

Staffordshire University  
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**An Investigation into Economic Migration with Special Reference to  
Kosova**

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## **Abstract**

The literature on the economics of migration is immense and it provides three different conceptual frameworks to model the decision to emigrate. In addition to differences among these three models, there are inconsistencies between previous studies within each approach in terms of theoretical rationales for inclusion of variables and their main empirical results. Recently, the literature has focussed more on the effects of migration from the perspective of the home countries, with efforts towards seeking a consensus on the appropriate model of migration decision-making left aside. This thesis is an attempt to fill this gap in the literature. Given the importance of social relations and the system of values, the household is arguably the most appropriate decision-making unit among KS-Albanian households. This thesis tests the applicability of a household perspective in modelling Kosovan migration behaviour. A theoretical framework is outlined where the household as the decision-making unit is modelled as maximising the sum of total expected present value of utilities from current and future household consumption at home and abroad. This theoretical framework is transformed into an empirical proposition that investigates the determinants of whether households plan to send at least one member abroad using a Kosova data set of 2007. This does not cover the second stage of decision making, of which household member(s) will be send. The empirical results are broadly in line with the theoretical expectations of this conceptual framework. The results from the propensity to emigrate suggest that the attitudinal variable, which is unique to this thesis and controls for whether the household head perceives that household income has decreased, is an important determinant. This household perspective is developed to consider the decision on the duration of emigration. The empirical results provide fairly broad support for the theoretical expectations of the model. Additionally, the results indicate that, in addition to economic factors, the prevailing political situation may be important in determining the probability of return conditional on migration duration. Given the major political change in Kosova in 2008, the model developed is further tested by considering its stability over time. The empirical results suggest that the model structure has remained stable over the period of investigation. A further examination based on data from the Albanian LSMS 2008 suggests that the household approach may have greater applicability to migration behaviour in that country. In summary, notwithstanding the countries were chosen to favour the household approach, the results obtained provide broad support for the extended formulation of the household approach.

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## ABBREVIATIONS AND ACCRONYMS

BoA	Bank of Albania
BO	Blinder-Oaxaca
CBK	Central Bank of the Republic of Kosovo
CPI	Consumer Price Index
EU	European Union
EUROSTAT	European Union Statistics
GDP	Gross Domestic Product
FDI	Foreign Direct Investments
IMF	International Monetary Fund
INSTAT	Institute of Statistics
IOM	International Organization for Migration
LD	Listwise Deletion
LSMS	Labour Supply Measurement Survey
MAR	Missing at Random
MCAR	Missing Completely at Random
MI	Multiple Imputations
NMAR	Not Missing at Random
OECD	Organization for Economic Cooperation and Development
Riinvest	Institute for Development Research
SOK	Statistical Office of the Republic of Kosovo
UNDP	United Nations development Program
US	United States of America
USAID	United States Agency for International Development
WB	World Bank

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# CHAPTER 1

## INTRODUCTION

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### 1.1 Introduction

In this chapter, the aim is to provide an overview of migration in Kosova focussing on the history and patterns of migration, the corresponding push and pull factors and the economic importance of remittances. In this vein, this chapter serves several purposes in complementing the key analysis of this thesis which focuses on the applicability of the household perspective to modelling migration behaviour in Kosova. First, this chapter establishes the importance of the research objectives to be addressed in the following analyses. Additionally, it provides the setting for developing formal models of migration behaviour and an important background against which the results can be considered.

In section 1.2, the history and patterns of migration are summarised. Special attention is paid to nature of migrant households in Kosova. Distinguishing between push and pull factors is the commonly employed initial framework for analysing economic migration. So, in the next section, an initial discussion of the push and pull factors in the context of a comparison of the relative economic performance of Kosova and Western European countries. Given the focus on economic migration, the focus of this section is on economic growth, labour market characteristics,

poverty and the welfare systems. Special attention is paid to possible similarities/differences in these factors between the period before and after the Declaration of Independence as the major political change since the war. In section 1.4, the history and patterns of remittances and the importance of migration and remittances on the economic development of Kosova are discussed focussing on their microeconomic and macroeconomic effects. The last section concludes this chapter and provides an explanation of the structure of the thesis focussing on the content and role of the following chapters.

## **1.2 History and Patterns of Kosovan Migration**

Prior to any discussion, it is important to raise issues related to the data used in this chapter. Given past political problems, in 1991 the census in Kosova was boycotted by KS-Albanians, and so the last complete census of population was conducted in 1981. Given this lack of population data the sample frame was based on the 1981 census of population. According to the World Bank (2011), this sampling frame is considered as outdated and hence the samples rendered unrepresentative. To rectify this, a new sampling frame was developed by the World Bank team in 2008. This sampling frame is not based on census data as the census was only conducted in 2011 and the data will not be published until the end of 2012. Consequently, the figures on demographic and socio-economic statistics stemming from sample data differ across data sources and are likely to be unreliable (European Commission, 2009). For the same reasons, lack of data is also an issue. Additionally, even where data is available, there are either no long-term data series or they are not comparable. Issues arise also regarding data on migration and remittances. The major problems in this regard are that there is no consistency in the questionnaires used, the method of sampling and also there is imprecision in the questions and the way the data is presented. Therefore, in several cases comparison between the data sources is rendered extremely difficult. Similar problems affect unemployment and poverty data as discussed in sections 1.3.1 and 1.3.2.

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Emigration from Kosova started in the early 1960s during the implementation of the guest worker programmes, where workers, largely male, emigrated mainly to Germany, Switzerland and Austria on a contractual basis. This was the first wave of emigration and it was almost exclusively for economic reasons, namely for employment or higher wages. The second phase started with the abolition of the autonomous status of Kosova in 1989 followed by the mass dismissal of Albanians from their jobs. Emigration at this stage was for mainly political reasons by primarily young men who fled/escaped from the Yugoslav army services and by politically involved families who emigrated to avoid persecution. It involved also economic reasons as those laid-off did not have an economic future in Kosova. The third emigration wave consists of forced emigration – massive population displacement – as a result of the 1998/99 war in Kosova. The immediate emigration then was for purely political reasons. Right after the war a large proportion of the displaced population returned and participated significantly in the reconstruction process. However, there was still a large proportion that had their houses burnt and had lost all their life-time savings. Restarting life from scratch was almost impossible for them and many decided to remain in the host countries for a longer period. This category of migrants has transformed this emigration wave from a politically induced into an economically sustained one. So, this emigration wave too can be considered to have been indirectly induced by economic factors. In summary, all three waves of emigration were, at least in part, motivated by economic factors; however the last two were motivated by economic factors only indirectly through preceding political changes in Kosova.

Emigration from Kosova was both legal and illegal, except for the first wave of emigration where emigration was on a contract basis, and it is predominantly long-term in nature. The reason for it being long-term is that the first-wave migrants in Kosova probably had long-term work contracts and only returned on visits. After 1989, due to the political situation in Kosova it was not certain whether migrants, who just came for visits, even if they had legal residence in the host countries, would manage to travel back to the host countries. This rendered circular migration risky and therefore it was almost non-existent among KS-Albanian migrants. During

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the 1990s, migrant workers also realised that the economic situation was deteriorating and that there were few economic prospects in case of return. The second-wave and third-wave migrants may have had another reason for their long-term emigration, apart from facing political issues when trying to re-emigrate. There were many illegal migrants among them who probably did not have any legal residence in the host countries. In case of illegal emigration, given Kosova's great geographic distance from the host countries successful emigration may have been less likely and probably very costly. Therefore, long-term emigration spells, rather than circular migration is common among Kosovan emigrants. Another feature of this emigration is that Kosovans, ignoring the young males eschewing the Yugoslav army services, mainly emigrated as a complete nuclear family. The high emigration pecuniary and non-pecuniary costs resulting from not being able to visit family due to the uncertainty of re-emigrating to the host countries, elaborated above may have influenced the migrant household structure.

