised. Canada's immigrant population is thus quite homogeneous in terms of legal resident and citizenship status. However, it is quite diverse in terms of ethnicity. Traditional migration sources are countries from Western and Southern Europe (i.e. UK, Italy, Germany, and Portugal) which in 2006 still made up about 28 percent of the stock of foreign-born population. Nevertheless, in the 1980s and 1990s immigration dramatically shifted towards Asian and Central and Eastern European sources, which now represent about 35 percent and 8 percent of the immigrant population respectively.

4.3.2 Family Expenditure Survey (FAMEX)

The data sets used for this analysis are taken from the waves 1986 and 1992 of the Family Expenditure Survey (FAMEX), Statistics Canada. Data were collected in the form of a detailed questionnaire during one or several interviews. Thus, income, expenditure and transfer data in the surveys are self-reported.

The FAMEX was designed to provide information for persons living in private households in the ten provinces of Canada as well as Whitehorse and Yellowknife.[56] The probability sample is based on a stratified multi-stage design. Each province is divided into large geographic stratum. The first stage of sampling consists of selecting smaller geographic areas, called clusters, from within each stratum. The second stage of sampling consists of selecting dwellings from within each selected cluster. The wave 1986 contains 10,356 and the wave 1992 9,492 households respectively. Because of varying sampling and response rates, each household (i.e. person or group of persons occupying a dwelling unit) has been assigned a specific weight.

The survey was carried out in the months January, February and March following the reference calendar year and provides expenditures by households, as well as their budgets for the year, including all expenditures, income, and changes in assets and debts. Topics include: composition of households, characteristics of dwelling, shelter expenses, furnishings and equipment, running the home, food and alcohol, clothing, medical and health care, travel and transportation, recreation and education, tobacco and miscellaneous expenses (including transfers).

The focus of the empirical part of this study is to investigate the possible differential patterns of private transfers by Canadian-born and foreign-born households. The Canadian-born population is used as a reference group since presumably its members have no immediate attachments abroad. The survey years 1986 and 1992 are of interest because they encompass a dynamic period of expanding Canadian immigration inflows which dramatically shifted to Asian source countries.[57] In terms of economic conditions there seems to be, however, not much difference between 1986 and 1992. After the years of economic growth and decreasing unemployment rate at the end of the 1980s, the 1991 recession brought unemployment at about the same level as in 1986 (ca. 10 percent of the labour force). The GDP per capita in constant Canadian dollars was in 1992 also only marginally higher compared to 1986: CA$ 27,958 vs. CA$27,382 respectively (see World Development Indicators 2010).

[56] Nevertheless, all records from Whitehorse and Yellowknife where subsequently excluded.
[57] In 1968 75 percent of Canadian immigrants came from Western Europe and North America, by 1992 25 percent came from these regions.

The wave 1990 was not included because in comparison to 1986 and 1992 it has observations only from households in urban areas.[58] Data from the year 1996 were omitted as well because they do not include information on the immigrant's year of arrival, which is assumed to significantly affect the transfer activity.

Only observations with positive and non-zero income and total expenditures were kept in the regressions. Observations with negative expenditures for the different expenditure groups and with "masked" or "non-stated" responses for the variables of interest were excluded as well.[59] In addition, the household head is considered to be the member of the household mainly responsible for its financial maintenance (i.e. pays the rent, mortgage, property taxes, etc.).[60] This definition of the household head will enable us to categorize a foreign-born household as one in which the financial maintenance responsibility is borne by a foreign-born person. The data from the pooled 1986 and 1992 surveys, given the above screening, yield 18,995 surveyed households.

Data used in this study do not allow us to differentiate between transfers sent inside or outside Canada. However, we can distinguish between a transfer to a person and to a charity. An inspection of the actual data indicates that some households specialize in the type of transferred funds. Specifically, 8.5 percent of the households send money exclusively to charitable organizations and about 17 percent transfer only to individuals, while 66 percent to both individuals and charitable groups.[61] We hypothesize that charitable transfers should respond

[58] A further reason for the omission of the survey year 1990 was the rejection of the test for non-occurrence of structural breaks when pooling the 1986, 1990 and 1992 surveys.
[59] Following this screening, a total of 853 observations were excluded.
[60] We assume that this person determines also the household's expenditure patterns.
[61] The remaining 8.5 percent did not make any remittances.

differently to household income since these donations are tax deductible in Canada and do not imply a contractual motive to extended family members.

Table 4.1 reports some descriptive statistics by birth status and for the two survey years included in the study: 1986 and 1992. We are able to differentiate between five pre-defined population groups: Canadian-born, immigrants from North America and Western Europe, from Southern and Eastern Europe, from China, Asia and Oceania, and Others and Non-Stated. The last group was excluded from the analysis since it was deemed too heterogeneous.[62]

Group mean values show that the Asian immigrant population contains more males as household heads, is younger and more educated, includes a lower portion of separated/divorced household heads, has households with the largest average size, and has a significantly shorter immigration history in Canada than the remaining foreign-born groups. Also, Asian immigrant households earn the highest average incomes but save least.

However, the greatest average transfers, both to persons and to charities, are made by immigrant households from North America and West Europe. They transfer about 35 percent more than Asian immigrant households in 1992. The North American and West European group have the greatest share of household heads separated or divorced (which we assume to positively affect transfers to persons) and the greatest income per household member[63] (which we assume to positively affect transfers to both persons and charities).

Age of the household head seems to significantly influence the transfer activity of the household as well (see Figure 4.1), however, with differences among

[62] A brief description of the variables used in the empirical analysis is provided in Table A4, p. 207.
[63] Square root equivalence scale.

the population groups. On average Canadian-born and South and East European immigrants make the greatest transfers to persons after age 65 (CA$ 1,375/year and CA$ 1,944/year respectively). While North American and West European households transfer the greatest average amounts between age 35 to 64 (CA$ 1,678/year). Only Asian immigrant households keep their average transfers to persons quite stable over the whole lifetime.

As a share of total expenditure, all population groups transfer most after age 65. The share is the biggest for South and East European (9.5 percent) and the smallest for Asian immigrants (4.7 percent). Finally, the largest average transfers to charities are made by households in all population groups after age 65 (CA$ 400 to 600 or 2 to 3 percent of the total expenditures).

4.3.3 Prices

The prices used for eight (out of ten) commodity groups (i.e. Food, Shelter, Household Operations and Furnishing, Clothing, Transportation, Personal and Health Care, Recreation, Education, and Tobacco and Alcoholic Beverages) included in this study are consumer price indices (CPI) that vary over time and across five regions (Atlantic Provinces, Quebec, Ontario, Prairies, and British Columbia) and are assumed to be fixed within the regions (see Table 4.2). For Transfers to Persons Outside the Household and Transfers to Charities we computed price indices based on the CPIs of the above eight commodity groups.

We argue that the value of one transferred dollar to a person outside the household equals to one dollar of forgone consumption. Thus, we calculated for each household in our sample the price index of Transfers to Persons as the sum of

the CPIs of the eight expenditure groups presented above, weighted by the respective share of the expenditure group in total expenditures.

Charitable donations are tax deductible.[64] Thus, the price for one dollar donated to charities equals the value of forgone consumption minus the tax deduction received for the donation of that one dollar. The CPIs for Transfers to Charities are computed as follows: $CPI_{chaor,i} = 100 + (CPI_{poh,i} - 100) \times (1 - Taxr_i)$. Where: $CPI_{chaor,i}$ is the CPI of Transfers to Charities for the i^{th} household; $CPI_{poh,i}$ is the CPI of Transfers to Persons for the i^{th} household; and $Taxr_i$ stands for the tax rate applicable for the i^{th} household. The tax rates are uniquely computed for each household through a combination of the federal and provincial tax rates.

4.4 Empirical Results

LA/AIDS is a system of seemingly unrelated equations with identical covariates and cross-equation restrictions, e.g. $\gamma_{ij} = \gamma_{ji}$. For estimating the system, therefore, we use Zellner's Seemingly Unrelated Regression (SUR). For the dependent variable the following must hold: $\sum w_i = 1$. This restriction implies further restrictions on the right hand side, in particular $\sum \varepsilon_i = 0$. The residuals are linearly dependent and their covariance matrix is singular.[65] Green (2002) shows that the solution to the singularity problem is to arbitrarily drop one of the equations and estimate the remainder. The residuals covariance matrix of the system with $n-1$ equations is non-singular. The coefficients of the n^{th} equation result from the "adding-up" restriction. Furthermore, in the SUR-model, when all

[64] I could find no evidence for changes in the tax laws regarding deductions for charitable donations between 1986 and 1992 (see Income Tax Act, R.S. 1985 (5th Supp.), 30 June 2010: http://laws-lois.justice.gc.ca).
[65] See Hansen (1993).

equations have the same regressors, the efficient estimator is single-equation ordinary least squares; i.e. GLS is the same as OLS. Thus, we use in this analysis SUR and OLS alternatively: SUR in most cases, in particular when we impose cross-equation restrictions and OLS for single equation estimation.

4.4.1 Homogeneity and symmetry

One of the tasks of this empirical analysis is to test if the restrictions implied by utility theory hold for the demand equations when including the unique expenditure items relating to transfers. The homogeneity restriction is first tested by using a likelihood ratio (LR) test comparing the separate OLS regressions for each commodity group in the study, with and without the restriction imposed. Then, we test for homogeneity, symmetry and both homogeneity and symmetry by comparing the SUR estimates for the whole system, with and without the restrictions imposed. The test is undertaken for both the LA/AIDS model (Eqn. (4.1)) and the demographics augmented model (Eqn. (4.8)).

The test results for the homogeneity and symmetry restrictions are presented in Table 4.3. Since we assumed different expenditure patterns for the four population groups in the study, we conducted the tests for each group separately. In fact, different results are generated by the restriction tests. In the uncontrolled for demographics setting, when running separate OLS regressions, the hypothesis of homogeneity cannot be rejected at the 95 percent level in six out of ten equations in the system for the Canadian-born population, all ten equations for the North American and West European and the South and East European immigrant population, and nine out of ten equations for the Asian immigrant population. When running the entire system, the homogeneity restriction cannot

be rejected in the case of the North American and West European and the South and East European immigrant groups. Finally, the symmetry restriction is rejected at the 99 percent level for all population groups.

The weak performance of the homogeneity and symmetry tests is not necessarily proof of irrational behaviour. In fact, it might have been caused by the lack of sufficient cross-variation of the price variables (i.e. the prices indices vary only between two years and five Canadian provinces/regions), thus, leading to quite large standard errors and making it difficult to accurately identify the price effects. Nevertheless, when estimating the expenditure elasticities we will impose the homogeneity and symmetry restrictions (Eqns. (4.3) and (4.4)) parametrically in the SUR model.

4.4.2 Weak separability

The LR-test results show that only in the case of Asian immigrant households weak separability cannot be rejected. The χ^2-statistic is 10.84 in an unrestricted setting and 8.93 when restricting for homogeneity and symmetry, with both values lower than the 95 percent level critical value. For all other population groups weak separability is rejected by the LR-test.[66]

This implies that in the case of Asian households the marginal substitution between transfers to persons and transfers to charities is independent of the expenditures on the other goods and the demand for them can be specified separately. In the remainder of the study, the demand sub-system for relations with relatives and/or friends and group membership is specified for Asian

[66] The rejection of the weak separability test for all population groups except Asian might be as well due to the limitations (i.e. low variance) of the price variables (see Section 4.4.1 above).

households separately. The LA/AIDS system thus contains only two equations (one for the share of tranfers to persons and one for the share of transfers to charities) and has total transfers as an independent argument (instead of total expenditures).

A possible reason for the weak separabilty in the case of Asian households might be the quite low variance in the transfers share to relatives and friends (see sections 4.4.3 and 4.4.4). Because transfers to charities represent only about 20 percent of the total transfers outside the household, their variance has a less significant impact on the weak separablility test results.

4.4.3 Expenditure elasticities

Engel elasticities for Canadian-born and foreign-born residents across income groups are estimated in an LA/AIDS system, under an uncontrolled as well as a controlled setting. Table 4.4 reports the estimated expenditure elasticities for the pooled 1986 and 1992 surveys without imposing restrictions for homogeneity and symmetry.[67] The estimated expenditure elasticities with restrictions imposed (Table 4.5) mimic those of the unrestricted estimates.

If the model is correct and demographic arguments condition transfers then significant differences should arise between the controlled and uncontrolled elasticity measures. And indeed, expenditure elasticities for transfers to persons and transfers to charity/religious groups are in a controlled setting up to two times greater than estimates derived in an uncontrolled one. In the remainder of this section we would like to focus on the first set of estimates because they reflect the net income effect on the transfer activity more accurately.

The results are differentiated by foreign-born status and income group to capture any effects owing to the immigrant origins or their position in Canada's income distribution. Given these categories, the range of calculated values for the expenditure elasticities for transfers to persons greatly exceed unity for the Canadian-born households and the North American and all European immigrant households. The sample variances of the Engel elasiticities are quite high,[68] but the related expenditure coefficients are positive and significant for all three population groups,[69] meaning that households in all three population groups treat social relations to persons outside the household as a luxury item. Asian immigrant households consider expenditures social ties to relatives and fiends as a luxury good as well, but their estimated expenditure elasticities are close to unity.

The results indicate significant differences in the transfer activity of the population groups across the cited income classes and imply that households value differently the relationships with relatives and/or friends outside the household. On the one hand, for the North American and all European immigrant households, the relationship among the household members (i.e. the nuclear family) appears to be of primary importance and only when total household consumption is large enough do these households become more generous towards other relatives and friends. On the other hand, for Asian households, the transferred share to persons outside the household is more stable with changes in total expenditure, which could be evidence of the unobserved socio-economic

[67] Elasticity estimates for the traditional goods on the basis of FAMEX as reported by Didukh (2001; 2002) and Geiger (2002) over a wide variety of commodities are within the range reported here.

[68] Due to the very low mean budget shares for the Transfers to Persons of about 0.031 (for Canadian born) to 0.047 (in the case of South and East European immigrants), the computed standard errors of the expenditure elasticities – the variance of the expenditure coefficients (see Table 4.6. and 4.7) divided by the mean budget share squared – are inflated by factors of about 500 to 1000.

characteristics of the receivers but also cultural differences in social/family norm (see Wolff *et al.* 2007).