Currently, both Kosova and its regional neighbours have large proportions of their populations living abroad. According to the World Bank's (2007c) estimates the migrant stock from Kosova was around 26 per cent of the population in 2005 (Table 1.1). Using the figure for the total population of 1.77 million gives a migrant stock of over 450,000 in 2005. As shown in Table 1.1, the distribution of migrant households is similar to the distribution of the population by urban/rural areas in Kosova. The majority of the migrant population is from rural areas, though the distribution of the migrant population is unequally distributed between regions when compared to the regional distribution of the total Kosovan population. The regions with the largest shares of the migrant population are Mitrovica and Prizren, although they do not have the largest shares of the total population. Unfortunately, the published data gives the distribution of the migrant population but not on the migration rate by region. The latter would be a better indicator of the migration incidence. Therefore, it is estimated using the figures in the Table 1.4. The regions with the highest migration rate include Gjakova, Mitrovica, followed by Peja and Prizren. One of the reasons for these may be that these regions were most affected by unemployment (see section 1.3.1), while the low migration rate in the other

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three regions may be explained by better economic prospects. Prishtina being the capital city has benefited most from employment opportunities provided by the international organisations concentrated in this region. Ferizaj and Gjilan have benefited from the business opportunities given their closeness to FYR of Macedonia.

**Table 1.1 Selected population and migration statistics for Kosova in 2007**

	Population (% of total)	Migrant population (% of total)	Migration rate
Urban	36.2	28.7	20.5
Rural	63.8	71.3	28.9
<b>Region</b>			
Gjakova	11.5	17.1	<b>38.5</b>
Mitrovica	15.1	20.6	<b>35.3</b>
Peja	11.2	13.2	<b>30.5</b>
Prizren	15.7	18.1	<b>29.9</b>
Gjilan	12	10.2	22.0
Ferizaj	11.2	7.6	17.6
Prishtina	23.3	13.2	14.7
Total	1,767,000	457,653	25.9

Source: World Bank (2007c)

In what follows, the emigration plans and reasons are summarised according to the quarterly Early Warning Reports prepared by UNDP and IOM (2009). As supportive evidence, results from the UNDP (2010) report on reasons for emigration among current migrants are also summarised. Given the focus of this thesis on the migration behaviour of KS-Albanians only, this section only considers the migration plans of KS-Albanians, although the Early Warning Reports report the figures also for minorities residing in Kosova. Prior to summarising the results, it is important to explain that the question used to ask about migration propensity changed over time. In 2005 and 2006, the respondents were asked whether they intend to emigrate. In the first quarter of 2007, respondents were asked about their willingness to emigrate, while in the following two quarters of 2007 they are asked about plans to emigrate. Additionally, unlike in the other periods, in 2007 respondents were asked about whether they had made specific plans to emigrate and the results are shown by age group. All these issues, especially the question on

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intentions make comparison of the responses throughout this period difficult, possibly even inappropriate. Therefore, a comparison has to be made with caution. Additionally, migration intentions are related to, but may overestimate, actual migration. This issue is discussed in detail in the chapter 2. For brevity, the term “migration propensity” is used to refer to each of the three different questions on migration in the discussion below.

As shown in Table 1.2, the migration propensity was around 30-40 per cent throughout the period under examination, except for the third quarter of 2007. For comparison with the UNDP (2007) opinion polls a study by IOM (2009) reports that around 27 percent of those aged 16 to 65 years declared that they have considered emigration and were emigrating within six months or in the more distant future. This may indicate that the propensity to emigrate increased after the Declaration of Independence. However, the differences may also be due to differences in methodology. In the opinion polls the respondent is the head of the household who only provides an answer about his own plans of migration. In the IOM (2009) study, however, the respondents are all those of the age group 16-65 implying that more than one person from the same household responded to this question. Yet another reason may be that the emigration propensity among KS-Serbs increased due to their dissatisfaction with the final political status. Another explanation could be that the increase resulted from KS-Albanians’ disappointment with their households’ standard of living given their high expectation for improvement after the resolution of the political status. As explained in section 1.2, due to inconsistencies among studies, the results are not directly comparable.

**Table 1.2 Percentage of KS-Albanians planning to emigrate during 2005-2007**

	2005 Q3	2005 Q4	2006 Q3	2007 Q1	2007 Q2	2007 Q3
Migration propensity (%)	27.9	34.7	38.0	40.0	32.9	19.6
Specific migration plans (%)					17.0	40.2

Source: UNDP, 2007a, 2007b, 2007c

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In addition to differences in the selection of respondents, these studies phrase their question about migration intentions differently. The question in IOM (2009) is whether the migrant has ever seriously considered migrating abroad for more than three months and seven different options are offered.

As shown in the table below, the migration propensity is highest among the young, those aged 18-24. One reason for this may be that the young are most affected by unemployment (section 1.3.1). Other reasons may include that the young are less risk averse and that they may have higher net benefits due to their longer working-life span, all else equal. These issues are discussed in detail in chapter 2.

**Table 1.3 Percentage of population by age group planning to emigrate during 2007 (in per cent)**

Age group	2007 Q1	2007 Q2	2007 Q3
18-24	38.9	46.6	28.2
25-30	18.7	39.6	19.9
31-36	14.8	38.3	23.5
37-45	13.4	30.8	17.4
Older than 46	19.7	17.2	11.9

Source: UNDP, 2007a, 2007b, 2007c

Emigration is planned mainly for economic reasons. According to the UNDP opinion poll of the third quarter of 2007, 55 per cent considered the unfavourable economic situation of the family to be the main reason for planned emigration, while 30 per cent would do so due to better economic opportunities abroad.<sup>1</sup> Given the economic situation in Kosova and especially the high unemployment rate, it is no surprise that the majority of those planning to emigrate declare that they plan to do so to take up employment. A comparison with the IOM (2009) study is not possible as it does not provide the reasons for emigration for all categories planning emigration.

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<sup>1</sup> Similar results were reported in the opinion poll of the third quarter of 2006, 66.2 per cent would consider the unfavorable economic situation of the family to be the reason for emigration, while 21.8 per cent would consider emigration due to better economic opportunities abroad.

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The UNDP (2010) survey provides reasons for actual migration, rather than for planned migration. It asked the question to current migrants who were in Kosova at the time of the survey. However, it is not clear whether the responses stem only from migrants who were visiting Kosova or also return migrants. If only the first category of migrants is interviewed, the results may be biased as return migrants may have given different reasons on average. Almost half the migrants declared they emigrated mainly for economic reasons, a quarter for political reasons, with some 20 per cent emigrating during the 1999 war.

Current Kosovan migrants reside mainly in Western European countries, while small proportions reside in the US, 5 per cent, and Canada, 2 per cent. The majority reside in Germany, 38 per cent, and Switzerland, 22 per cent (UNDP, 2010). This mimics the pattern of the contract-based emigration of the 1960s. The UNDP (2010) survey indicates that Germany and Switzerland remain the two most preferred host countries by those planning to emigrate (UNDP, 2010). This is no surprise given the possible network effect on potential migrants working through current migrants.