As reflected by the Canadian Ethnic Diversity Survey 2003, Canadian ethnic groups exhibit differential contact with their relatives in their country of origin. For example, 62 percent of those of Filipino ancestry reported monthly or more frequent contact with their relatives compared to 46 percent of those of Chinese, 31 percent of those of Italian and 20 percent of those of German origin.[70] Elliott and Gray (2000) explain in a report for the New Zealand Immigration Service that the responsibility to care for parents and grandparents is a key component of the family systems in South and South East Asia. Similarly, in Oceania young adults are expected to contribute to both nuclear and extended family commitments. Conversely, in Western societies such family obligations are less important because they have been replaced by well developed social security and financial systems.

In contrast to the results presented above, previous studies that analysed the remittances behaviour of migrants from the perspective of the receiving households in developing countries, found that remittances generally tend to be affected under proportionally by changes in the migrants income (i.e. elasticities below unity). For example, Lucas and Strak (1985) found evidence that a one percent increase in the wages of Botswanan migrants induced increases in remittances between 0.25 percent (at low wage levels) and 0.75 percent (at high wage levels; see Chapter 1, p. 28).

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[69] Deaton and Muellbauer (1980) argue that the nature of the goods is actually determined by the expenditure coefficients: $\beta_i > 0$ for luxuries, $\beta_i = 0$ for normal goods, and $\beta_i < 0$ for necessities.

[70] See Statistics Canada (2003); these numbers are in part reflecting time of arrival in Canada.

The difference in remittance behaviour is most probably due to the fact that the migrants captured by the developing country literature where mostly temporary, while the vast majority of immigrants to Canada settles permanently and benefits from a generous family reunification policy. The average income share remitted by immigrants in Canada is, thus, very small (about 4.3 percent) and eventually represents mainly gifts send to relatives and friends. Comparatively, Liu and Reilly (2004) report that internal migrants in China remit on average over one third of their urban income for improving the daily consumption of their dependents, the housing conditions, etc.

The estimated expenditure elasticities to charities of all households in the top income half are below unity, implying that they consider group membership a necessity. This is actually in line with the general experience, that religious participation weakens (or at least it does not strengthen) as a person/household becomes wealthier. However, for households in the bottom income half, the elasticity is around unity for the Canadian-born and the South and East European (for North American and West European even exceeding unity), meaning that these households increase charitable spending probably as a means to improve their status in their social group as their income rises. Asians are again an exception with households in both income halves treating transfers to charities as a necessity.

4.4.4 Demographic controls

We now turn to the effects of household demographic characteristics on transfer behaviour. We argue that transfers are embedded in the household's life cycle experience and illustrate it with a series of simulations. These simulations are

depicted in the Figures 4.2 and 4.3 and are constructed from the reported estimates for transfers to persons and to charities in the Tables 4.6 and 4.7. In short, for each representative household we place the mean values for all the model's variables (except age and age-squared) and cross multiply by the relevant coefficients. This produces the household's estimated transfers share by age for its constituent parts.

Figure 4.2 reveals several important features of the transfer experience over time and across various population groups. We note that the share of transfers to persons of Asian households has the lowest variance with age. Moreover, from all population groups, Asian households transfer to persons the greatest share of expenditures over the active lifetime of the household head (i.e. until age 60).[71] Both these could be a sign of contributions to the extended family, whose size is more stable over the lifetime.

Non-Asian households' transfers to persons increase dramatically as the age of the household head exceeds 50. This result may arise as members of the nuclear family (i.e. own children) leave the household. The largest transfers are, however, made after retirement age, perhaps as inter vivo transfers to heirs.

These simulated patterns conform to our earlier reported stylised facts (Figure 4.1). To wit, the Canadian born increase their transfers to persons from an average of CA$ 700/year under the age of 34 to around CA$ 1,050 between age 35 and 64 and further to about CA$ 1,375/year after age 65. Similarly, South and East Europeans increase their transfers to persons from an average of about CA$ 900/year under age 34 to about CA$ 1,300/year between age 35 and 64 and almost CA$ 2,000/year over age 65. The transfers to persons sent by North American and

[71] The F-tests employed confirm the existence of significant differences in means between the predicted values.

West European immigrant households reach a maximum at midlife (ca. CA$ 1,700/year) and fall again after age 65 to about CA$ 1,250/year. While those of Asian households being quite stable among age groups, at values between CA$ 1,100 and 1,250/year.

From Figure 4.1 we should further note that the substantial increase of expenditure shares transferred to persons after age 65 observed from the simulation is partly due to the significant decrease in all expenditures, except transfers to persons and to charities.

The possible explanation that the share of expenditures transferred to persons increases with the number of the close family members living outside the household is also confirmed for the Canadian-born and North American and West European households by the positive sign of the coefficient of the separated/divorced dummy. This implies that if the spouse lives outside the household or the household head is divorced,[72] the household transfers a significantly higher share of its expenditures to persons outside the household.

Another important result is that education negatively affects the budget share transferred to persons in the case of South and East European and Asian immigrant households, confirming the prediction of the exchange hypothesis that better educated migrants have a lower propensity to return, are less likely to invest in home country assets and, therefore, less likely to pay relatives in the home country (under the form of remittances) for taking care of such assets (see Cox 1987; Rapoport and Docquier 2006; Faini 2007; Chapter 1, pp. 29-30).

[72] The FAMEX marital status group includes widowed persons as well. However, we expect that this will not bias our results. Both separated, divorced and widowed household heads might have a higher propensity to remit. Separated and divorced household heads might remit more because they have a greater number of close relatives (i.e. [ex]spouse, children) living outside the household. Similarly, widowed household heads

Figure 4.3 depicts the simulated charitable transfers for various households. In general all population groups increase their minuscule charitable donations from about 0.5 percent at age 25 to around 2-3 percent at age 75. Furthermore, all immigrant groups transfer slightly less to charities compared to the Canadian-born, with no sign of convergence over time.

4.4.5 Immigration Entry and Assimilation Effects

We finally estimate the augmented share equation (Eqn. (4.9)) with the immigration entry and assimilation effects. Table 4.8 reports the estimation results for the expenditure share of the transfers to persons, the expenditure share of the transfers to charities, and the related F-test comparing the immigrant group coefficients (i.e. the entry effects) and the interactions of the immigrant group coefficients with the variable for the time spent in Canada (i.e. the assimilation effects).

The immigrant group coefficient for transfers to persons is significant only for the Asian households. This indicates that at the time of entry, their expenditure share transferred to persons is 1.7 percentage points higher compared to that of Canadian-born households (and implicitly also 1.7 percentage points higher compared to other immigrant households). The coefficients are significantly different between immigrant groups. The χ^2 statistic of the F-test being 3.54 and, thus, greater than the 95 percent critical value. Moreover, there is no evidence of assimilation between the foreign-born and the Canadian-born transfer behaviour over time. In the case of immigrant households from Southern and Eastern

might invest more in relations to persons outside the household (i.e. remit more) in order to substitute for their loss of social relations within the household.

Europe, the transfer behaviour diverges over time from the Canadian norm. Each additional year spent in Canada increases their expenditure share transferred to persons by 6.2 percent. The χ^2 statistic derived from comparing the convergence patterns is 3.66 and thus greater than the 95 percent critical value.

Regarding transfers to charities, all foreign-born households donate a slightly smaller share of expenditures (-0.5 to -0.7 percentage points) compared to Canadian-born households. However, the χ^2 statistic of both F-tests is lower than the 95 percent critical value, thus, giving no evidence of differences in the transfer behaviour to charities.

4.5. Conclusions

This study aimed to add a novel perspective to the literature on the determinants of migrants' transfers, by analysing the transfer behaviour in the framework of a formal demand system.

The empirical results using Canadian household data show that, like Canadian-born, immigrants from North America and all of Europe consider transfers to persons outside the household a luxury and, therefore, adjust more efficiently their transfers to changes in total expenditures (or income). The more stable expenditure shares transferred to persons by Asian immigrant households (i.e. elasticities closer to unity), could be evidence of closer ties to the extended family that characterise the family norms in this world region but also of unobserved socio-economic characteristics of the receivers (e.g. relatively lower income). The particular transfer behaviour of Asian households is confirmed by

the fact that they send to persons a greater share of their expenditures at time of arrival, with no evidence of convergence to the Canadian-born norm over time.

As for transfers to charities, households in the top income half across all population groups seem to consider them an inferior good. Only poorer households seem to increase charitable spending with income (i.e. unitary elasticities) probably because they consider this as means to improve their status in their social group as their income rises.

These findings give additional insights into the transfer behaviour of permanent migrants in general and have important policy implications. The differential response with respect to changes in total expenditures (or income) suggests that during periods of economic downturn in migrant host countries – like the one we are currently passing trough – migrants originating form countries with a nuclear family tradition (and/or with more developed social systems) would probably decrease their private monetary transfers more dramatically. These differences in transfer behaviour will certainly change the geography of international remittance flows. Recent World Bank estimations of regionally aggregated remittance flows to developing countries confirm these expectations. Remittance flows to developing countries in Europe and Central Asia are estimated to have fallen in 2009 by about -14.7 percent, while migrants' remittances to South and East Asia and Pacific by only -1.5.to -1.8 percent (Ratha *et al.* 2009).

Finally, we must note that in the Canadian context transfers represent only a small share of the immigrant households' budget until retirement years, most probably because the vast majority of immigration to Canada is permanent and the generous family reunification policy.

Table 4.1: Descriptive Statistics by Population Group (1986/1992; mean values)

Variable	Population Group							
	Canadian		N.Am&W.Eu.		S&E Europ.		Ch.,Asian&Oc.	
	1986	1992	1986	1992	1986	1992	1986	1992
Female	0.31	0.43	0.33	0.42	0.23	0.32	0.21	0.32
Age	45.60	46.69	53.93	54.44	51.13	52.97	42.00	45.18
Education	2.49	2.69	2.75	3.04	1.94	2.36	3.22	3.18
Married (with HH member)	0.63	0.63	0.62	0.63	0.76	0.72	0.85	0.75
Single (never married)	0.15	0.14	0.09	0.08	0.04	0.05	0.09	0.13
Separated/divorced/widowed	0.22	0.23	0.29	0.29	0.20	0.23	0.06	0.12
No. of persons a member	2.68	2.57	2.50	2.39	3.03	2.75	3.93	3.22
Home ownership	0.56	0.60	0.66	0.66	0.71	0.74	0.55	0.55
Years since immigration	n.a.	n.a.	27.58	31.16	24.72	28.30	11.19	13.36
HH income after taxes (CA$)	36,189	36,404	39,012	37,807	39,966	35,784	43,063	38,213
HH income per sq. root of HH size (CA$)	22,723	23,214	24,862	24,935	23,377	21,791	22,517	22,043
Net change in assets (CA$)	1,563	1,737	3,634	1,865	2,432	1,365	-282	1,222
Transfers to persons (CA$)	988	1,033	1,173	1,711	1,500	1,322	1,227	1,173
Transfers to charities (CA$)	395	322	557	588	225	309	292	316
No. of Observations	8,530	7,898	780	594	405	317	233	238

Notes: prop. = proportion; Education levels are 1 = less than 9 years, 2 = some or completed secondary, 3 = some post-secondary, 4 = Post secondary degree, 5 = University degree; Monetary values in 1992 Canadian dollars

Table 4.2: Prices Indices Across Canadian Regions: 1986 and 1992

Year	Region	Expenditure Group							
		Food	Shelter	HH Op. & Furn.	Clothing	Transp.	Pers. & Health Care	Recr. and Educ.	Tob. & Alcohol
1986	**Atlantic**	82.9	68.2	85.2	75.9	60.3	71.0	77.7	58.3
	Quebec	87.6	58.4	81.2	74.3	79.1	67.9	71.7	58.3
	Ontario	85.7	78.0	83.5	78.3	77.3	74.2	75.5	54.1
	Prairies	84.0	62.2	77.1	80.5	57.3	68.5	71.5	50.7
	BC	88.4	80.3	84.5	81.7	63.5	71.0	77.6	55.3
1992	**Atlantic**	98.2	80.4	98.1	96.5	75.9	88.7	101.3	104.5
	Quebec	97.8	72.0	96.7	99.7	90.1	90.7	100.1	101.1
	Ontario	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Prairies	98.6	75.1	92.1	102.8	77.5	92.2	94.6	95.1
	BC	104.7	102.0	99.2	99.8	97.9	88.0	97.1	104.4

Notes: the base used for the price indices is Ontario 1992.
Source: Pendakur (2001), Didukh (2001), and Browning and Thomas (1998a,1998b).

Table 4.3: Test for Homogeneity and Symmetry Restrictions

Commodity Group	Population							
	Canadian		N.Am.&W.Eu.		S&E Eu.		Ch.,As.&Oc.	
	chi^2	p-value	chi^2	p-value	chi^2	p-value	chi^2	p-value
Uncontrolled Setting								
Food	5.62	0.018	1.36	0.244*	3.28	0.070*	1.35	0.246*
Shelter	5.22	0.022	1.05	0.307*	2.14	0.143*	0.87	0.350*
HH Op. & Furnishing	2.29	0.130*	1.20	0.274*	0.86	0.353*	12.10	0.001
Clothing	2.11	0.147*	0.38	0.536*	2.37	0.124*	0.04	0.841*
Transportation	0.29	0.591*	0.54	0.462*	0.04	0.849*	2.85	0.091*
Heath & Pers. Care	0.86	0.355*	0.92	0.337*	1.12	0.291*	0.02	0.902*
Recreation & Educ.	2.18	0.140*	0.14	0.713*	0.09	0.770*	1.68	0.195*
Tobacco & Alcohol	1.04	0.307*	0.01	0.940*	0.02	0.881*	0.31	0.578*
Transfers to persons	7.08	0.008	0.01	0.941*	1.62	0.203*	0.53	0.466*
Transfers to charities	8.35	0.004	0.29	0.591*	0.79	0.373*	2.64	0.104*
System								
Homogeneity	32.43	0.000	5.37	0.801*	9.56	0.387*	24.83	0.003
Symmetry	7523.39	0.000	531.94	0.000	190.65	0.000	329.48	0.000
Homog. & Symmetry	10358.00	0.000	795.41	0.000	321.71	0.000	388.63	0.000
Controlled for Demographic Characteristics								
Food	1.76	0.184*	2.02	0.155*	1.74	0.187*	0.82	0.366*
Shelter	26.89	0.000	4.04	0.044	3.36	0.067*	0.05	0.817*
HH Op. & Furnishing	6.95	0.008	1.79	0.181*	0.61	0.435*	13.91	0.000
Clothing	8.37	0.004	1.36	0.244*	6.39	0.012	0.04	0.849*
Transportation	0.63	0.427*	0.76	0.382*	0.23	0.629*	2.77	0.096*
Heath & Pers. Care	3.27	0.071*	0.32	0.572*	1.60	0.207*	1.89	0.169*
Recreation & Educ.	0.32	0.574*	0.10	0.757*	0.43	0.511*	1.83	0.176*
Tobacco & Alcohol	1.45	0.229*	0.00	0.976*	0.12	0.726*	1.18	0.277*
Transfers to persons	10.94	0.001	0.51	0.477*	0.84	0.360*	0.35	0.556*
Transfers to charities	20.51	0.000	0.79	0.374*	0.05	0.819*	2.02	0.155*
System								
Homogeneity	72.98	0.000	10.00	0.351*	11.65	0.234*	26.47	0.002
Symmetry	6289.78	0.000	446.69	0.000	158.00	0.000	291.03	0.000
Homog. & Symmetry	7426.94	0.000	506.40	0.000	179.64	0.000	337.09	0.000

Notes: * chi-value smaller than the 95 percent critical level.