In addition to the above, given the scope of this thesis a brief discussion of return migration in terms of duration of stay and its determinants is rendered important. However, return migration in the Kosovan context has been analysed only in one study, the World Bank (2011d).<sup>2</sup> Unfortunately, even this study does not provide data on the duration of stay and/or motivations to return. It provides an analysis regarding the educational attainment and labour market performance of returnees. According to this study, Kosova is benefiting from some 'brain gain' in that at all skill levels returnees have advanced their education while abroad and are currently involved in more skilled jobs than those that have never emigrated. Additionally, at all skill levels returnees perform better than non-migrants in the Kosovan labour market in terms of labour market participation, employment rate and wage rates. However, these results have to be taken with caution as this study

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<sup>2</sup> There is another study that provides data on return migrants, Riinvest (2007). However, this study is not considered in this discussion as part of the research reported in this thesis is based on the same data set.



does not provide a statistical analysis of differences and/or an empirical analysis of their corresponding determinants.

In sum, Kosovan migration is sizable with around one-third of the population living abroad. The reasons for migration were predominantly economic in nature in the beginning, but in later waves the reasons were only indirectly economic through the political changes in Kosova. Migration was both legal and illegal. Given political issues, the lack of economic prospects, and the geographic distance, return or circular migration was either very uncertain or too costly. Therefore, Kosovan migration is characterised by long migration spells and households frequently emigrating as nuclear families. Other characteristics include the disparities in the migration rate between rural and urban areas and among the regions. Current migration intentions also are sizable, with again one-third of the population intending to leave. Potential migrants are motivated mainly by economic factors. The two countries that offered the first labour demand programmes remain the most preferred host countries for migrants. This may be the result of the support provided by networks in these two countries.

### **1.3 Migration from Kosova: Push and Pull Factors**

The orthodox economic analysis of emigration explains emigrant's motives within the push-and-pull framework. Accordingly, migrants are motivated mainly by differences in economic prospects and standard of living. Other motives include differences in political situations, religious freedom, as well as superior medical care and education. Given the focus of this research on economic emigration, only factors that are economic in nature will be considered in the discussion below. These include differences in wages, paid employment opportunities, social protection and in technological advancement between the home and host countries. These factors, as explained below in detail, underpin the emigration decisions of KS-Albanian migrants. The majority of the KS-Albanian migrants live in Germany and Switzerland and the majority plan to immigrate into these two

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countries (see section 1.3). Given this the comparison in terms of economic determinants of migration will be confined to these two countries.

In the first wave, migration was ignited by the bilateral Labour Demand Programme of the 1960s. Being part of former Yugoslavia, Kosova was relatively open and internationally integrated, although always the poorest part of former-Yugoslavia (World Bank, 2003). Upon the break-up of former Yugoslavia in the 1990s the international community imposed sanctions on the remaining parts of Yugoslavia, Kosova being a part of it (Bartlett, 2009). In 1989, in the very early stages of political changes within Yugoslavia, Kosova's independence was abolished. For Kosova this was the time of the first phase of severe political problems, isolation and economic rundown, deindustrialisation due to disinvestment, increased unemployment and forced establishment of its informal education system. The majority of KS-Albanian workers were laid off, some 140,000 in total. As a result, output halved during 1991-1995 (World Bank, 2003).<sup>3</sup> KS-Albanians were expelled from formal education institutions. As a solution, they built a parallel education system. These caused "human damage" due to the lack of access to work experience and formal secondary and higher education (European Commission and World Bank, 1999). In this period, KS-Albanians in addition to being subject to persecution, compulsory participation in the Yugoslav army service, and thus in the Balkan wars of the 1990s, they had no economic prospects. In such a situation, the only exit strategy from economic hardship was considered to be emigration.

The Kosovan economy continued contracting up until the end of the 1998/9 War. Just before the war, the unemployment rate in Kosova was estimated at 68 per cent, while in the aftermath of the war it reached 74 per cent (Hoti, 2004). The 1998/9 war in Kosova had serious political, social and economic consequences (European Commission and World Bank, 1999). During the war the parallel system of political, education and health institutions collapsed. Industrial output was terminated and the telecommunication system and infrastructure network

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<sup>3</sup> The output decline in Kosova started before 1989. Due to lack of data, only changes in the economic growth rate are reported; it fell from 5.6 per cent during 1981-1985 to -1.8 per cent in the period 1986-1990 (World Bank, 2001).

## *Chapter 1: Introduction*

destroyed, while agricultural production plummeted as 50 per cent of the assets, including livestock herds were either killed or lost and the planting season missed. This period is characterised by forced migration. Half of the population fled to the neighbouring countries or further, around 30 per cent of the housing units, both urban and rural, were ruined and unusable. Additionally, equipment, personal property and cash savings were looted. The war was severe in terms of civilian losses: 12,000 people were killed during the war, out of which 3,368 are still missing. Although a large proportion of the forced KS-Albanian migrants returned and participated in the recovery and reconstruction process, given the economic consequences of the war restarting life from scratch was almost impossible for some. Therefore, many decided to remain in the host countries for a longer period. Economic hardship was the major motivation behind migration also in the aftermath of the war.

After the economic rundown and extensive war damages, Kosova started the transition process, adopting legal and institutional reforms geared at establishing an open market economy. With substantial donor support Kosova started a reconstruction and revitalisation process “aiming at setting the stage for private-sector led recovery and long-term economic growth” (Bradley and Knaus, 2004, p.6). During this Emergency Phase it achieved annual real GDP growth rates of 10-20 per cent during 1999-2002.<sup>4</sup> The major pillar on which the economic boom relied was remittances and donor support. This rapid economic growth was short-lived as it was not based on an increase in home-country productivity, but rather on external transfers. Additionally, the comparison was against a very low economic base. Therefore, the comparison below will focus only on the time period 2002 and onwards.

Kosova’s economy has grown constantly in the post war period with an average real GDP growth rate of 3.1 per cent during the period 2002-2010 (Table 1.4). The major contributors to this growth include investment, both public and

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<sup>4</sup> Data on GDP growth, inflation and other economic indicators for the period 1999-2001 are unreliable as they vary widely between sources.

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private, remittances, and donor support, although donor support has been decreasing ever since 2003 (Table 1.4). Aiming at improving public infrastructure and human capital, public investments more than doubled in 2008. Such investments were considered a prerequisite for private sector development and through that job creation. FDI peaked in 2007 with the large wave of privatisation in that year, where more than half of FDI inflows comprised purchases of privatised enterprises and the licensed mobile telephone operator. In 2008, although the privatisation process was blocked for more than half of the year, FDI decreased only slightly (CBK, 2008). All proceeds of sales, however, are kept frozen in the privatisation fund to settle claims of potential creditors or owners of the companies in the liquidation process. Therefore, the economy could not benefit from this fund in terms of increased sources of finance and in turn its impact on growth is rather limited. Growth in the private sector resulted mainly from the expansion of the retailing sector, which relies on imports, given Kosova's limited production capacities. Ever since the war Kosova has relied heavily on imports to meet its consumption and investment needs due to the destruction/shrinking of its economy during the 1990s and the war damages during 1999. Out of total imports only 10 per cent are capital goods, while more than half of imports consist of consumption goods. This implies that domestic deposits, remittances and donor support were spent on imports rather than home country production. The trade deficit increased during 2008, mainly as a result of the increased public investments, which, given the limited production capacities, again had to rely heavily on imports. Throughout the post-war period the trade deficit has been one of the major challenges facing Kosova's economy, reflecting its limited production capacities and hence limited capacity for employment generation. Throughout this period Kosova's economy was characterised by a low rate of inflation (see Table 1.4). However, the heavy reliance on imports and full euroisation made price stability extremely sensitive to inflationary pressures from international markets. In 2007, due to the increase in oil and food prices, the CPI increased. In 2008, the inflation rate reached its highest value, 9.4 per cent.