Table 4.4: Expenditure Elasticities Calculated from LA/AIDS, Unrestricted (1986/1992)

Population Group	Expenditure Group	Uncontrolled			Controlled		
		Income Group			Income Group		
		all	top Y/2	bottom Y/2	all	top Y/2	bottom Y/2
Canadian	Food	0.74 (0.03)	0.69 (0.06)	0.74 (0.04)	0.63 (0.03)	0.62 (0.06)	0.64 (0.05)
	Shelter	0.60 (0.03)	0.67 (0.07)	0.58 (0.03)	0.61 (0.03)	0.66 (0.08)	0.63 (0.04)
	HH Op. & Furnishing	1.06 (0.09)	1.08 (0.17)	1.07 (0.13)	1.03 (0.11)	1.11 (0.19)	1.06 (0.18)
	Clothing	1.26 (0.14)	1.18 (0.22)	1.31 (0.27)	1.27 (0.17)	1.22 (0.26)	1.35 (0.34)
	Transport	1.68 (0.08)	1.57 (0.13)	1.91 (0.16)	1.65 (0.10)	1.48 (0.15)	1.81 (0.20)
	Heath & Pers. Care	0.92 (0.18)	0.75 (0.33)	0.98 (0.29)	0.90 (0.24)	0.73 (0.39)	1.00 (0.38)
	Recreation	1.40 (0.16)	1.33 (0.25)	1.46 (0.34)	1.36 (0.21)	1.33 (0.29)	1.38 (0.43)
	Tobacco & Alcohol	0.93 (0.39)	0.87 (0.80)	1.00 (0.57)	1.00 (0.50)	1.04 (0.92)	0.98 (0.72)
	Trans. to persons	**1.13** (0.99)	**1.09** (2.07)	**1.32** (1.45)	**1.85** (1.22)	**1.45** (2.29)	**1.95** (1.80)
	Trans. to charities	**0.60** (3.53)	**0.40** (7.37)	**0.60** (5.20)	**1.02** (4.44)	**0.84** (8.39)	**0.98** (6.55)
N. American & W. European	Food	0.78 (0.10)	0.72 (0.22)	0.74 (0.14)	0.63 (0.13)	0.62 (0.25)	0.59 (0.18)
	Shelter	0.63 (0.09)	0.77 (0.24)	0.62 (0.11)	0.65 (0.12)	0.68 (0.27)	0.69 (0.14)
	HH Op. & Furnishing	1.14 (0.28)	1.15 (0.54)	1.23 (0.45)	1.14 (0.37)	1.20 (0.65)	1.23 (0.61)
	Clothing	1.24 (0.57)	1.12 (0.94)	1.33 (1.17)	1.18 (0.77)	1.08 (1.12)	1.41 (1.57)
	Transport	1.51 (0.27)	1.41 (0.41)	1.63 (0.59)	1.48 (0.36)	1.43 (0.48)	1.47 (0.80)
	Heath & Pers. Care	0.89 (0.65)	0.68 (1.32)	0.92 (0.99)	0.85 (0.88)	0.59 (1.56)	1.00 (1.35)
	Recreation	1.46 (0.55)	1.40 (0.86)	1.59 (1.19)	1.39 (0.74)	1.34 (1.04)	1.49 (1.60)
	Tobacco & Alcohol	1.04 (2.18)	0.72 (3.66)	1.15 (3.83)	1.01 (2.88)	0.91 (4.36)	1.07 (4.99)
	Trans. to persons	**1.11** (2.26)	**0.98** (5.08)	**1.24** (3.23)	**1.91** (2.95)	**1.83** (5.85)	**1.82** (4.25)
	Trans. to charities	**0.72** (7.05)	**0.31** (16.5)	**0.81** (9.62)	**1.17** (9.40)	**0.60** (19.6)	**1.20** (12.9)
S&E European	Food	0.78 (0.12)	0.68 (0.26)	0.79 (0.17)	0.67 (0.16)	0.63 (0.33)	0.71 (0.23)
	Shelter	0.50 (0.12)	0.52 (0.35)	0.52 (0.14)	0.49 (0.17)	0.55 (0.46)	0.53 (0.19)
	HH Op. & Furnishing	1.14 (0.49)	1.16 (0.93)	1.20 (0.79)	1.11 (0.68)	1.10 (1.24)	1.23 (1.09)
	Clothing	1.36 (0.64)	1.27 (0.98)	1.33 (1.34)	1.34 (0.87)	1.29 (1.32)	1.47 (1.76)
	Transport	1.71 (0.38)	1.65 (0.60)	1.99 (0.76)	1.59 (0.53)	1.48 (0.82)	1.67 (1.03)
	Heath & Pers. Care	1.00 (0.88)	0.86 (1.72)	1.03 (1.35)	0.96 (1.23)	0.83 (2.36)	1.01 (1.90)
	Recreation	1.53 (1.13)	1.41 (1.62)	1.43 (2.63)	1.41 (1.56)	1.29 (2.19)	1.22 (3.65)
	Tobacco & Alcohol	1.10 (2.76)	1.17 (4.95)	1.08 (4.56)	1.10 (3.79)	1.60 (6.62)	0.70 (6.16)
	Trans. to persons	**0.93** (2.98)	**0.60** (6.34)	**1.20** (3.74)	**2.03** (3.93)	**1.55** (8.24)	**2.31** (4.81)
	Trans. to charities	**0.38** (16.2)	**0.37** (42.7)	**0.47** (17.9)	**0.86** (21.9)	**0.30** (56.2)	**0.95** (24.0)
Chinese, Asian & Oc.	**Trans. to persons**	**1.08** (0.02)	**1.08** (0.03)	**1.10** (0.03)	**1.09** (0.02)	**1.08** (0.03)	**1.10** (0.03)
	Trans. to charities	**0.77** (0.16)	**0.80** (0.21)	**0.71** (0.27)	**0.75** (0.16)	**0.79** (0.20)	**0.69** (0.27)

Notes: Elasticities are computed using the formula $e_i = 1 + (\beta_i / \overline{w}_i)$, where $\overline{w}_i$ is the mean share of expenditures on the i^{th} good for the entire sample and β_i is the estimated household total expenditures coefficient. Standard errors in parentheses.

Table 4.5: Expenditure Elasticities Calculated from LA/AIDS, Restricted for Homogeneity and Symmetry (1986/1992)

Population Group	Expenditure Group	Uncontrolled			Controlled		
		Income Group			Income Group		
		all	top Y/2	bottom Y/2	all	top Y/2	bottom Y/2
Canadian	Food	0.75 (0.02)	0.65 (0.05)	0.71 (0.04)	0.61 (0.03)	0.58 (0.06)	0.59 (0.05)
	Shelter	0.65 (0.02)	0.76 (0.06)	0.62 (0.03)	0.71 (0.03)	0.77 (0.07)	0.70 (0.04)
	HH Op. & Furnishing	1.07 (0.09)	1.03 (0.17)	1.03 (0.13)	1.03 (0.11)	1.09 (0.19)	1.05 (0.18)
	Clothing	1.30 (0.12)	1.17 (0.21)	1.29 (0.27)	1.22 (0.17)	1.14 (0.24)	1.25 (0.35)
	Transport	1.58 (0.07)	1.60 (0.12)	1.95 (0.17)	1.66 (0.09)	1.58 (0.13)	1.91 (0.21)
	Heath & Pers. Care	0.91 (0.15)	0.73 (0.30)	0.96 (0.30)	0.84 (0.21)	0.67 (0.34)	0.95 (0.38)
	Recreation	1.40 (0.14)	1.23 (0.23)	1.42 (0.35)	1.28 (0.19)	1.18 (0.26)	1.29 (0.44)
	Tobacco & Alcohol	0.89 (0.32)	0.84 (0.70)	1.03 (0.57)	0.91 (0.45)	0.90 (0.81)	0.89 (0.72)
	Trans. to persons	**1.17** (0.84)	**1.13** (1.86)	**1.28** (1.47)	**1.78** (1.11)	**1.43** (1.99)	**1.81** (1.82)
	Trans. to charities	**0.62** (3.42)	**0.31** (7.21)	**0.50** (5.26)	**0.97** (4.35)	**0.83** (8.15)	**0.90** (6.56)
N. American & W. European	Food	0.78 (0.08)	0.68 (0.19)	0.69 (0.15)	0.61 (0.12)	0.60 (0.21)	0.54 (0.18)
	Shelter	0.68 (0.07)	0.81 (0.20)	0.68 (0.11)	0.72 (0.10)	0.72 (0.22)	0.76 (0.14)
	HH Op. & Furnishing	1.08 (0.28)	1.09 (0.54)	1.14 (0.45)	1.11 (0.37)	1.16 (0.65)	1.22 (0.61)
	Clothing	1.24 (0.49)	1.12 (0.83)	1.24 (1.18)	1.11 (0.73)	1.05 (0.98)	1.24 (1.61)
	Transport	1.54 (0.23)	1.49 (0.38)	1.82 (0.63)	1.62 (0.34)	1.60 (0.41)	1.74 (0.84)
	Heath & Pers. Care	0.85 (0.54)	0.64 (1.13)	0.88 (0.99)	0.76 (0.80)	0.51 (1.29)	0.92 (1.35)
	Recreation	1.40 (0.47)	1.36 (0.76)	1.47 (1.21)	1.27 (0.69)	1.25 (0.88)	1.32 (1.61)
	Tobacco & Alcohol	1.07 (1.77)	0.80 (3.05)	1.37 (3.89)	0.88 (2.66)	0.80 (3.83)	0.90 (4.99)
	Trans. to persons	**1.06** (1.89)	**1.04** (4.39)	**1.13** (3.30)	**1.77** (2.71)	**1.64** (4.89)	**1.66** (4.30)
	Trans. to charities	**0.56** (6.71)	**0.15** (15.8)	**0.50** (9.88)	**1.03** (9.10)	**0.42** (18.6)	**1.06** (12.9)
S&E European	Food	0.79 (0.11)	0.66 (0.25)	0.74 (0.18)	0.65 (0.14)	0.62 (0.28)	0.65 (0.23)
	Shelter	0.56 (0.11)	0.55 (0.31)	0.57 (0.15)	0.57 (0.15)	0.55 (0.37)	0.62 (0.19)
	HH Op. & Furnishing	1.12 (0.49)	1.08 (0.93)	1.15 (0.79)	1.08 (0.68)	1.06 (1.24)	1.20 (1.09)
	Clothing	1.35 (0.56)	1.20 (0.91)	1.29 (1.35)	1.29 (0.80)	1.20 (1.14)	1.37 (1.82)
	Transport	1.66 (0.32)	1.74 (0.56)	2.04 (0.77)	1.66 (0.46)	1.69 (0.69)	1.81 (1.03)
	Heath & Pers. Care	0.98 (0.73)	0.81 (1.56)	1.01 (1.35)	0.90 (1.07)	0.69 (1.93)	0.97 (1.88)
	Recreation	1.51 (1.00)	1.33 (1.50)	1.39 (2.63)	1.35 (1.42)	1.16 (1.87)	1.14 (3.65)
	Tobacco & Alcohol	1.12 (2.32)	1.24 (4.56)	1.20 (4.58)	1.03 (3.44)	1.47 (5.82)	0.54 (6.12)
	Trans. to persons	**0.85** (2.52)	**0.65** (5.85)	**1.19** (3.79)	**1.89** (3.42)	**1.52** (6.78)	**2.15** (4.80)
	Trans. to charities	**0.25** (15.7)	**0.35** (41.9)	**0.34** (18.1)	**0.70** (21.1)	**0.39** (53.5)	**0.81** (24.1)
Chinese, Asian & Oc.	**Trans. to persons**	**1.07** (0.02)	**1.07** (0.03)	**1.10** (0.03)	**1.09** (0.02)	**1.08** (0.03)	**1.10** (0.03)
	Trans. to charities	**0.80** (0.16)	**0.82** (0.21)	**0.71** (0.27)	**0.76** (0.16)	**0.79** (0.20)	**0.69** (0.27)

Notes: Elasticities are computed using the formula $e_i = 1 + (\beta_i / \overline{w_i})$, where $\overline{w_i}$ is the mean share of expenditures on the i^{th} good for the entire sample and β_i is the estimated household total expenditures coefficient. Standard errors in parentheses.