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In 1988, its per capita GDP was only 28 per cent of the Yugoslav average (World Bank, 2003). During the decade of oppression, due to the contraction of the economy per capita GDP fell to 400 US Dollars in 1995. During the last decade, per capita GDP has more than doubled (Table 1.4). Still, it remains a challenge for Kosova. It is the lowest in the region.

**Table 1.4 Main macroeconomic indicators in Kosova during 2002 – 2010**

Macroeconomic Indicators	2002	2003	2004	2005	2006	2007	2008	2009	2010
Population (in thousands)*	1,737	1,748	1,757	1,767	1,777	1,785	1,795	1,805	
GDP (in mil. €)	1,715	1,735	1,789	2,977	3,099	3,425	3,739	3,912	4,289
Real GDP growth (%)*	2.1	3.2	3.3	3.8	3.9	3.9	5.4	2.9	4.0
GDP per capita (in €)	1,182	1,164	1,161	1,482	1,519	1,611	1,847	1,848	1,996
GDP Deflator*	1.8	-1.7	-3.8	-0.8	-1.1	5.2	7	-3.4	
CPI (annual average; %)*	3.6	-1.1	-1.1	-1.4	0.6	4.4	9.4	-2.4	3.5
Current account/GDP (%)		-8.1	-8.3	-7.4	-6.7	-8.3	-15.2	-16.8	-17.3
Remittances/GDP (%)			20.0	14.0	15.1	15.1	14.3	12.9	11.9
Foreign assistance/GDP (%)				12.3	10.3	8.7	8.8		
Unemployment rate (%)*	55.0	49.7	39.7	41.4	44.9	46.3	47.5	45.4	
Poverty rate (%)*		37.7	43.7	34.8	45.0			34.0	

Sources: CBK, 2004, 2005, 2006, 2007, 2008, 2009, 2010; Data labelled by “\*” are from the World Databank 2011

In February 2008, Kosova declared independence. The resolving of the final status was anticipated to positively impact on the economic situation of Kosova as several aspects of its progress were conditioned by the resolution of its final status. The law on public debt, IMF and World Bank memberships, the Stand-by-Agreement with the IMF and the Stabilisation Association Agreement process with the European Commission were all dependent on the settlement of political status. Membership would imply, among others, access to additional sources for financing

investment projects. Given the financial limitations of the Kosova budget, this was considered of high importance for economic development. Additionally, independence was expected to positively affect FDI through its impact on improving investment security. Real GDP annual growth averaged about 5 per cent in the aftermath of the declaration of independence. That year's economic performance was better than the average growth of the neighbouring countries. This was in part, probably, due to Kosova's economy being only weakly affected by the global crisis given that contagion was curbed by Kosova's limited integration into financial and goods markets (IMF, 2011).

As explained above, the Kosovan economy started recovering only in the aftermath of the 1998/9 war. Throughout this period its economic growth has been robust and the GDP and per capita GDP have both doubled. Still, comparing it to the average of EU27 the average per capita GDP still remains very low. Both Germany and Switzerland lead the European list in terms of GDP per capita, with 29,200 Euro and 45,600 Euro respectively (World Databank, 2011a).<sup>5</sup> Comparing the standard of living, measured by per capita GDP in these two countries with that in Kosova shows that it is 25 times larger in Switzerland and 16 times larger in Germany. This large differential in living standards between Kosova and the two host countries serves as an important pull factor for KS-migrants who look for an escape from economic hardship.

### **1.3.1 Unemployment and other labour market characteristics**

As discussed in section 1.2, given the lack of recent census data the sampling frames used are considered unrepresentative and hence the sample data is rendered unreliable and inaccurate. Consequently, the data on labour market characteristics elaborated in this section have to be interpreted with caution.

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<sup>5</sup> Own calculations based on the average annual exchange rate US Dollars/Euro in 2009 provided by the European Central Bank.

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Following the discussion in the previous section, the lack of paid employment opportunities and low wages, which are the result of the depressed labour market, are important determinants of the emigration decision. This is especially true for Kosovo which, as will be elaborated below, is a country of sustained high unemployment rates and low wages. The explanation for the depressed labour market is related to factors considered in the previous section. The SME sector is usually considered to be the engine of employment. It provides jobs for 60 per cent of those employed.<sup>6</sup> However, Kosovan SMEs operate in a poor business environment, especially with respect to public infrastructure which raises costs and in turn harms their competitiveness. Public infrastructure cannot greatly improve in the near future given that the limited Kosovo budget is challenged by social protection needs due to the high poverty rates and unemployment rates. Consequently, the labour market situation is not expected to improve in the near future. The large labour supply surplus may be considered one of the major reasons for the low wages in Kosovo.

In 1989, immediately after the abolishment of the autonomous status of Kosovo, KS-Albanian workers were forcibly dismissed from their positions. According to World Bank (2003), during the pre-war period the unemployment rate was estimated at around 70 per cent. In the post-war period, despite robust economic growth, the Kosovan labour market has remained depressed with an unemployment rate of around 50 per cent (Table 1.5).

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<sup>6</sup> This figure does not include informal employment.

**Table 1.5 Labour market indicators in Kosova during 2001 – 2010**

Labour market Indicators	2002	2003	2004	2005	2006	2007	2008	2009
Population (in thousands) <sup>1</sup>	1,737	1,748	1,757	1,767	1,777	1,785	1,795	1,805
Aged: <15 (% of total)	30.6	32.1	31.9	30.6	30.3	29.6	28.7	28.2
15-64 (% of total)	62.8	61.6	62.0	62.5	62.6	63.7	64.2	64.0
65+ (% of total)	6.5	6.3	6.0	6.9	7.1	6.8	7.1	7.8
Working age population, 15-64, (in thousands)	1,090	1,076	1,089	1,104	1,112	1,114	1,115	1,155
<b>Labour force participation rate</b>								
Total	52.8	50.3	46.2	49.2	52.3	46.8	46.2	48.1
Male	72.0	71.7	68.1	69.0	70.8	65.7	66.2	67.5
Female	34.5	29.5	25.3	29.9	33.7	28.4	26.1	28.8
<b>Employment rate by gender</b>								
Total	23.8	25.3	27.9	28.9	29	26.5	24.3	26.4
Male	39.4	42.8	46.8	46.4	46.5	40.6	38	40.2
Female	8.8	8.3	9.9	11.9	11.9	12.7	10.6	12.6
<b>Employment rate by age</b>								
15-24	10.0	10.7	11.3	10.5	11.5	9.4	8.1	7.5
25-54	32.8	34.8	32.6	38.6	38.1	35.1	32.6	34.2
54-64	18.4	20.1	23.9	25.2	26.3	24.6	23.8	27.9
<b>Employment rate by education</b>								
Less than upper secondary	10.3	12.5	14.2	14.4	14.6	12.8	8.7	9.3
Upper secondary	34.9	37.1	39.1	38.1	36.7	32.7	33.8	34.9
Higher education	75.1	75.2	80.7	76.2	74.7	74.7	77.2	76.9
<b>Unemployment rate</b>								
Total	55.0	49.7	39.7	41.4	44.9	43.6	47.5	45.4
Male	45.2	40.3	31.5	32.9	34.6	38.5	42.7	40.7
Female	74.5	71.9	60.7	60.5	61.6	55.2	59.6	56.4
<b>Unemployment rate by age</b>								
15-24	77.7	74.9	66.5	70.5	75.5	70.0	73.0	73.0
25-54	47.1	41.5	32.6	34.5	36.7	38.4	42.5	41.9
54-64	34.1	22.0	18.7	18.3	19.3	22.9	26.9	25.9
<b>Unemployment rate by education</b>								
Less than upper secondary	70.1	60.8	47.9	50.2	52.1	55.4	65.0	64.0
Upper secondary	52.7	49.6	41.1	43.4	46.7	45.3	48.1	46.3
Higher education	16.1	15.3	11.3	12.6	13.5	14.9	15.0	14.9
Long term unemployment (per cent of unemployed 12+ months)	85.9	85.9	87.9	83.7	91.5	85.0	81.8	81.7