Table 4.6: Regression Equation Coefficients (OLS) Predicting the Expenditure Share of Transfers to Persons, 1986/1992

	Canadian		N. Am. & W. Eu.		S&E European		Ch., Asian & Oc.	
	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Log of Total Expenditures	0.004	0.027	0.004	0.038	-0.003	0.048		
	[0.001]***	[0.002]***	[0.005]	[0.007]***	[0.007]	[0.011]***		
Log of Total Transfers							0.062	0.067
							[0.014]***	[0.013]***
Log of Price for Food	-0.459	-0.590	-0.832	-0.516	-0.129	-0.488		
	[0.183]**	[0.175]***	[0.654]	[0.582]	[1.199]	[1.241]		
Log of Price for Shelter	0.236	0.260	0.264	0.107	0.051	0.094		
	[0.080]***	[0.076]***	[0.270]	[0.241]	[0.488]	[0.485]		
Log of Price for HH Op. & Furnishing	-1.946	-2.614	-2.027	-0.660	-0.181	-1.348		
	[0.804]**	[0.764]***	[2.689]	[2.402]	[4.843]	[4.749]		
Log of Price for Clothing	0.302	0.329	0.768	0.392	0.046	0.267		
	[0.135]**	[0.128]**	[0.492]	[0.440]	[0.936]	[0.959]		
Log of Price for Transportation	0.049	0.051	0.062	-0.021	0.042	0.083		
	[0.040]	[0.038]	[0.135]	[0.121]	[0.234]	[0.228]		
Log of Price for Health & Pers. Care	0.122	0.170	0.175	0.079	-0.241	-0.073		
	[0.053]**	[0.049]***	[0.176]	[0.166]	[0.423]	[0.371]		
Log of Price for Recreation	0.532	0.803	0.023	-0.367	-0.163	0.243		
	[0.293]*	[0.278]***	[0.983]	[0.888]	[1.768]	[1.739]		
Log of Price for Tobacco & Alcohol	0.900	1.165	1.448	0.725	-0.100	0.641		
	[0.367]**	[0.347]***	[1.238]	[1.101]	[2.261]	[2.226]		
Log of Price for Trans. to Persons	0.096	0.145	0.319	0.426	0.432	0.614	2.938	0.859
	[0.066]	[0.062]**	[0.196]	[0.210]**	[0.438]	[0.367]*	[1.057]***	[1.168]
Log of Price for Trans. to Charities	-0.109	0.026	-0.323	-0.355	-0.633	-0.655	-4.653	-1.593
	[0.096]	[0.096]	[0.290]	[0.316]	[0.640]	[0.533]	[1.574]***	[1.726]
Female		-0.002		-0.004		0.013		-0.010
		[0.001]*		[0.005]		[0.009]		[0.039]
Age x 100		-0.168		-0.068		-0.411		-0.501
		[0.023]***		[0.105]		[0.164]**		[0.895]
Age squared x 1,000		0.025		0.014		0.053		0.030
		[0.003]***		[0.011]		[0.018]***		[0.092]
Education x 10		0.002		-0.027		-0.047		-0.542
		[0.004]		[0.017]		[0.022]**		[0.123]***
Married (with HH member) x 100		-0.002		0.411		-0.093		4.130
		[0.142]		[0.584]		[1.261]		[5.898]
Separated/divorced/widowed		0.013		0.016		0.014		-0.005
		[0.002]***		[0.006]**		[0.015]		[0.077]

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Table 4.6: Regression Equation Coefficients (OLS) Predicting the Expenditure Share of Transfers to Persons, 1986/1992 (continued)

	Canadian		N. Am. & W. Eu.		S&E European		Ch., Asian & Oc.	
	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
No. of persons a member		-0.010		-0.014		-0.014		-0.024
		[0.001]***		[0.002]***		[0.003]***		[0.013]*
Home ownership		0.001		0.003		0.009		-0.053
		[0.001]		[0.004]		[0.009]		[0.039]
Log of net change in A&L		-0.049		0.046		0.135		-0.013
		[0.028]*		[0.069]		[0.091]		[0.225]
Years since immigration x 100				-0.023		-0.006		-0.405
				[0.020]		[0.030]		[0.219]*
Constant	1.753	2.324	1.322	0.486	3.891	1.325	8.450	4.551
	[0.465]***	[0.584]***	[1.513]	[1.542]	[2.471]	[3.167]	[2.722]***	[3.793]
Observations	16,428	16,428	1,374	1,374	722	722	417	417
R-squared	0.02	0.14	0.02	0.11	0.03	0.17	0.07	0.15

Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.7: Regression Equation Coefficients (OLS) Predicting the Expenditure Share of Transfers to Charities, 1986/1992

	Canadian		N. Am. & W. Eu.		S&E European		Ch., Asian & Oc.	
	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Log of Total Expenditures	-0.005	0.001	-0.005	0.003	-0.007	-0.002		
	[0.001]***	[0.001]	[0.002]**	[0.004]	[0.003]***	[0.003]		
Log of Total Transfers							-0.062	-0.067
							[0.014]***	[0.013]***
Log of Price for Food	-0.504	-0.296	-0.541	-0.299	-0.085	-0.042		
	[0.100]***	[0.096]***	[0.400]	[0.385]	[0.473]	[0.473]		
Log of Price for Shelter	0.261	0.155	0.156	0.041	-0.058	-0.067		
	[0.042]***	[0.040]***	[0.166]	[0.163]	[0.178]	[0.182]		
Log of Price for HH Op. & Furnishing	-2.410	-1.460	-1.208	-0.192	1.191	1.033		
	[0.423]***	[0.407]***	[1.702]	[1.677]	[1.921]	[1.913]		
Log of Price for Clothing	0.250	0.119	0.360	0.167	0.059	0.120		
	[0.071]***	[0.068]*	[0.313]	[0.300]	[0.375]	[0.359]		
Log of Price for Transportation	0.078	0.034	0.025	-0.020	-0.070	-0.043		
	[0.021]***	[0.020]*	[0.083]	[0.081]	[0.091]	[0.082]		
Log of Price for Health & Pers. Care	0.155	0.120	0.109	0.073	-0.131	-0.105		
	[0.027]***	[0.026]***	[0.114]	[0.114]	[0.145]	[0.141]		
Log of Price for Recreation	0.842	0.487	0.172	-0.162	-0.709	-0.615		
	[0.154]***	[0.149]***	[0.609]	[0.601]	[0.676]	[0.708]		
Log of Price for Tobacco & Alcohol	0.985	0.601	0.719	0.258	-0.426	-0.370		
	[0.193]***	[0.185]***	[0.800]	[0.782]	[0.939]	[0.907]		
Log of Price for Trans. to Persons	-0.204	-0.033	0.046	0.211	-0.046	-0.011	-2.938	-0.859
	[0.041]***	[0.042]	[0.111]	[0.121]*	[0.114]	[0.110]	[1.057]***	[1.168]
Log of Price for Trans. to Charities	0.348	0.089	0.027	-0.223	0.091	0.042	4.653	1.593
	[0.059]***	[0.062]	[0.159]	[0.174]	[0.143]	[0.162]	[1.574]***	[1.726]
Female		0.001		0.002		0.004		0.010
		[0.001]		[0.003]		[0.004]		[0.039]
Age x 100		-0.056		-0.151		-0.118		0.501
		[0.013]***		[0.059]**		[0.046]**		[0.895]
Age squared x 1000		0.011		0.020		0.018		-0.030
		[0.001]***		[0.006]***		[0.006]***		[0.092]
Education x 10		0.030		0.034		0.026		0.542
		[0.002]***		[0.013]***		[0.014]*		[0.123]***
Married (with HH member)		-0.005		-0.008		-0.014		-0.041
		[0.001]***		[0.007]		[0.014]		[0.059]
Separated/divorced/widowed		-0.007		-0.009		-0.024		0.005
		[0.001]***		[0.007]		[0.017]		[0.077]

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Table 4.7: Regression Equation Coefficients (OLS) Predicting the Expenditure Share of Transfers to Charities, 1986/1992 (continued)

	Canadian		N. Am. & W. Eu.		S&E European		Ch., Asian & Oc.	
	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
No. of persons a member x 100		0.004		0.076		0.025		2.383
		[0.021]		[0.097]		[0.088]		[1.294]*
House ownership		0.003		0.005		0.002		0.053
		[0.001]***		[0.003]		[0.003]		[0.039]
Log of net change in A&L		0.033		0.015		0.013		0.013
		[0.007]***		[0.018]		[0.017]		[0.225]
Years since immigration x 100				0.030		0.009		0.405
				[0.010]***		[0.009]		[0.219]*
Constant	1.495	0.765	1.040	0.596	0.591	-0.102	-7.450	-3.551
	[0.270]***	[0.251]***	[0.881]	[0.924]	[0.934]	[1.053]	[2.722]***	[3.793]
Observations	16,428	16,428	1,374	1,374	722	722	417	417
R-squared	0.02	0.11	0.02	0.08	0.06	0.16	0.07	0.15

Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.8: Entry and Assimilation Effects, 1986/1992

	Share of Transfers to Persons		Share of Transfers to Charities	
	OLS	F-test (p-value)	OLS	F-test (p-value)
Log of Total Expenditures	0.028		0.001	
	[0.002]***		[0.001]	
Log of Price for Food	-0.688		-0.261	
	[0.163]***		[0.087]***	
Log of Price for Shelter	0.276		0.132	
	[0.070]***		[0.037]***	
Log of Price for HH Op. & Furnishing	-2.686		-1.218	
	[0.708]***		[0.373]***	
Log of Price for Clothing	0.384		0.100	
	[0.121]***		[0.064]	
Log of Price for Transportation	0.065		0.023	
	[0.035]*		[0.018]	
Log of Price for Health & Pers. Care	0.149		0.104	
	[0.047]***		[0.024]***	
Log of Price for Recreation	0.782		0.385	
	[0.257]***		[0.135]***	
Log of Price for Tobacco & Alcohol	1.242		0.508	
	[0.323]***		[0.170]***	
Log of Price for Trans. to Persons	0.171		-0.012	
	[0.057]***		[0.037]	
Log of Price for Trans. to Charities	-0.018		0.060	
	[0.088]		[0.055]	
Female	-0.002		0.001	
	[0.001]*		[0.001]	
Age x 100	-0.171		-0.064	
	[0.022]***		[0.012]***	
Age squared x 1000	0.025		0.012	
	[0.002]***		[0.001]***	
Education x 10	-0.024		0.296	
	[0.040]		[0.024]***	
Married (with HH member)	0.027		-0.498	
	[0.134]		[0.113]***	
Separated/divorced/widowed	0.013		-0.007	
	[0.002]***		[0.001]***	

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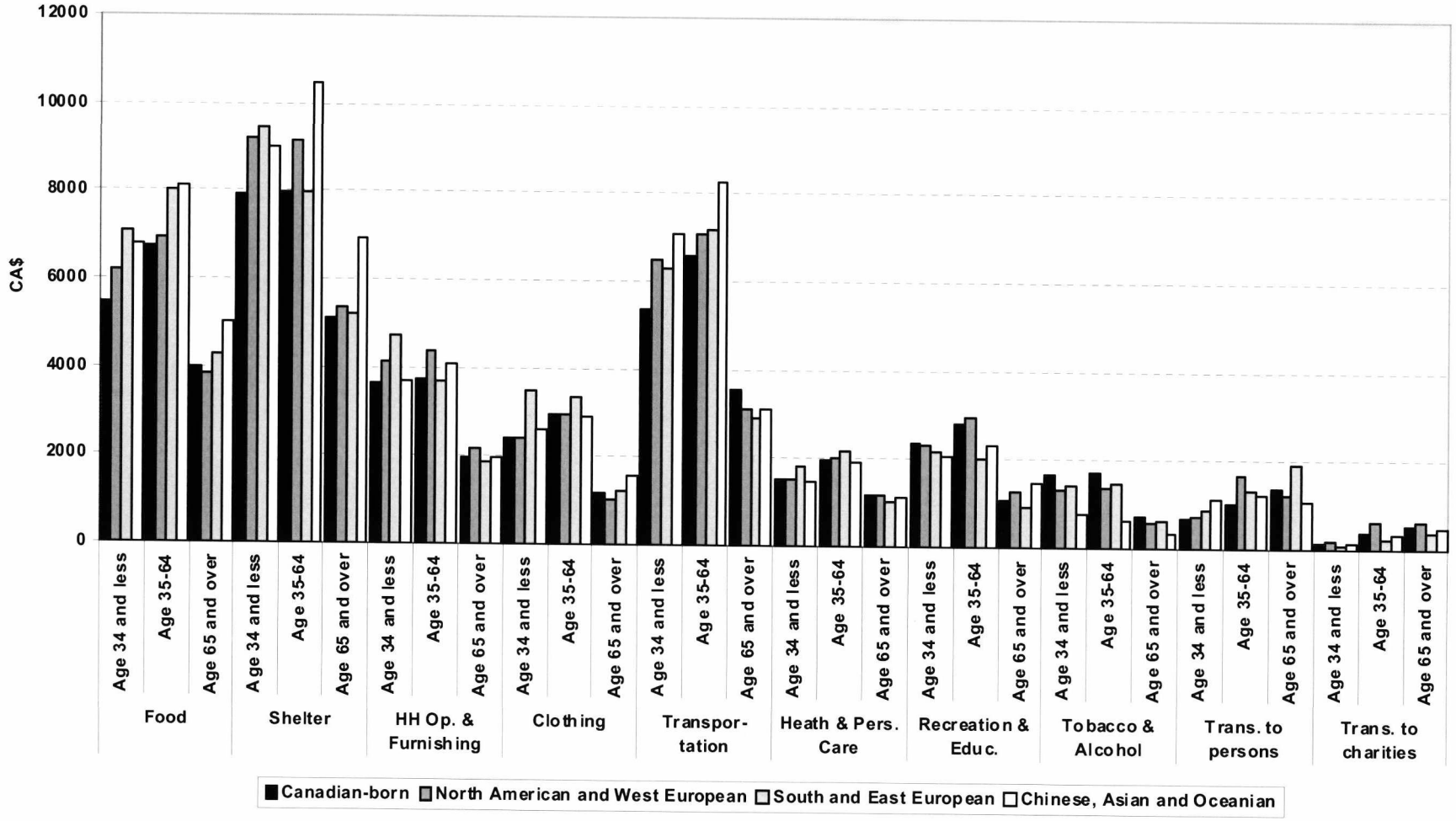
Table 4.8: Entry and Assimilation Effects, 1986/1992 (continued)

	Share of Transfers to Persons		Share of Transfers to Charities	
	OLS	F-test (p-value)	OLS	F-test (p-value)
No. of persons a member x 100	-0.103		0.001	
	[0.004]***		[0.002]	
House ownership	0.001		0.003	
	[0.001]		[0.001]***	
Log of net change in A&L	-0.029		0.030	
	[0.024]		[0.006]***	
North American & West European (NAWE)	0.004		-0.007	
	[0.005]	3.54	[0.003]**	0.15
South & East European (SEE)	-0.006		-0.005	
	[0.006]		[0.002]***	
Chinese, Asian & Oceania (CAO)	0.017	(0.029)	-0.005	(0.863)
	[0.006]***		[0.002]***	
NAWE x years since immigration	-0.015		0.024	
	[0.018]	3.66	[0.011]**	0.49
SEE x years since immigration	0.062		0.011	
	[0.027]**		[0.009]	
CAO x years since immigration	-0.052	(0.026)	0.009	(0.611)
	[0.048]		[0.016]	
Constant	2.420		0.726	
	[0.522]***		[0.224]***	
Observations	18,995		18,995	
R-squared	0.13		0.11	

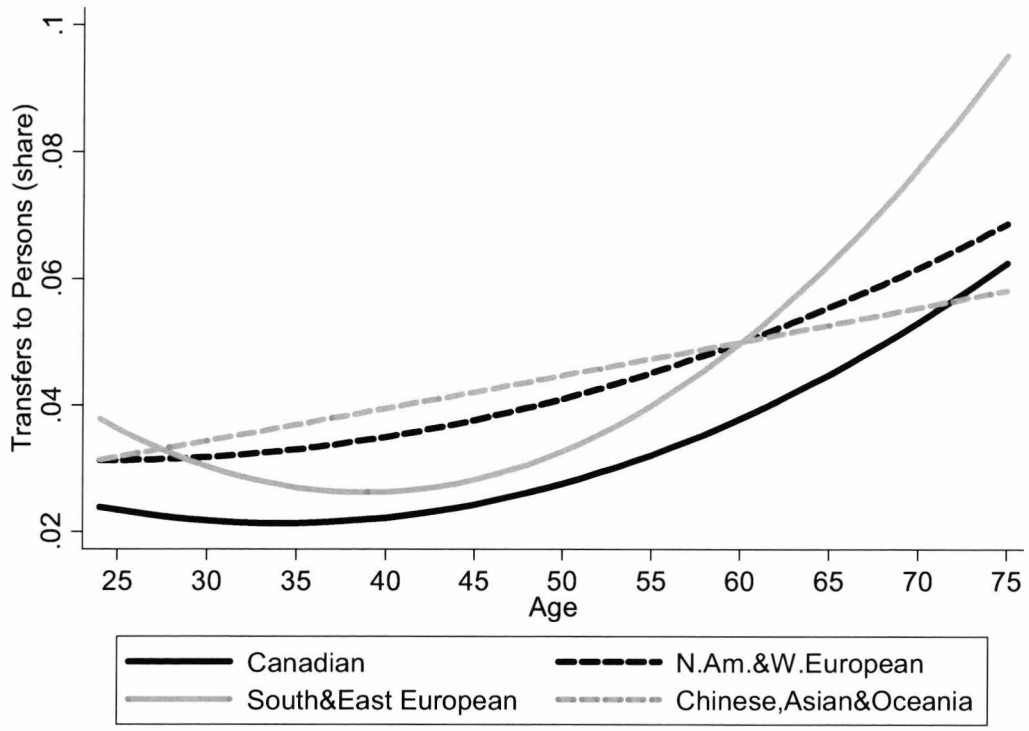
Robust standard errors in brackets
* significant at 10%; ** significant at 5%; *** significant at 1%

Figure 4.1: Mean Expenditures by Age and Population Groups



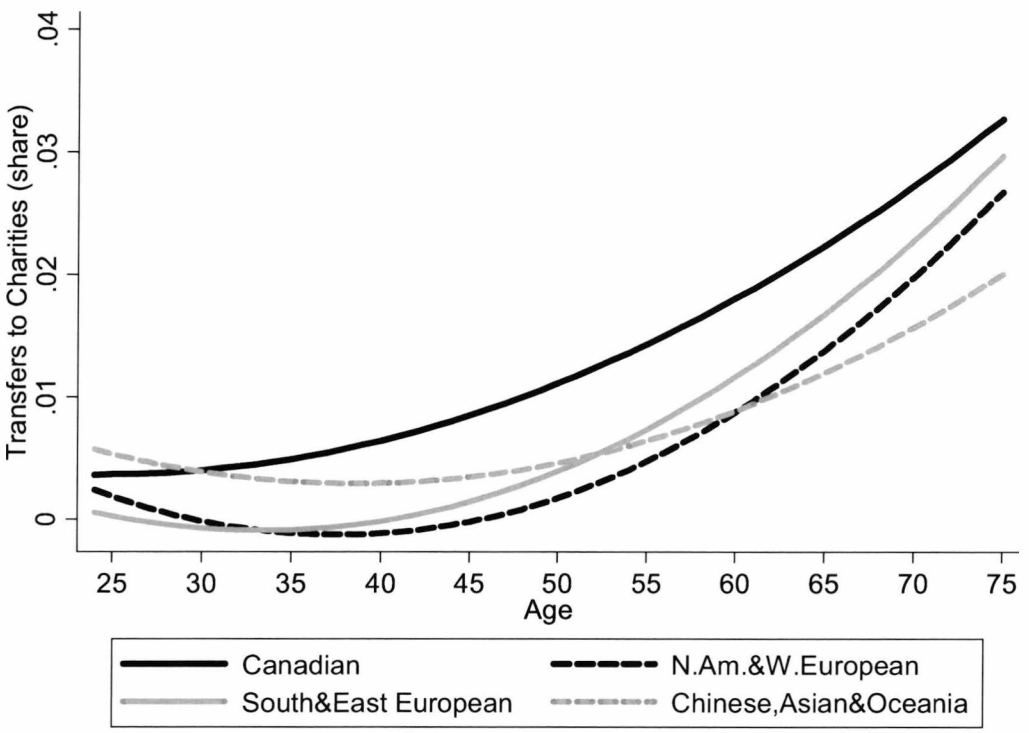
Notes: Values in 1992 Canadian dollars.
Source: Own calculations; Family Expenditures Survey (FAMEX) 1986/1992, Statistics Canada.

Figure 4.2: Expenditure Share of Transfers to Persons by Population Group over the Life Cycle



Source: Own calculations; Family Expenditures Survey (FAMEX) 1986/1992, Statistics Canada.

Figure 4.3: Expenditure Share of Transfers to Charities by Population Group over the Life Cycle



Source: Own calculations; Family Expenditures Survey (FAMEX) 1986/1992, Statistics Canada.

CHAPTER 5: MIGRANTS' SKILLS AND THE USE OF REMITTANCES

5.1 Introduction

The topic of migration and development has received much attention in recent years. This is not surprising since two major factors linked to the impact of migration on development (i.e. migration of high-skilled workers and migrants' remittances) increased dramatically in volume in the last decades. However, despite the fact that remittances flows to developing countries tripled between 1998 and 2008, reaching US$338 billion (Ratha *et al.* 2009), it is still controversial if the increasing number of highly-educated migrants from developing countries residing in the OECD[69] do indeed compensate through remittances for the loss in human capital generated in their countries of origin.

The main concern is that high-skilled migrants are more likely to settle permanently abroad and reunite with family members and, consequently, remit relatively less because a) more close family members live with them in the host country thus reducing the motivation for altruistic remittances to relatives at home, and b) the transfers for exchange purposes (i.e. "buying" services from relatives, such as taking care of assets owned in the home country) are less important, as the exchange motive is assumed to be positively related to temporary migration or the intention to return (see Cox 1987; Glytsos 1997; Rapoport and Docquier 2006). This hypothesis is supported by empirical evidence

[69] The number of immigrants with university education in the OECD doubled between 1990 and 2000 (Docquier and Marfouk 2005) and is likely to have grown since as developed countries have increasingly pursued skill-selective immigration policies (Bollard *et al.* 2009).

from Faini (2007) and Niimi *et al.* (2008) who use cross-country macroeconomic approaches to estimate the relationship between the amount of remittances (and remittances per capita) received at country level to the ratio of migrants with tertiary education.

Bollard *et al.* (2009) challenge the above evidence, criticising the fact that macroeconomic data on remittances suffer from several limitations that may lead to biased results, e.g. they cover only remittances through formal channels and the propensity to use formal remittance can be correlated to the education level.[70] Using migrant-survey data from 11 OECD countries, they show that highly-educated migrants have about the same propensity to remit compared to less educated ones but if remitting, they remit significantly higher amounts. Moreover, they find evidence that the education effect on remittances is mainly due to variation in income, i.e. more educated migrants remit more because they earn more.[71]

The study included in this chapter is an attempt to further challenge the view that high-skilled migration is harmful for the migrant origin countries from the perspective of the scope and use of migrants' remittances. Using information collected through qualitative interviews with Afghan, Egyptian and Serbian migrants in Germany we show that higher-educated/higher-skilled migrants are more likely to make investment savings and productive investments in their

[70] Being more likely to settle permanently in the host country (see Faini 2007), high-skilled migrants are also more likely to naturalise there. Consequently, their remittances are often not included in the balance of payments statistics under the migrants' remittances categories. If a migrant possessing the citizenship of his home country remits money back home, the amount is usually being registered in the balance of payments under *Compensation of Employees* (under *Income*) or *Workers' Remittances* (under *Current Transfers*), depending on whether he is residing for less or more than 12 months in the host country. However, if a naturalised migrant (i.e. having the citizenship of the host country) transfers money to a relative in his home country, the amount is usually registered under *Other Current Transfers of Other Sectors* (Alfieri *et al.* 2005).

[71] Another explanation could be that they have to remit more in order to repay an informal loan eventually contracted with relatives for the investment in the migrant's own education (Poirine 1997).

countries of origin compared to their lower skilled counterparts. This differential behaviour seems to be mainly due to the differences in income (i.e. financial potential) and business skills (i.e. human capital). Nevertheless, judging by the remittance behaviour of the three immigrant groups and the statements of the interviewees it becomes evident that the political and economic environment in the country of origin is substantially influential in the decision of migrants to invest there or not. We could identify comparatively larger and more frequent investment projects made by Egyptian migrants; from the three countries of origin considered, Egypt having enjoyed relatively more political stability and successful economic reforms in the last decades.

The main objective of this study is focused on exploring the direct effects of remittances on savings and job creating activities in the migrants' countries of origin. Despite the fact that even the disposition of remittances on consumption and real estate may produce various indirect development effects on the economy (i.e. development of human capital; stimulation of investments from other sources; see Ghosh 1996; Glytsos 1993; Ratha 2003), an imperative condition for such positive effects to take place is that production capacities in the migrant sending country flexibly adapt to meet the increased demand. Otherwise, negative effects may occur. For example, if the increased demand falls on non-tradable goods it can generate inflation and/or the appreciation of the real exchange rate, reducing the competitiveness of the domestic manufacturing sector (i.e. the so called *Dutch disease* effect); if the rising demand falls on tradable goods, it can increase imports and generate (or aggravate) trade balance deficits.

Extant literature on the use of migrants' remittances focuses exclusively on the spending decisions of remittance receiving households and show that they

mainly use remittances based on the type of income they perceive remittances to be. If perceived to be transitory income then a relatively higher share is saved or invested, as for example found by Adams (1998) in the case of Pakistan and Yang (2008) in the case of the Philippines. On the other hand, households that regard remittances as permanent income consume more out of them in comparison to other forms of income (Zhu *et al.* 2009a and b). This chapter adds to this literature by analysing the pattern and use of remittances from the perspective of the remittance sender. The information collected through the qualitative interviews should give new insights about investment remittances of long-term/permanent migrants that are often not captured either by macroeconomic data on remittances (e.g. if the migrant is naturalised in the host country and invests into a business in the country of origin remittances are captured under *Direct Investments*) or by migrant sending or receiving country household data (e.g. in the case the remitted money is not sent to a relative but into a saving account or a business owned by the migrant himself).

The remainder of the chapter is structured as follows: Section 5.2 describes the methodology. In order to provide context, Section 5.3 illustrates the immigrant groups, highlights their particularities, provides an overview on the remittance outflows from Germany to Afghanistan, Egypt, and Serbia, and discusses the data problems. Section 5.4 evaluates the interviews and comparatively analyses the three groups included in the study in what patterns and the use of remittances in the countries of origin are concerned. Section 5.5 concludes.

5.2 Methodology

This study relies on about 80 guided interviews carried out in Germany, Egypt and Serbia.[72] Using a snowball sampling procedure,[73] key stakeholders (i.e. leaders of Diaspora organisations, well-known representatives, and businessmen) of the Egyptian, Afghan and Serbian communities in Germany were identified, while in Egypt and Serbia interviews were conducted with representatives of the government, companies, banks, business chambers, universities and schools, as well as with migrants who had returned to their countries of origin.[74]

The interviews aimed *inter alia* to provide information about the remittance motivation of immigrants in Germany and the use of remittances by the family back home and/or the migrants themselves. Furthermore, the interviews carried out in the countries of origin (i.e. in Belgrade and Cairo) had to give insight into the ways in which the role and effects of remittances are perceived and judged there, in particular by the economic organisations and political decision makers. The questionnaire included sections on the characteristics of the interviewee, personal history of migration, social integration and involvement, and the perceived socio-economic conditions in the country of origin.

Interviews with Afghan stakeholders were carried out in Berlin, Bochum, Bonn, Detmold, Freiburg, Hagen i.T., Hamburg, and Karlsruhe. Egyptian stakeholders were identified in Berlin, Frankfurt a.M., Munich, and Cairo. Finally,

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[72] The interviews were carried out in the framework of the project *Egyptian, Afghan, and Serbian Diaspora Communities in Germany: How do they Contribute to Their Country of Origin?* commissioned by the German Federal Ministry of Economic Cooperation and Development and the German Technical Cooperation (GTZ) and were conducted by a joint team of the Institute for Migration Research and Intercultural Studies (IMIS), University of Osnabrück and the Migration Research Group (MRG) of the Hamburg Institute of International Economics (HWWA/HWWI).

[73] Through previous contacts of the GTZ and internet searches leaders of central organisations of the Diaspora communities where contacted first. Then, during the interviews they where asked to name and provide contact details of other active representatives of their migrant group.

[74] No field study was carried out in Afghanistan because of the financial and security costs involved.

Serbian representatives were interviewed in Berlin, Bielefeld, Bonn, Frankfurt, Hamburg, Munich, and Belgrade.

Beyond evaluating the interviews, this chapter also reviews statistical data from the International Monetary Fund (IMF) and the national central banks (i.e. German Federal Bank, Central Bank of Afghanistan, Central Bank of Egypt, National Bank of Serbia) concerning the remittances flows from Germany to Afghanistan, Egypt and Serbia, and statistical data about immigrant stocks and flows from the German Federal Office for Migration and Refugees (BAMF), the German Federal Ministry for Economic Cooperation and Development (BMZ), the German Federal Statistical Office, and the German Federal Foreign Office.