Source: Statistical Office of Kosovo, 2002, 2003, 2004, 2005, 2006, 2007, 2008b, 2009a



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The labour force participation rate was around 50 per cent, while only around one-fourth of the working age population was employed throughout this period. The situation in the labour market has not significantly changed in the period after the Declaration of Independence which was followed by increases in public spending. In 2008, all three labour market indicators, labour force participation, employment and unemployment rate remained at the same levels. The main drivers behind the low participation rate may include: 1) female participation is very low for reasons explained below, 2) an underestimation of the rate due to the large informal economy, and 3) remittances increase the reservation wage (USAID, 2008).

**Table 1.6 Annual inflow and outflow of the number of registered unemployed**

Labour market indicator	2005	2006	2007	2008	2009
Inflow	29,471	30,327	23,279	21,979	19,462
Outflow (Number of those who obtained employment, started training or failed to re-register)	11,537	22,691	14,710	20,632	16,509
Net inflow	17,934	7,636	8,569	1,347	2,953

Source: Ministry of Labour and Social Welfare, 2009

Kosova has the youngest population in Europe; more than half of the population is under the age of 25, while the share of those in the age group 15-25 has been around 20 per cent throughout the post-war period (Table 1.5). As shown in the table above, there has been a lot of fluctuation in all three indicators, but the net-inflow of the number of registered unemployed has been positive throughout the period under examination. A significant change is recorded in 2008 when the outflow increased significantly, while the inflow decreased slightly, significantly reducing the net inflow compared to the previous years. This may be the immediate effect of the increase in public capital investments.

The above data shows that Kosova is a country of continuing mass unemployment. According to World Bank (2007c) estimations, to achieve a reduction of the current unemployment rate by 50 per cent in the next ten years

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Kosova would need to grow at about 6 per cent annually. This assumes a 1.9 per cent annual increase in the labour force participation rate and a growth to productive employment elasticity of 1.6 per cent. According to SOK (2009b), private sector employment has expanded continuously in the aftermath of the war. The expansion was considerable in the processing, hotels and restaurant and construction industries. As expected, the number of construction enterprises doubled in 2008 compared to 2007, mainly due to the large construction projects financed by the Kosova government. Yet, the growth rate in the private sector is not high enough to match the growth rate of the labour force (USAID, 2008). Around 95 per cent of the enterprises consist of no more than 5 employees. This holds also for the new enterprises registered each year. A complementary source of job creation would be foreign direct investments (FDI). FDI increased throughout the period 2005-2007. After reaching a peak of 12 per cent of GDP in 2007, it decreased to 9.1 per cent of GDP in the next year.

To have a full picture of unemployment it is important to examine what categories of the labour market are most affected. As shown in Table 1.5, women, youths and those with lower levels of education are most likely to be unemployed. The former is notwithstanding the low labour force participation of women, around 30 per cent, half that of men. Unlike in the pre-war period, the unemployment rate of women has been almost twice that of men throughout the post-war period. Only around 11 per cent of the working-age women are employed. The comparable figure is three times higher for men. The low female participation rate and consequently the low employment rate may partly reflect the traditional nature of Kosovan households where women are exclusively involved in child rearing, dependent care and home production, rather than the labour market. Other reasons may include lower educational attainment among women. Employment opportunities seem to be worse for youths, those aged 15 to 24. This age group has had an unemployment rate of above 70 per cent throughout the post-war period. There are differences in the unemployment rate according to the level of education. The rate of employment shows that those with higher education have a considerably higher probability of being employed.

**Table 1.7 Unemployment rate by rural/urban (in percent)**

Labour market Indicators	2003*	2008**
Urban	43.6	41
Rural	54.5	53

Source: \* Riinvest (2003); \*\* World Bank (2010)

Unfortunately, the annual reports on labour market characteristics published by the Statistical Office of Kosovo do not provide the labour market indicators by rural and urban areas or by region. To shed light on rural/urban similarities or differences, other sources were referred to. According to Riinvest (2003), there were disparities in the unemployment rate between urban and rural areas. Similar findings are provided by the World Bank (2010) report. According to this report, in 2008 the unemployment rate in rural areas was 10 per cent higher than in urban areas.

**Table 1.8 Unemployment rate by region (in percent)**

Regions	2003
Mitrovica	56.4
Gjilan	55.0
Prizren	53.9
Ferizaj	51.7
Peja	43.5
Prishtina	42.5
Gjakova	33.3

Source: Riinvest (2003)

According to Riinvest (2003), there were significant regional differences in the unemployment rate. The regions with the most depressive labour markets include Mitrovica, Gjilan, Prizren and Ferizaj. The reason for this is claimed to be that in these regions heavy industries were concentrated, which were not reactivated in the post-war period. There is no other study that reports regional unemployment rates to provide a basis for comparison. However, given that all three major labour market indicators have remained stable over time, no significant change is expected in the regional unemployment rates.

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Another important labour market indicator is the duration of unemployment. The majority of the unemployed have been looking for a job for more than 12 months suggesting that unemployment is mainly a structural phenomenon (World Bank, 2010). Yet another characteristic of the Kosova labour market is the low average wage. . The monthly average wage in Kosova was around 200 Euros in 2002 (Riinvest, 2003), and increased to 236 Euros in 2007 (CBK, 2008). In 2008, the Kosova government raised wages for the public administration by 10 per cent and for the education system by 35 per cent. However, private sector wages remained the same, so the overall impact on the annual average wage in the labour market was an increase by only 2.5 per cent, to 248 Euros. As discussed above, this nominal increase was more than offset by the large increase in CPI.

Given the depressed labour market in Kosova both in the pre-war and post-war period, the differential in employment opportunities may have a stronger pull factor effect on KS-Albanians than the wage differential. However, all models of economic emigration present the wage differential as one of the basic motives of emigration. Hence, the discussion of pull factors will start with the wage differences. Comparison in terms of wages is very difficult, as detailed data for sector or skill-levels is not available for Kosova. Thus only average monthly wage differentials will be considered. In 2009, the average annual net wage in Germany was estimated at around 65,661 Euro and 107,651 Euro in Switzerland (OECD, 2011). These are substantially higher than the average wage in Kosova estimated at 3,264 Euro in the same year.

The other two labour-market related pull factors that are relevant here are: the labour demand programmes of the 1960s and the differential in employment opportunities. Although these labour demand programme was the only in which KS-Albanians were eligible to participate, it was an important pull factor for Kosovan migration in the first migration wave. In the 1960s Yugoslavia signed contracts on guest worker programmes with Germany and Switzerland. As a result, Kosovans immigrated into these countries on a work-permit basis and had work contracts prior to emigration. In later periods other labour-market related pull factors were at

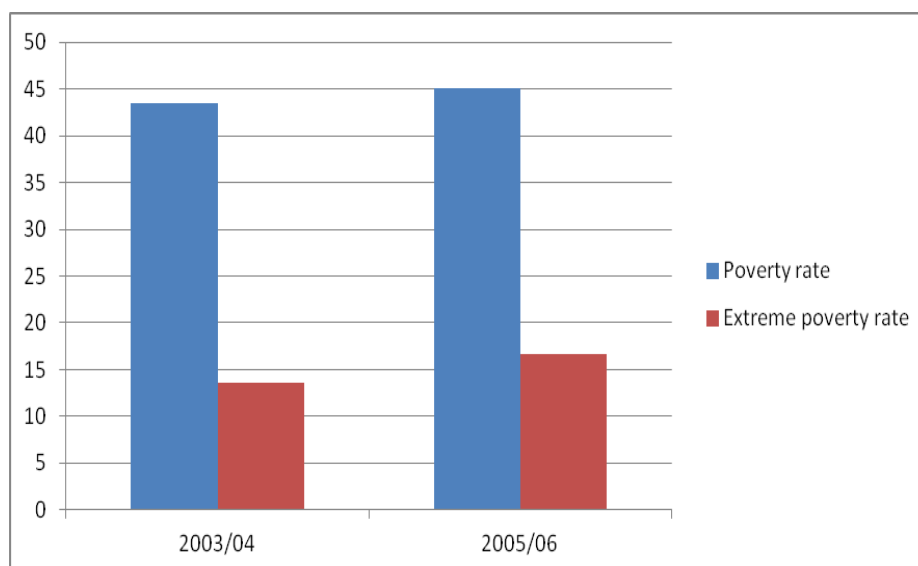
place, namely the differentials in employment opportunities. Employment opportunities in the German and Swiss labour markets have been and remain much better than in the Kosovan. In 2009, the unemployment rate was around 7.7 per cent in Germany and 4.1 per cent in Switzerland (World Databank, 2011b). Compared to the unemployment rate in Kosova estimated at 45 per cent, this differential signals much better employment prospects for the migrants and is likely to serve as an important pull factor.

### **1.3.2 Poverty and income inequality**

GDP growth is essential in improving living standards, alleviating poverty, and advancement toward the goal of EU integration. Nonetheless, GDP growth does not seem to have had significant impact on poverty. Despite solid and improving macroeconomic performance, improvements in living standards were slow and uneven, implying that economic growth has not been pro-poor (World Bank, 2010). The absolute poverty rates, defined as the share of population falling below the poverty line, which in 2002 prices was 43 Euros per adult per month, and extreme poverty rates, defined as the share of population below the poverty line, which in 2002 prices was 43 Euros per adult per month, have remained high throughout the post-war period (World Bank, 2007c). The issues related to the data used in this thesis raised in section 1.2 relate also to data on poverty. The figures for the annual absolute and extreme poverty rates in Kosova, presented in Table 1.4, are not directly comparable on a yearly basis. According to the World Bank (2007b), although both reports are based on the household budget surveys, non-comparability is due to differences in definitions, disaggregation and recall periods. For example, the two surveys use different questions related to remembering the period during which respondents consumed the reported purchased item and consumption of own-produced items. Additionally, there are differences in representativeness, due to the lack of an accurate or current census of population and the survey design. Given this, in the World Bank (2007d) study, a sensitivity analysis employing six different methods was conducted and results indicate that

there is no significant reduction or increase, that is, the absolute and the extreme poverty rates have remained stagnant during the period from 2003/04 to 2005/06 at around 40 per cent. In 2009, the absolute poverty rate fell to 34 per cent. Again, results should only be compared with caution and considered as indicative at best, given changes in the sampling frame undertaken for the purposes of the 2009 survey (World Bank, 2010). Nonetheless, in the study it is argued that at least part of the reduction is genuine, given the modest increase in GDP per capita and that the level of inequality has remained the same.

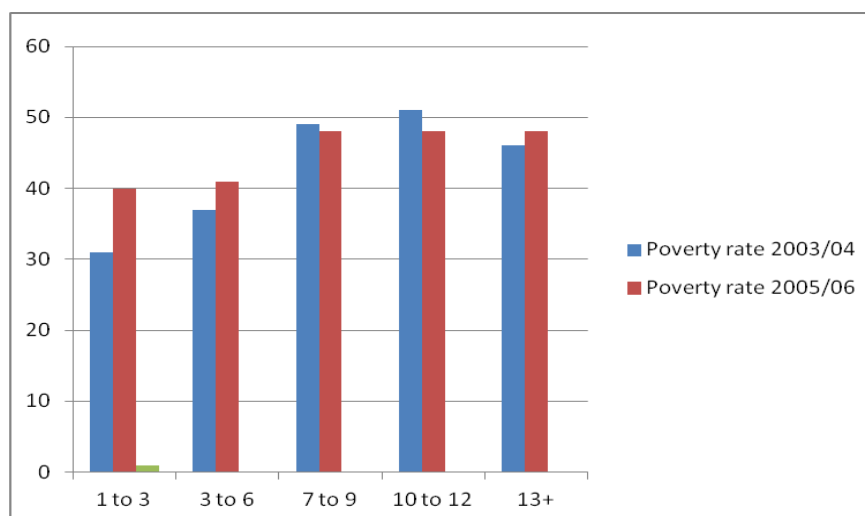
**Figure 1.1 Rate of Poverty and Extreme Poverty in 2003/04 and 2005/06 in percent**



Source: World Bank (2007c)

According to the World Bank (2007c), there are differences in the poverty incidence by demographic characteristics of the households. Larger households are on average poorer; households consisting of more than seven to nine members have a poverty rate of eight percentage points higher than households consisting of one to three members. However, the poverty rate among larger households has remained the same, while that for smaller households has increased over the period. Additionally, households with a higher share of dependents are also poorer, especially if the dependents are old. Households whose share of the elderly exceeds 50 per cent have a higher poverty rate.

**Figure 1.2 Rate of Poverty by household size in 2003/04 and 2005/06**



Source: World Bank (2007c)

According to the same source, poverty is negatively correlated with educational attainment. The poverty incidence is highest, at 48 per cent, among households, whose heads have not completed primary education, and lowest, at nearly half this level among those whose heads have completed higher education. Higher levels of education imply a higher probability of employment and of higher wages, and in turn, a lower probability of being poor.

There were very slight differences in poverty rates in 2003/04 in terms of type of area, that is, rural versus urban, 44 per cent and 42 per cent respectively (World Bank, 2007c). However, in 2005/06 the situation changed. While in urban areas poverty declined by about five percentage points, in rural areas, it rose by the same magnitude. Additionally, income inequality was higher in urban areas. However, it remained the same in urban areas, but increased in rural areas over this period. Given that slightly more than half the population in Kosova is rural, there is no surprise that there was no reduction in the poverty rate, but rather a slight increase during this period.

There are regional differences in the poverty rate. In 2003/04, four regions had a poverty rate higher than the national rate of poverty. Mitrovica was the region with the highest poverty rate both in 2003/04 and 2005/06. The second

highest was recorded in Ferizaj followed by Gjakova and Prizren. The poverty rates by region mimic the unemployment rates by region. In 2005, the poverty rate increased in Mitrovica, Ferizaj, Prishtina and Peja. According to World Bank (2007d), the high poverty rate in Mitrovica is explained by it having a larger rural population, over 70 per cent, while the increase in Prishtina may be explained by the internal immigration of the poor population to this region.