5.3. Afghan, Egyptian and Serbian immigrants in Germany and related remittance flows

With about 10.1 million foreign-born residents in 2005 (or 12.3 percent of its population), Germany is one of the major host countries of international migrants (Münz *et al.* 2006). With estimated numbers of about 100,000 Afgans, 24,000 Egyptians and 700,000 Serbians the foreign born members of the countries included in this study account for about 1.0 percent, 0.2 percent and 7.0 percent of Germany's total immigrant population respectively. Despite the fact that these are not the most numerous immigrant groups in Germany, the interest in them emerges from the diversity in the characteristics of their members and the different socio-economic environment in the countries of origin, thus, allowing a comparative analysis of their remittance behaviour.

5.3.1 The Afghan immigrants

The largest stock of Afghan citizens living in Germany was registered in 2001 with about 71,662 people. Since then, their number has constantly declined due to naturalisation, return migration and deportations, reaching 55,111 in 2005. Of those, 47,635 were born abroad and 7,476 were born in Germany of Afghan parents. However, the number of total residents of Afghan origin (including naturalized Afghans) is estimated by the German Federal Ministry of Economic Cooperation and Development (BMZ) to be almost double (about 100,000 people; see GTZ 2004a).

The first Afghan settlers in Germany were carpet salesman who stocked their commodities and opened branches in the free-harbour of Hamburg.[75] After World War II, migration to Germany occurred in three waves. In the 1950s and 1960s Afghan-German relations were intensely promoted. Several exchange programs took place between the University of Kabul and the universities of Cologne, Bochum and Bonn, allowing graduates of the German High School in Kabul to study in Germany. As a result, most Afghan immigrants during this period were students and businessmen.

The second wave of immigration started in 1979 after the Soviet Invasion. The majority of immigrants in this wave were supporters of the Islamic Mujahedin (i.e. the strongest opponents of the Soviet invasion), seeking asylum after the institution of the communist regime in Kabul. The third wave of immigration occurred in the 1990s and consisted also mainly of asylum seekers, leaving Afghanistan because of the civil war (Bommes *et al.* 2007).

[75] According to subjective estimations of interviewees, nowadays, 50 percent of the about three hundred carpet salesmen in the Hamburg harbour are of Afghan origin.

The socio-economic characteristics and the residence status of the Afghan immigrants reflect their different migration patterns. Those who arrived before 1979 (i.e. students and businessmen) are better educated, well integrated, and have a consolidated resident status, i.e. permanent residency (13 percent of the residents of Afghan origin) or German citizenship. On the other hand, those who have immigrated after 1979 as refugees still have a less consolidated resident status (30 percent of the total residents of Afghan origin have a temporary visa and 7 percent an exceptional leave to remain).[76] Due to the relatively restrictive German immigration and asylum policy, they were kept for many years outside the education system and labour market.

However, even those who acquired education and skills in Afghanistan often experienced difficulties having their diplomas and qualifications recognised in Germany. Over 78 percent of the interviewees indicated having received no further training and having no or less than one year of work experience in Germany in the profession learned. Thus, the majority of them often had to accept jobs below their skill level and experienced a social decline (Bommes *et al.* 2007).

5.3.2 The Egyptian immigrants

The Egyptian immigrant group living in Germany is relatively small. According to the German Federal Statistical Office, about 10,258 Egyptian citizens legally resided in Germany in 2005. On the other side, Egyptian authorities estimate the number of emigrants to Germany, including those naturalised, to be about 24,000 (Bommes *et al.* 2007). Finally, when taking into account also second and third

[76] Are tolerated to stay but can be deported anytime.

generation migrants, the GTZ (2004b) estimates the number of residents of Egyptian origin to be about 40,000.

Already in the 1920s an active Arab community was established in Berlin including entrepreneurs and intellectuals. Due to those initial network connections, Egyptians migrated to Germany in large numbers in the late 1950s and early 1960s as a reaction to the unstable political and economic situation in Egypt. Their main migration reason was to get a better education and is reflected today in the high number of high skilled (e.g. engineers and medical doctors) in the Egyptian community.

The majority of these immigrants are nowadays naturalised (75 percent of the total residents of Egyptian origin).[77] The process of naturalisation was facilitated by the high number of Egyptian-German marriages, thus easing the access to citizenship for the second generation as well (GTZ 2004b). Moreover, they are highly organised in cultural and professional associations and have strong networks with the social elite in Egypt, based on kinship ties and professional relations (Bommes *et al.* 2007).

After 1984 certain numbers of Egyptian asylum seekers also migrated to Germany, primarily because of religious persecution. They were Copts or members of the Muslim Brotherhood. However, their acceptance quota was rather low, not exceeding 1.2 percent (Gesemann 1995). In addition, since the beginning of the 1990s, irregular immigrants of Egyptian origin have continuously entered Germany. Albeit scarce information about their numbers and socio-economic characteristics, it can be presumed that they come from middle class families. The

[77] Source: own calculations; German Federal Statistical Office (2006a; 2006b).

poorer may not have been able to afford the high smuggler fees of up to €5,000 in order to be shipped over to Western Europe (Bommes *et al.* 2007).

5.3.3 The Serbian immigrants

The Serbian immigrant group is the largest of the three included in this study. The GTZ (2004c) estimates the number of German residents of Serbian origin to be about 700,000 and, thus, being the second largest ethnic group in Germany after the Turks. According to the German Federal Statistical Office (2006a), 297,004 of those still had Serbian citizenship in 2005. Net immigration from Serbia was, however, negative in the last years, mainly because of the political forced return of refugees after the end of the Kosovo conflict (Bommes *et al.* 2007).

Immigration from Serbia occurred on a large scale in the 1960s during Germany's economic boom. Since then and until the general ban on recruitment in 1973, about 535,000 Yugoslavian workers were granted residence within the framework of the *Guest Worker Programme*. After the recruitment stop, and as a result of the return policy, about 25 percent of the Yugoslavian guest workers returned to their country of origin (Malacic 1996). The stock of migrants in the 1980s remained, however, more or less unchanged. This was due to the fact that return migration flows were balanced by further immigration for family reunification reasons (Bommes *et al.* 2007).

The number of refugees from the disintegrating Yugoslavia rose considerably in the 1990s, with the outbreak of the ethnic conflicts. Between 1991 and 1997, approximately 300,000 people left the country; and about the half of them requested asylum in Germany and Austria. The last immigrant wave finally came with the Kosovo conflict at the end of the 1990s. As noted before, the

numbers of refugees are, however, shrinking because of their political forced return after the end of the war.

Nowadays, the majority of residents of Serbian origin is naturalised (57 percent) or has a permanent resident status (19 percent)[78] and, according to the GTZ (2004c), belongs to the German middle-class.

5.3.4 Remittance flows from Germany to Afghanistan, Egypt, and Serbia

Following the definitions of Hertlein and Vadean (2006) and Münz *et al.* (2006), Germany ranks second, after the United States, as source country of migrants' remittances.[79] In 2005 the cumulated remittance outflows from Germany were estimated to be of about €14.1 billion.[80] However, the statistical data on the bilateral remittance flows between Germany and Afghanistan, Egypt and Serbia respectively have to be considered with care. In Afghanistan and Serbia the statistical collection is poor, while in Egypt the methods of data collection applied seem to differ significantly from those in Germany.

For Afghanistan neither national offices nor international finance organisations record remittance inflows. According to the unpublished statistics of the German Federal Bank, €22 million in *Workers' Remittances*[81] were made from Germany to Afghanistan in 2004.[82] However, the German Federal Bank measures *Workers' Remittances* on the basis of cash self-carried by foreign workers on their trips to their home countries and adds to them estimates on the basis of statistics from the German Federal Employment Agency on the number of employed and

[78] Source: own calculations; German Federal Statistical Office (2006a; 2006b).
[79] The amount of the *Compensation of Employees* plus 50 percent of the private transfers (i.e. sum of the balance of payments items *Workers' Remittances* and *Other Current Transfers of Other Sectors*). For details see Hertlein and Vadean (2006) and Münz *et al.* (2006).
[80] Own calculations; German Federal Bank (2006).
[81] See Footnote 67 for more details of the migrants' remittances items in the balance of payments statistics.
[82] Data for *Compensations of Employees* and *Migrants' Transfers* were not available.

unemployed foreign nationals who are subject to social insurance contribution (IMF 2005; German Federal Bank 2006). The remittance outflows reported could be significantly underestimated: first, because cash has to be declared to the customs only for amounts exceeding €15,000; and second, due to the fact that migrants not covered under social security (i.e. students or part time employees) and those who had been naturalised in Germany (about 40 percent of the residents of Afghan origin) were not included in the estimations.

Data about remittance flows to Serbia suffer also from severe limitations. They are not recorded by the International Monetary Fund (IMF), and the Serbian Central Bank only documents public and private transfers in aggregate, without distinguishing between source countries. According to statistics of the German Federal Bank, €240 million were transferred from Germany to Serbia and Montenegro in 2005 (Walter 2006). However, as mentioned before, these include only official registered cash transfers and estimates of bank transfers by Serbian citizens residing in Germany who are covered under social security.

The statistical databases for Egypt are much better, but the data provided by the Egyptian Central Bank differ significantly from that of the German Federal Bank. According to the Egyptian Central Bank, the inflows of migrants' remittances from Germany in 2004 amounted to US$90 million (Fargues 2005). The German Federal Bank, however, reports in unpublished statistics only €4 million in workers' remittances outflows to Egypt. And even after including all other private transfers (€12 million),[83] the gap between the two estimates does not narrow much.

[83] These should include both cash and bank transfers of all legal residents in Germany.

An explanation for this great discrepancy is that the Egyptian Central Bank probably includes *Compensations of Employees* and *Migrants' Transfers* in their estimation of the remittance flows. Furthermore, it is possible that certain money transfers are booked by the two central banks under different categories, e.g. as remittances by the Egyptian Central Bank, while as direct investments by the German Federal Bank.

5.4 Evaluation of interviews

This section assesses the purpose and use of migrants remittances made by migrants in each of the three groups considered, with focus on the education/skill level. Then, the remittances and investment behaviour between the groups is comparatively analysed by taking into account the differences in characteristics between the groups and the distinctive investment climate in the respective country of origin.

5.4.1 Remittances to Afghanistan

Most Afghan interviewees stated that nearly all Afghan immigrant households in Germany support financially their relatives in Afghanistan and explained that Afghan families receiving remittances are mainly from the lower income distribution. A considerable part of Afghanistan's population would be, however, dependant on the remittances from their relatives abroad for meeting their daily consumption needs (see van Hear 2003). This information confirms the results of a World Bank study that estimated about 15 percent of the rural households in Afghanistan to be recipients of remittances from relatives abroad, covering about 20 percent of their daily expenditures (World Bank 2004). Thus, it seems that

Afghan migrants remit money regularly for the day to day consumption of the relatives and/or in the case of a stringent need, e.g. when a relative gets ill and needs financial support for medical care.

Only one interviewee mentioned cases where close family members residing in Germany transferred money to relatives in Afghanistan to support them in the renovation of their house or to start a small second-hand car business.[84] However, such small business investments are rather uncommon, so the opinion of most Afghan interview partners. In general, the amounts remitted would be relatively low. The managing director of a company that recently started offering formal *hawala*-banking services in Hamburg shared this opinion. He confirmed that the majority of his regular customers are households of Afghan origin which remit on average about 200 Euro/month to relatives in Afghanistan.[85] The use of remittances is probably determined also by the financial situation of the receivers. Given that 42 percent of the Afghan population lives below the national poverty line[86] and assuming that preferences are ordered, the majority of the receiving households eventually need remittances exclusively to cover daily expenditure. Consequently, remittances might be seldom saved or invested (see also Chapter 1, p. 35).

None of the Afghan interviewees mentions a specific case of a productive investment made in the country of origin. The few participating businessmen of Afghan origin only referred to having plans to do so. For instance, the owner of a

[84] In this case, buying used cars in Germany and shipping them to be sold in Afghanistan.
[85] Such amounts are low when judged by European standards. However, they are substantial when compared to the average income in Afghanistan.
[86] World Development Indicators, online database.

successful German lighting company[87] expressed his intention to establish a small factory for illumination systems in Kabul. Despite his personal history (i.e. being forced to flee Afghanistan at the young age of 18 having just started his university studies) and his current citizenship status (i.e. holds German citizenship), he has the sentiment of owing something to his country of origin. The intended investment project would be a way to share with his native homeland the success he had in Germany.

According to the business plan for this enterprise, in the first years lamps will be produced for the Afghan market only. Then, in a period of seven years, deliveries will be expanded to the Asian and European markets. Since only a few machines will be used in the manufacturing process, the amount of jobs created could reach 70 after one to two years. The intermediate products should be imported in the short and medium term from Germany. However, the target is to produce and/or buy about 70 percent of all needed materials in Afghanistan. The lamps should find their use in airports, schools, hospitals etc. but also in private houses and should convince through quality. Even though he showed confidence in the ability of the new Afghan government to reach stability and evaluated positively the country's efforts in the last years to foster the economic and political development, there seemed to be a reluctance to state a more precise schedule for the implementation of his business plan.

Further, the same interviewee mentioned a young self-employed engineer of Afghan origin currently residing in Germany who intends to invest in Afghanistan as well. The plan is to open an engineering office for the planning of

[87] The company designed and implemented for example the current illumination system of the Cologne/Bonn airport.

steel construction systems. However, in this case the person is still hesitant, as many others, because of the serious credit constraints in Afghanistan.

A member of Afghanistan's diplomatic mission in Berlin reinforced the determination of the Afghan government to continue to adopt regulations for the establishment of a free market economy and also to support measures promoting investments. Investors will be able to obtain the necessary licences more easily and under certain circumstances the government will provide land for the construction of industrial plants. Furthermore, row materials can be imported in Afghanistan tax-free. Still, investments in Afghanistan are very scarce. The major obstacles for the implementation of investment projects are the lack of proper infrastructure (in particular electricity) and the difficulties concerning access to land acquisition, qualified labour and financial services (World Bank 2005b).

To sum up, Afghan immigrants in Germany seem to remit usually only relatively small amounts of money with the purpose of supporting their relatives in Afghanistan in their basic everyday consumption. Such transfers are made even by migrants that have settled in Germany a long time ago, and across all educational and skill levels. Moreover, skilled migrants that have successfully built up companies in Germany seem to be willing to invest in Afghanistan. However, they are still waiting for a more stable political system and a better infrastructure.