To understand whether poverty rates are lower among the better educated due to them having a higher probability of being employed or having higher wages, the report analyses the impact of education on consumption by netting out the impact of other characteristics. The results suggest that, on average, households, whose heads are less educated, are larger in size, have a higher share of dependents, have a higher share of the elderly, have a higher share of the unemployed, are more likely to be located in rural areas and live in Mitrovica or Ferizaj and have a higher poverty rate.

### **1.3.3 Social Assistance**

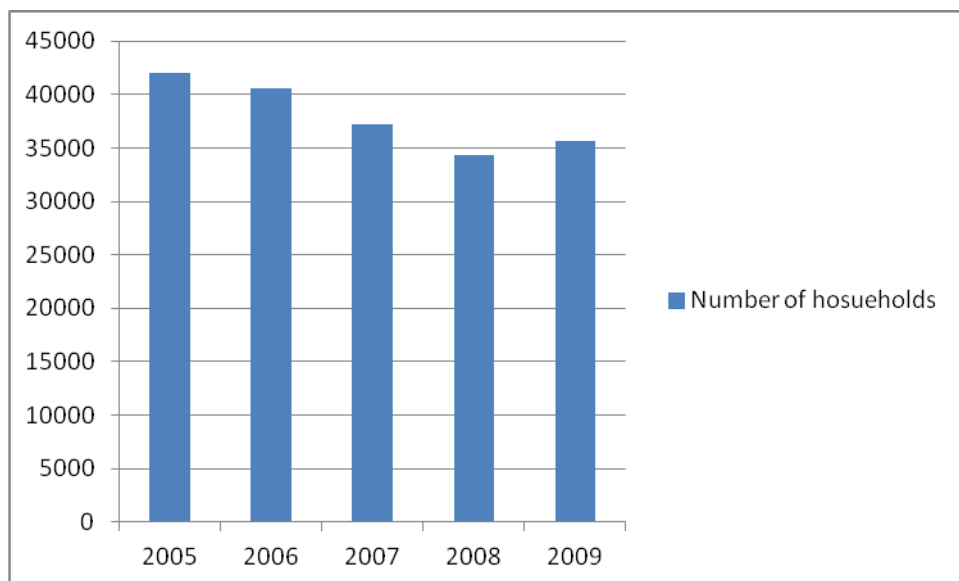
To support the poor and other vulnerable groups of society, the Kosova government approved a law on social assistance. The scheme started in 2002. The figures show that the number of households receiving social assistance has decreased over time (SOK, 2009c). The same trend has been followed by the number of people receiving social assistance.

These benefits reach mostly the poor with around 90 per cent of all recipients being either poor or vulnerable (World Bank, 2007c). Despite this, the impact of the social system on poverty reduction is considered to be weak (World Bank, 2007c). The social assistance system is characterised by three major weaknesses (World Bank, 2007c). First, coverage is low considering that around 75 per cent of the poor are not reached by the programme. Second, the monetary value of benefits has remained the same, that is, has not been adjusted for inflation. Given low inflation that prevailed until 2007, as discussed in section 1.3.3, the purchasing power of the social assistance was not substantially lowered until



recently. Third, the values of the benefits are very low, which in combination with the low coverage have had a very low impact on improving the welfare of the poor. Section 1.4.1 suggests that migration and remittances have been more effective in terms of reducing poverty.

**Figure 1.3 The number of households receiving social assistance during 2005 – 2009**



Source: Statistical Office of Kosovo (2009c)

In the host countries, the standard of living of the unemployed and of those not earning enough to have a decent standard of living, as determined by law, is supported by the social welfare system. Current migrants in addition to informing potential migrants about employment opportunities, provide them with information also on the welfare system in the host countries. Both Germany and Switzerland have well-developed public assistance systems which support jobless, working-age populations as well as other categories. In addition to migrants with a residence permit, those that do not have a residence permit are eligible for social assistance. According to Adema et al.'s (2003) study in 2002 the monthly amount of unemployment insurance in Germany was 60-70 per cent of the last net wage, while unemployment assistance was 50-60 per cent. In Switzerland the unemployment insurance is 70-80 per cent of the previously covered salary. In Germany, social

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assistance, which does not depend on previous work experience, was around 700 Euro for a single person, and between 1,650 and 1,800 Euro for couples with two children in 2002. Those eligible for social assistance are entitled to housing support which makes up 25 per cent of the total social assistance. According to Bonoli and Gay-des-Combes (2002), social assistance in Switzerland is a cantonal programme and therefore social benefits vary by canton. However, the programme is coordinated through CSIAS (Conférence intercantonale des Institutions d'aide sociale) which makes recommendations, which are not legally binding, on social assistance benefits levels. The recommended levels are similar to those in Germany; for a single person the recommended level is 640 Euro, while for a family of four it is 1370 Euro in 1999. Additionally, housing is paid for. In both countries, recipients are also provided with health insurance. In Kosova, however, the public assistance system provides only social assistance. According to the law on social assistance, in 2002 a single person was entitled to 35 Euro, while the highest amount is 75 Euro monthly for families consisting of seven members. No distinction is made between household demographic characteristics, and no children benefits or housing support is provided. This huge differential between the minimum and maximum monthly amount of social assistance between the two host countries and Kosova, serves as another important pull factor on potential migrants in Kosova.

The latest stream of migration research considers networks as an important pull factor. As explained above, they can inform potential migrants on the economic opportunities available in the host countries. Additionally, they support migrants both with monetary as well as non-monetary means to emigrate. Given the large proportion of KS-Albanians having emigrated to Germany and Switzerland based on the guest worker programmes they are likely to have served as an important engine to attract further migrants to the same countries.

In summary, although Kosova recorded robust economic growth in the 2000s, unlike in the host countries macroeconomic imbalances and a low standard of living persist. Economic growth relied on strong domestic demand which was financed by large inflows of remittances, donor funds, foreign direct investment

(FDI), deposit-financed credit growth and increased public investments. In 2008, the major political change was followed by improvements in some macroeconomic indicators, while others remained the same. Kosovo still faces infrastructure bottlenecks, particularly in the transport and energy sectors, that constrain productivity and competitiveness in its private sector. Domestic demand is mainly met by imports indicating that Kosovo has limited production capacities and resulting in current account deficits. Economic growth has as yet had little impact on improving the standard of living of the majority of the population. Unlike in the host countries, Kosovo's society is still challenged by a high unemployment rate. The Kosovan labour market does not have the capacity to offer sufficient employment and earnings opportunities to its growing labour force in the near future, especially to its youth. The low average wages are reflected in low domestic purchasing power and low access to bank loans necessary to smooth consumption. Also, there seem to be discrepancies in employment opportunities between urban and rural areas and among the seven regions. Other challenges include the high rates of poverty and a low coverage and low level of social assistance per recipient households. All of these factors are likely to motivate emigration.

## **1.4 History and Patterns of Remittances**

Initially the impact of emigration is reflected in a reduction in labour supply in the country of origin (Freeman, 2006). Then it impacts on the economy of the origin countries via emigrants' remittances and via the impact of the return migrants' financial and human capital accumulated in host countries, as well as their professional and personal contacts (Horvat 2004, Rapoport and Docquier, 2005). This former impact in the home country may be reflected in a smoothing of household consumption (Adams, 2007; Rapoport and Docquier, 2005; World Bank, 2006b and 2006c), increased aggregate demand (World Bank, 2006b and 2006c), employment generation (Sengenberger, 2006;), poverty alleviation (Adams, 2007; World Bank, 2006b and 2006c), reduced burden on the welfare system (Leon-Ledesma and Piracha, 2001), increased transfer of technology and knowledge

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causing increased productivity (Dustmann and Kirchkamp, 2002; Horvat, 2004), reduction of capital constraints (Dustmann and Kirchkamp, 2002), increased investment in education, entrepreneurship and health (Rapoport and Docquier, 2005; Lueth and Ruiz-Arranz, 2006; Sengenberger, 2006; Adams, 2007; Ranis, 2007; World Bank, 2006b and 2006c), the fostering of trade (United Nations, 2011). However, it can also negatively affect labour supply by increasing the reservation wages of domestic workers (Jadotte, 2009).