5.4.2. Remittances to Egypt

In comparison to the Egyptian labour migrants (that typically migrate to the Gulf States), the Egyptian immigrants in Germany rarely have to remit money for the financial support of their families. First, because they originate mainly from

wealthier upper middle-class families in Egypt and second, because their spouse and children often accompanied them or they married in Germany and, thus, the majority has only distant relatives left in the home country.[88] Therefore, remittances of Egyptian immigrants in Germany are not made regularly but are linked to a specific need, i.e. the amount remitted depends on the particular demand of the family member asking for support. The most important remittance purpose seems to be, however, the acquisition of real estate. In the case of older migrants, apartments and houses bought in Egypt are being not only an investment saving, but a secondary residence too.

Furthermore, many of the interviewees remitted money to Egypt for productive investment purposes. Such is the case of an Egyptian engineer who returned to Egypt – after completing his PhD and lecturing for many years at the Darmstadt University of Technology - with the objective of engaging in business. In Germany this would have been harder because the markets are saturated. Thus, in the mid 1980s, he bought a paper factory together with another Egyptian colleague from the Darmstadt University of Technology and later, he founded a trading company that represents several German companies in Egypt. The products traded are mainly machines, special stones for high-temperature kilns, and steel. Most recently, a holiday development at the Red Sea coast was added to his investment portfolio. The latest venture is the establishment of a German private school in Cairo. The school is organised following the German model and can host 1,200 pupils, while the classes are held in both the German and Arabic language. The investment was of about 1.6 million Euro. However, at the moment

[88] None of the interviewees mentioned any situation of remittances made to pay for family investment in the migrant's education and/or migration (see Chapter 1, pp. 31-32)

of the interview the school was not making a profit because it had not yet attracted the optimal number of pupils. The interviewee declared that in order to be able to afford taking the risk of such an investment one has to have a high enough financial potential and the income for the general consumption of the family secured.

Another Egyptian immigrant who runs a successful solar energy business in Germany, also reports to have several investment projects in Egypt. For example, he established a furniture factory with about 1,000 employees, producing car seats for the German market. He also took over a factory producing hydraulic systems and in order to improve its competitiveness organised for its employees to be re-trained in Germany. Finally, he set up a German school in Cairo as well.[89]

Another successful investment project in Cairo is a medical clinic of an Egyptian physician who studied in Germany and practises there. It consists of an orthopaedic and a telemedicine practice that was still in the organisation phase at the time of the interview. The patients are planned to be attended by an assistant doctor who will make the first health check and set an appointment for a teleconference with a specialist from a German clinic. If an inpatient treatment is necessary, the assistant doctor will organise the patient's trip to Germany. Post operation treatments shall be carried out in Cairo. The practice is not making profits yet. The owner mentions that without his income from Germany, he could not afford to make this investment. Yet, he still hopes that his effort will pay off in the future.

[89] There are three private German schools and a private German university in Cairo, all set up by Egyptian emigrants to Germany.

While remittances for the support of family consumption of their relatives back home seem to be less common for the high skilled Egyptian immigrants in Germany, they seem to remit significant amounts of money for acquisition of real estate and for productive investments. In the observed examples of investment projects conducted by Egyptian immigrants in their home country, the protagonists are skilled migrants originating from Egyptian upper middle-class families. However, since the key stakeholders of the Egyptian Diaspora in Germany all have about the same educational and social characteristics, it should be noted that the snowball sampling technique employed could have determined that only persons belonging to this social group have been interviewed. Still, evidence can be reported that the Egyptian skilled migrants remitted significant amounts of money and successfully invested in their home country, generating employment opportunities as well as contributing to the long-term development of the Egyptian education and health systems.

5.4.3 Remittances to Serbia

The majority of interviewees stated that the main remittance purpose for Serbian immigrants is the acquisition of real estate in their home country. Alternatively, remittances are used for consumption, for setting up a small business or are deposited in Serbian bank accounts.

A technician that immigrated to Germany in 1976 and is currently working as quality analyst at BMW stated that he spends his holidays in Serbia every year. According to his estimates, during those holidays his own consumption, the financial support for his relatives and his real estate investments amount to about €5,000 a year. He owns five apartments in Serbia, which are being rented out by

his mother. The rental income is partly consumption purposes by her and the rest deposited in Serbian banks.

The general manager of the ProCredit Bank Serbia confirms that an increasing number of Serbians living abroad deposit their money in Serbian and foreign banks located in Serbia.[90] With interest rates of 4 to 6 percent, fixed deposits denominated in Euro would be highly attractive. Still, the financial sector has to make significant efforts in attracting savings from expats. Its credibility has suffered significant damage in the 1990s when the Serbian government froze private foreign exchange accounts to finance the war, numerous financial pyramid systems collapsed, and hyperinflation eroded savings. Consequently, some foreign banks, as for example the subsidiary of the HypoVereinsbank Switzerland, offer their clients additional guaranties of the parent bank.

No outstanding investment project of a Serbian immigrant could be identified from the interviews. At the same time, as explained by a representative of the Serbian Chamber of Industry and Commerce, the number of small business investments still remains unknown. For example, a friend of his got from his parents working in Germany an insulating tape manufacturing machine. With this machine he started a small business and makes his living. However, like many other small business ventures, the one owned by his friend is not legally registered and, thus, does not appear in the official statistics.

The main reasons for the lack of productive investments by the Serbian immigrants could be the fact that the Serbian political environment is still fragile and the rule of law lacks implementation. Furthermore, most Serbian immigrants

[90] The euroisation is quite high in Serbia, comparing to international standards. According to IMF estimates, more than 66 percent of the bank deposits and more than 75 percent of the bank credits are denominated in Euro. This would be due to the high inflation and to the fact that real interest rates in Serbian dinar are negative.

in Germany belong to the working class and many of them are at retirement age. Lacking the necessary entrepreneurial skills, they use their savings for buying real estate or save in bank deposits. The second and third generation also does not invest directly. Those working in high skilled jobs seem to prefer acting as middlemen in direct investment projects of their German employers and use this as a chance for a career promotion within the framework of the company's transnationalisation process.

5.4.4 Comparative analysis

The three immigrant groups included in this study differ significantly in terms of their skill composition: the Afghan immigrant group consists of people who are employed on average in lower skilled jobs; majority of the Serbian immigrants arrived in Germany as guest workers and belong to the middle-skilled working class; while most Egyptian immigrants originate from Egypt's upper middle-class. They came to Germany mainly for the reason of studying and are nowadays on average a highly-skilled immigrant group, belonging to the German upper middle-class.

The remittance habits as well as the use of remittances in the home countries seem also to be quite different among the three immigrant groups: Afghan immigrants usually remit on a regular basis but relatively lower amounts (on average €200/month), which largely serve as a means of subsistence for the recipients; besides financing the consumption expenditures of their relatives, many Serbian immigrants use the money remitted to invest in real estate or deposit it in Serbian bank accounts; while Egyptian immigrants, having the highest financial potential from the three groups, remit money mainly for the

acquisition of real estate and for investments in the manufacturing and the service sector.

The more frequent remittance activity of the Afghan immigrants does not mean that Afghans remit on average more. The acquisition of real estate (i.e. in the case of Serbs) and productive investments (i.e. in the case of Egyptians) occur eventually more seldom, but the related amounts are much higher.[91] Thus, the resulted per capita annual averages might be higher as well, meaning that a high (i.e. Egyptians) and/or middle skilled (i.e. Serbs) immigrant group remits on average also more than a low skilled one.

On the other hand, the remittance behaviour does not depend only on the financial potential (e.g. the education, skills, and income level) of the immigrants but also on the development level (i.e. infrastructure, availability of skilled labour) and the investment climate (i.e. political and macroeconomic stability, rule of law, interest rates, and development strategies) in the home country.

The different economic and political situation in the countries of origin makes it difficult to establish a causal link between skills and remittances from the comparison of the three immigrant groups. However, it explains why immigrants with the same skill level have such a different behaviour concerning remittances and the use of these repatriated savings. Afghan immigrants who have the skills and financial means for investing in Afghanistan are not doing so but are still monitoring the political development in their country of origin and wait for the infrastructure destroyed in the long lasting war to be rebuilt by means of official financial assistance. Similarly, due to the political and macroeconomic instability

[91] The amount of about €5,000/migrant and year indicated by one of the interviewees seem, however, to be rather overestimated or an exception.

in Serbia in the 1990s, Serbian skilled migrants prefer to make investment savings that involve a lower degree of risk (i.e. acquisition of real estate, foreign exchange bank deposits) and engage in direct investment projects only as middlemen. In contrast, Egypt enjoyed in the last decades political and macroeconomic stability and recently the government made important efforts in liberalising the economy as well as improving communications and infrastructure. This is perhaps one of the main reasons for the high skilled Egyptian migrants to invest the capital accumulated in both the home and host country in Egypt's manufacturing and service sectors.

These findings seem to confirm the empirical results of Catrinescu *et al.* (2009), who point out to the important role played by the home country's institutions in assuring a positive impact of remittances on economic growth (see also Chapter 1, p. 38). Their empirical results show that a sound institutional environment positively affects the volume and efficiency of investments. In the presence of good institutions, remittances are often channelled more effectively, ultimately leading to higher output. A sound financial system, the guarantee of property rights, the presence of free and open markets and the promotion of development strategies involving all actors of the economy seem to be the key to assuring large inflows of remittances (but also of foreign capital) as investment savings and as productive investments. Based on the interviewees' responses, it can be presumed, that in the case of equally favourable investment conditions to those in Egypt, skilled migrants from Afghanistan and Serbia would start to remit larger portion of their savings and invest in their home countries too.

5.5. Conclusions

This chapter aimed to provide insight into the way in which the education and/or skill level of migrants affects the remittance behaviour, purpose, and use, in the context of Afghan, Egyptian and Serbian immigrant groups in Germany.

While the conclusion whether high-skilled migrants remit more or less compared to low skilled ones cannot be answered through the qualitative analysis performed here, it provides evidence that the migrants' education/skill level significantly affects the purpose of remittances towards more productive investment. Whilst lower educated/skilled migrants mainly remit for securing the consumption need of their family members, the remittances of middle skilled migrants are more often used for investment saving (e.g. buying of real estate or bank deposits), and high-skilled migrants seem to be relatively more likely to make productive investments in their countries of origin. Nevertheless, the analysis of the remittance behaviour and the statements of the interviewees of the three immigrant groups reveal that a stable political environment and the establishment of a free market economy in the country of origin play a major role in the investment decision process of the migrants.

These insights have important policy implications. They show that concerns of "brain drain" are not always justified, with high-skilled migrants being relatively more likely to save and invest in their countries of origin, thus, promoting development and eventually offsetting its negative effects. The migrant's endowment with human capital often assures that he earns more money than he and his family require for meeting their basic needs and capital is left for savings and investments. Moreover, the skills and expertise accumulated through education and work experience abroad are important for the implementation of

investment projects. However, a good investment climate is necessary for such projects to take place. Increased efforts in following models of sound macroeconomic management and development strategies involving the whole economy would probably be the best means for government in migrant sending countries to mitigate eventual "brain drain" and maximise positive developmental effects of migration and remittances.

CHAPTER 6: CONCLUSIONS

The contribution of temporary migration and migrants' remittances to the development process of the countries of origin is at the heart of the debate on international migration management and development aid policies. The essays included in this thesis contribute in several ways to a better understanding of these phenomena.

The insight from the Albanian migration experience presented in Chapter 2 shows that circular/repeat migration is an important phenomenon, with more than half of the temporary migrants having an experience of repeated international migration movements between 1990 and 2005. Probably the most notable result is the evidence showing that re-migration of return migrants (i.e. circularity) occurs along the same selection pattern as initial migration and return. From the initial middle to low educated migrant population those with the highest education return to Albania (leaving abroad a permanent migrant group with an even lower average education level), and from the returnees those having less education are most likely to re-migrate (leaving home a past migrant group with a higher average education level).

This selection pattern might be due to, as hypothesised by Borjas and Bratsberg (1996), the relative higher net returns to education/skills in the home compared to the destination countries. Of particular interest for further research would probably be to assess if in the case of relative lower returns to skills in the home country individuals with higher skills/education are motivated to migrate

circularly and contribute to the economies of both origin and destination countries, as often expected by policy makers.

Given that majority of the circular migrants are primary educated, their main contribution to development in Albania is probably through increasing the aggregate demand via remittances and repatriated savings. Nevertheless, development gains from transfers of skills and technology could eventually be achieved through the better educated permanent returnees. As shown in Chapter 3, many of them become entrepreneurs after return.

The impact of temporary migration on the home country's labour market is assessed by studying the occupational attainment of returnees out of four alternatives: non-participation, wage employment, own account work, and entrepreneurship. The distinction between self-employment as own account work (i.e. without hiring employees) and entrepreneurship (i.e. with paid employees) allowed the identification of a possible positive labour market effect beyond the one for the migrant himself. The results of the empirical analysis show that return migration to Albania decreased the on own account working rate and increased the entrepreneurship rate. The effect could include the expansion of a small business on own account to a small or medium sized enterprise with paid employees. Furthermore, the positive effect on job creating activities is almost entirely due to past migration experince (the effect due to characteristics being rather unimportant), and target savers having the highest odds of being entrepreneurs after return. Thus, the main motive for migration for Albanian nascent entrepreneurs seems to be the need to overcome capital constraints, implying that an improved access to credit might have positive effects on job creation activities and the aggregate employment level.

The empirical results in Chapter 3 could eventually provide some explanation for the divergent empirical findings in previous literature with respect to the characteristics of self-employed returnees as well, given the higher education level and better labour market skills found for entrepreneurs compared to own account workers. The low education level among returnees in Egypt and Pakistan can be explained by the fact that many unskilled workers in these countries, being left outside the labour market, choose to engage in own account activities that do not require labour market skills, e.g. small trade or workshops (McCormick and Whaba 2001; Ilahi 1999). On the other hand, a positive relationship between schooling and self-employment in the case of Turkey and Romania is more likely to be present in the case of entrepreneurial activities (Dustmann and Kirchkamp 2002; Radu and Epstein 2007).

Even if the migrants do not return to the home country and settle aboard permanently (or until retirement), they still could make a positive contribution to the home economy over the money transfers they make to relatives, friends or charities. As shown, however, in Chapter 4, the transfer behaviour varies significantly among immigrant groups of different origin. While all immigrant households consider remittances to relatives and/or friends a luxury, the expenditure elasiticities of transfers to persons in the case of Asian immigrants are quite close to unity. This is most probably due to the relatively closer ties with the extended family and more binding familial responsibilities in Asian societies.

These findings give additional insights into the transfer behaviour of permanent migrants in general and have important policy implications. The differential response with respect to changes in total expenditures (or income) suggests that during periods of economic downturn in migrant host countries –

like the one we are currently passing trough – migrants originating form countries with a tradition of closer extended family ties (and/or with more less developed social systems) would probably continue to experience large remittance inflows. Recent World Bank estimates confirm these expectations: while migrants' remittances to developing countries in South, East Asia and Pacific have fallen in 2009 by only -1.5.to -1.8 percent, remittance flows to developing countries in Europe and Central Asia have shrank by about -14.7 percent (Ratha *et al.* 2009). The differences in transfer behaviour will certainly change the future geography of international remittance flows.

As for the impact of remittances on the home economy, the qualitative study in Chapter 5 provides evidence that (similar to the choice of entrepreneurship in the case of returnees; Chapter 3) the human capital endowment is significantly linked to the decision to invest in the home country. Low skilled migrants in Germany remit mainly to secure the consumption need of their family members, the remittances of middle skilled migrants are more often used for investment saving (e.g. buying of real estate or bank account deposits), while high skilled migrants make also productive investments in their home countries. The migrant's endowment with human capital often assures that he earns more money than he and his family require for meeting their basic needs and money is left for savings and investments. Moreover, the skills and expertise accumulated through education and work experience are important for the implementation of investment projects.

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APPENDIX

A1: Description of variables used in Chapter 2

Individual Characteristics	
Gender (female=1)	=1 if the individual is a female; =0 if otherwise
Age	age of the individual
Education level: primary	=1 if the individual has primary education or less; =0 if otherwise
Education level: secondary	=1 if the individual achieved secondary or vocational level; =0 if otherwise
Education level: tertiary	=1 if the individual achieved tertiary level; =0 if otherwise
Speaks English (1990)	=1 if the individual spoke at least some English in 1990; =0 if otherwise
Speaks Italian (1990)	=1 if the individual spoke at least some Italian in 1990; =0 if otherwise
Speaks Greek (1990)	=1 if the individual spoke at least some Greek in 1990; =0 if otherwise
Married	=1 if the individual is married; =0 if otherwise
Household Characteristics	
HH subjective economic status in 1990	self assessed household economic status in 1990 on a scale between 1=poor and 10=rich
HH subjective economic status in 2005	self assessed household economic status in 2005 on a scale between 1=poor and 10=rich
HH size	total number of individuals in the household
Number of friends	total number of friends
Community and Regional Characteristics	
Urban area	=1 if the individual resides in an urban settlement; =0 if otherwise
Region: Coastal	=1 if the individual resides in the Coastal region; =0 if otherwise
Region: Central	=1 if the individual resides in the Central region; =0 if otherwise
Region: Mountain	=1 if the individual resides in the Mountain region; =0 if otherwise
Region: Tirana	=1 if the individual resides in the capital city Tirana; =0 if otherwise
Log of average wage at district level (LEK)	logarithm of the average annual wage in the district where the individual resides
Number of migrants in community (PSU)	total number of migrants in the panel sampling unit where the individual resides
Migration history (first migration trip)	
Age at 1st migration trip	age of the migrant at first migration trip
Months remained away (1st trip)	total number of months spent abroad during first migration trip
Obtained legal residence (1st trip)	=1 if individual obtained legal residence during first migration trip; =0 if otherwise
Work during 1st migration trip: no	=1 if individual had not worked during first migration trip; =0 if otherwise
Work during 1st migration trip: legally	=1 if individual worked legally during first migration trip; =0 if otherwise
Work during 1st migration trip: illegally	=1 if individual worked illegally during first migration trip; =0 if otherwise
Not married, no children	=1 if individual was not married and had no children at the time of the first migration trip; =0 if otherwise
Married w/o children: migrated with spouse	=1 if individual was married, had no children and migrated with the spouse during the first migration trip; =0 if otherwise
Married w/o children: spouse in Albania	=1 if individual was married, had no children and migrated alone during the first migration trip; =0 if otherwise
Mig. with spouse and children	=1 if individual was married, had children, and migrated with spouse and children during the first migration trip; =0 if otherwise
Mig. with children, spouse in Albania	=1 if individual was married, had children, and migrated only with his children during the first migration trip; =0 if otherwise
Mig. with spouse, children in Albania	=1 if individual was married, had children, and migrated only with his spouse during the first migration trip; =0 if otherwise
Spouse and children in Albania	=1 if individual was married, had children, and migrated alone during the first migration trip; =0 if otherwise
Country of destination (1st trip): Greece	=1 if individual migrated to Greece during the first migration trip; =0 if otherwise
Country of destination (1st trip): Italy	=1 if individual migrated to Italy during the first migration trip; =0 if otherwise
Country of destination (1st trip): other country	=1 if individual migrated to a different country than Greece or Italy during the first migration trip; =0 if otherwise
Age at return from 1st migration trip	age of the migrant at time of return from first migration trip
Occupational choice: not working	=1 if temporary migrant is not working; =0 if otherwise
Occupational choice: wage employment	=1 if temporary migrant is working as wage employee; =0 if otherwise
Occupational choice: self-employment	=1 if temporary migrant is self-employed; =0 if otherwise
Return reason: family/non-economic	=1 if temporary migrant returned to Albania because of family, homesickness, or other (non-economic) reasons; =0 if otherwise
Return reason: unsuccessful	=1 if temporary migrant returned to Albania after getting expelled, or failing to find work or to obtain residence; =0 if otherwise
Return reason: temporary/seasonal permit	=1 if temporary migrant returned to Albania after the expiry of a temporary/seasonal work permit; =0 if otherwise
Return reason: accumulated enough savings	=1 if temporary migrant returned to Albania after having accumulated enough savings; =0 if otherwise
Re-migration intention: yes	=1 if temporary migrant has intention to re-migrate during the next 12 months; =0 if otherwise
Re-migration intention: no	=1 if temporary migrant has no intention to re-migrate during the next 12 months; =0 if otherwise
Re-migration intention: don't know	=1 if temporary migrant is undecided about re-migration in the next 12 months; =0 if otherwise

A2: Programme (ado-file): MSL thee-variate probit with two sequential selection equations

```
program define dhprob

        args lnf xb1 xb2 xb3 c21 c31 c32
        tempvar sp2 sp3 k1 k2 k3
quietly {
        gen double `k1' = 2*$ML_y1 - 1
        gen double `k2' = 2*$ML_y2 - 1
        gen double `k3' = 2*$ML_y3 - 1
        tempname cf21 cf22 cf31 cf32 cf33 C1 C2
        su `c21', meanonly
        scalar `cf21' = r(mean)
        su `c31', meanonly
        scalar `cf31' = r(mean)
        su `c32', meanonly
        scalar `cf32' = r(mean)
        scalar `cf22' = sqrt( 1 - `cf21'^2 )
        scalar `cf33' = sqrt( 1 - `cf31'^2 - `cf32'^2 )
        mat `C1' = (1, 0 , 0 \ `cf21', `cf22', 0 \ `cf31' , `cf32' , `cf33')
        mat `C2' = (1, 0 \ `cf21', `cf22')
        egen `sp3' = mvnp(`xb1' `xb2' `xb3') if $ML_y1==1 & $ML_y2==1, ///
                chol(`C1') dr($dr) prefix(z) signs(`k1' `k2' `k3')
        egen `sp2' = mvnp(`xb1' `xb2') if $ML_y1==1 & $ML_y2==0, ///
                chol(`C2') dr($dr) prefix(z) signs(`k1' `k2')
        replace `lnf'= ln(`sp3') if $ML_y1==1 & $ML_y2==1
        replace `lnf'= ln(`sp2') if $ML_y1==1 & $ML_y2==0
        replace `lnf'= ln(1- normprob(`xb1')) if $ML_y1==0
        }
end
```

Do file:

```
/* Initial values */
quietly {
probit mig x1
mat b1 = e(b)
mat coleq b1 = mig
probit return x2
mat b2 = e(b)
mat coleq b2 = return
probit circ x3
mat b3 = e(b)
mat coleq b3 = circ
mat b0 = b1, b2, b3
}

/* Halton draws with antithetics */
mdraws, dr(100) neq(3) prefix(z) burn(10) antithetics
global dr = r(n_draws)

/* ML probit with two selection equations */
ml model lf dhprob (mig: mig = x1) ///
                (return: return = x2) ///
                (circ: circ = x3) ///
                /c21 /c31 /c32 ///
                , cluster(county) missing title("3-var probit, 2 selections, MSL, $dr Halton
                draws")
ml init b0
ml maximize
```

A3: Description of variables used in Chapter 3

Individual Characteristics	
Age	age of the individual
Education level: primary or less	=1 if the individual has primary education or less; =0 if otherwise
Education level: secondary	=1 if the individual achieved secondary or vocational level; =0 if otherwise
Education level: tertiary	=1 if the individual achieved tertiary level; =0 if otherwise
Speaks English	=1 if the individual speaks at least some English; =0 if otherwise
Speaks Italian	=1 if the individual spspeaks at least some Italian in 1990; =0 if otherwise
Speaks Greek	=1 if the individual spoke at least some Greek in 1990; =0 if otherwise
Married	=1 if the individual is married; =0 if otherwise
Monthly income (if working; LEK)	total personal monthly income in Albanian lek
Household Characteristics	
HH subjective economic status in 1990	self assessed household economic status in 1990 on a scale between 1=poor and 10=rich
HH subjective economic status in 2005	self assessed household economic status in 2005 on a scale between 1=poor and 10=rich
Household size	total number of individuals living in the household
Social Capital	
No. of friends	total number of friends
Migration Assets	
No. of other HH members a past migrant	total number of household members with a past migration experience
No. of HH members living abroad	total number of family members (i.e., spouse or children) living abroad
Community and Regional Characteristics	
Community has piped water	=1 if the individual resides in a community connected to running water; =0 if otherwise
Community has banking service	=1 if the individual resides in a community that has banking services; =0 if otherwise
Urban area	=1 if the individual resides in an urban settlement; =0 if otherwise
Region: Tirana	=1 if the individual resides in the capital city Tirana; =0 if otherwise
Region: Coastal	=1 if the individual resides in the Coastal region; =0 if otherwise
Region: Central	=1 if the individual resides in the Central region; =0 if otherwise
Region: Mountain	=1 if the individual resides in the Mountain region; =0 if otherwise
Sector of employment	
Agriculture	=1 if the individual works in agriculture, fishing or the mining sector; =0 if otherwise
Manufacturing	=1 if the individual works in manufacturing; =0 if otherwise
Construction	=1 if the individual works in the construction sector; =0 if otherwise
Wholesale and retail trade	=1 if the individual works in wholesale or retail trade; =0 if otherwise
Hotel and restaurant	=1 if the individual works in a hotel or restaurant; =0 if otherwise
Transportation	=1 if the individual works in transportation; =0 if otherwise
Other services	=1 if the individual works in an other sector than the ones mentioned above; =0 if otherwise
Migration history	
Time since returned (months)	number of months spent in Albania since the last return from a migration trip abroad
Re-migration intention: No	=1 if temporary migrant has intention to re-migrate during the next 12 months; =0 if otherwise
Re-migration intention: Yes	=1 if temporary migrant has no intention to re-migrate during the next 12 months; =0 if otherwise
Re-migration intention: Don't know	=1 if temporary migrant is undecided about re-migration in the next 12 months; =0 if otherwise
Return reason: family/non-economic	=1 if temporary migrant returned to Albania because of family, homesickness, or other (non-economic) reasons; =0 if otherwise
Return reason: unsuccessful	=1 if temporary migrant returned to Albania after getting expelled, or failing to find work or to obtain residence; =0 if otherwise
Return reason: temporary/seasonal permit	=1 if temporary migrant returned to Albania after the expiry of a temporary/seasonal work permit; =0 if otherwise
Return reason: accumulated enough savings	=1 if temporary migrant returned to Albania after having accumulated enough savings; =0 if otherwise

A4: Description of variables used in Chapter 3

Expenditures	
Log of Total Expenditures	log of household total expenditures
Log of Total Transfers	log of household total transfers (i.e. to persons outside the household and to charities)
Prices variables	
Log of Price for Food	log of the consumer price index for food (see Table 4.2)
Log of Price for Shelter	log of the consumer price index for shelter (see Table 4.2)
Log of Price for HH Op. & Furnishing	log of the consumer price index for household operations and furnishing (see Table 4.2)
Log of Price for Clothing	log of the consumer price index for clothing (see Table 4.2)
Log of Price for Transportation	log of the consumer price index for transportation (see Table 4.2)
Log of Price for Health & Pers. Care	log of the consumer price index for health and personal care (see Table 4.2)
Log of Price for Recreation	log of the consumer price index for recreation (see Table 4.2)
Log of Price for Tobacco & Alcohol	log of the consumer price index for tobacco and alcohol (see Table 4.2)
Log of Price for Trans. to Persons	log of the consumer price index for transfers to persons – computed as the sum of the CPIs of the eight expenditure groups above weighted by the respective expenditure share
Log of Price for Trans. to Charities	log of price for transfers to charities computed as: $100+(CPI_{poh,i}-100)\times(1-Taxr_i)$, where $CPI_{poh,i}$ is the CPI of Transfers to Persons for the i^{th} household; and $Taxr_i$ stands for the tax rate applicable for the i^{th} household; the tax rates are uniquely computed for each household through a combination of the federal and provincial tax rates
Individual Characteristics	
Female	=1 if household head a female; =0 if otherwise
Age	age of household head
Age squared	square of age of household head
Education	=1 if household head had less than 9 years of education; =2 if completed some or secondary education; =3 if some post-secondary education; =4 if completed post secondary degree; =5 if completed university degree
Single (never married)	=1 if household head has been never married; =0 if otherwise
Married (with HH member)	=1 if household head was married with a household member; =0 if otherwise
Separated/divorced/widowed	=1 if household head was separated, divorced or widowed; =0 if otherwise
Household Characteristics	
No. of persons a member	number of persons living in the household in the reference year
Home ownership	=1 if the household head (or spouse) was a property owner; =0 if otherwise
Log of net change in A&L	log of net change in assets and liabilities
Migration variables	
Years since immigration	number of months since immigration in Canada
North American & West European (NAWE)	=1 if the household head was born in North America (outside Canada) or Western Europe; =0 if otherwise
South & East European (SEE)	=1 if the household head was born in South or Eastern Europe; =0 if otherwise
Chinese, Asian & Oceania (CAO)	=1 if the household head was born China, Asia or Oceania; =0 if otherwise