In Kosova, remittances in nominal terms have increased over time, except for the year 2009 when they recorded a decrease of approximately 5.5 percent. The decrease was probably associated with the global financial crisis, which affected employment rates in host countries. This may have left a higher proportion of migrants unemployed and hence less able to send money back home (CBK, 2009). The UNDP (2010) survey results suggest that half the respondents expect that their remittance inflow will stay at the same level, while the share of those expecting an increase in the next year is 27 per cent, which is larger than the share of those that expect a decrease. Expectations about the increase are supported by the figure for 2010 when remittances increased again but only slightly (Table 1.9).

**Table 1.9 Remittances and remittances as a share of GDP for Kosova during 2005 – 2010**

	2005	2006	2007	2008	2009	2010
Remittances (in mil. €)	418	467	516	535	506	510
Remittances/GDP (%)	13.9	14.9	15.2	13.9	12.9	11.9

Source: CBK, 2006, 2007, 2008, 2009 and 2010a

The UNDP (2010) estimates the total annual remittance inflow in 2009 at 422.7 million Euros which is about 20 per cent smaller than the official estimate of CBK (2010a). Out of this total, around 45 per cent was found to have been received in cash, 11 per cent was in-kind, and migrant expenditure during visits in Kosova made up 43 per cent. This difference may be due to difficulties in calculating remittances because, as explained below, they are not always sent through official channels and/or because they are not always in the same currency. Results from the

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same study indicate that migrants used mainly informal channels to transfer remittances. Out of the total, 58 per cent of the migrants transferred remittances personally or through friends, while a quarter was transferred through post offices and 16 per cent through banks.

Remittances make up a large share of GDP. In 2006, in the Western Balkans, Kosova was ranked the third highest and in the world the 11<sup>th</sup> highest remittance-recipient measured as share of remittances in GDP (World Bank, 2006c). Remittances as a share of GDP increased up to 2007, and then started to decrease in the next two years. Remittances have always been larger than FDI and exports. In 2005, remittances were four times the value of FDI. The ratio decreased to a factor of 1.2 in 2007, but increased again to two times the value of FDI in 2009. The ratio of remittances to exports was four in 2006, while in later years it remained unchanged at 3.

According to the World Bank (2007c), 20 per cent of the Kosovan population received remittances in 2005/06. A similar figure is indicated for 2009 by the UNDP (2010) survey. The distribution of remittance-recipients between rural and urban areas mimics that of the population where two thirds of the remittance-recipients live in rural areas (Tables 1.1 and 1.10). This is supported by data from the UNDP (2010). Based on the remittance-recipient rate, which is calculated using the data in Tables 1.1 and 1.10, the population in rural areas is more likely to receive remittances. Moreover, the average monthly amount of remittances received by households is higher in rural areas (World Bank, 2007c). The former receive on average 233 Euros per month, while the average monthly amount for urban households is 181 Euros. Rural households receive higher amounts of remittances at every income quintile, except the poorest. As shown in the Tables 1.1 and 1.10, regional distribution of the rate of remittance-recipients is similar to the regional distribution of the migration rate. Accordingly, the regions with the highest incidence of recipients include Gjakova, Mitrovica, Peja and Prizren.

**Table 1.10 Selected remittance statistics for Kosova in 2007**

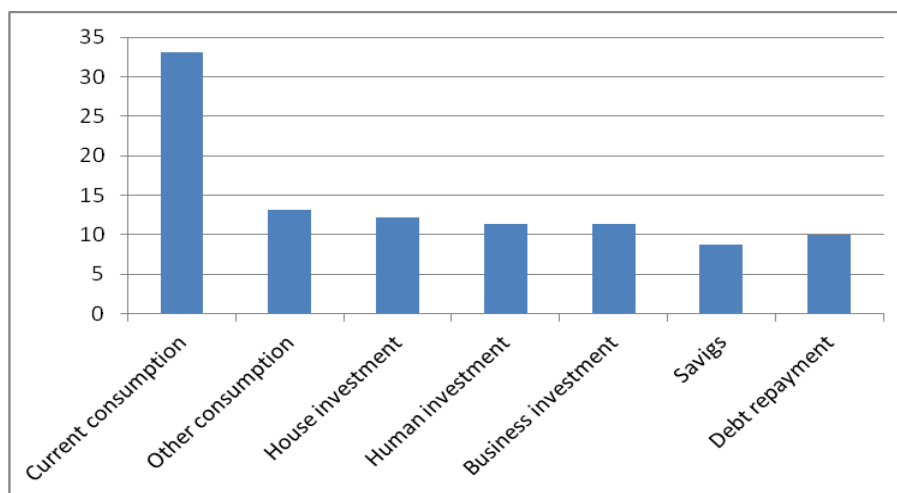
	Percentage of remittance-recipient population	Remittance-recipient rate
Urban	27.6	17.3
Rural	72.4	25.7
Region		
Mitrovica	20.4	28.9
Prizren	20.1	27.4
Gjakova	15.5	28.8
Gjilan	12.4	22.1
Prishtina	12.2	11.2
Peja	11.3	21.6
Ferizaj	8.1	15.5
<b>Total</b>	<b>378,138</b>	<b>21.4</b>

Source: World Bank, 2007c

Annually, the average annual amount of remittances received by households was estimated at 2,603 Euros in 2005, this implies an additional monthly income of 217 Euros for recipient households (World Bank, 2007c). The UNDP (2010) reports a similar figure for the average monthly household remittances among remittance-recipients, 194 Euros. So, remittances in levels are similar to the average monthly salary in Kosova which was around 236 Euros in 2008 and 272 Euros in 2009 (section 1.3.1).

As supplementary income, remittances are used to meet household consumption needs and for investment and/or savings. The UNDP (2010) survey indicates that remittances were used for funding current and other consumption, 46 per cent, with 10% utilised for debt repayment (Figure 1.4). The other share was directed to productive use, distributed almost equally among housing, human capital investments, business investments, and savings.

**Figure 1.4 Expenditure pattern of remittances in per cent of total remittances in 2009**



Source: UNDP, 2010

The effects of remittances on the economy are difficult to disentangle, a descriptive analysis of the impact of remittances at the household level and macroeconomic level is provided. First, the focus will be on the economic impact at the household level focussing mainly on poverty and income inequality, and then on the macroeconomic effects and their possible dynamic spill-over effects in the economy. In-kind remittances, for example, clothes, cars and medicine, although they too positively affect well-being, will not be part of the focus of this analysis due to lack of data.

### **1.4.1 The Microeconomic Effects of Remittances**

The UNDP (2010) suggests that remittances make up 40 per cent of household income among those households receiving remittances. As such, remittances have distributive effects as well and help reduce absolute poverty in the short run. As a share of GDP remittances are more than three times higher compared to the share of social transfers to GDP. Additionally, the social protection system has lower coverage than remittances, 13 per cent and 20 per cent respectively (World Bank, 2007c). As such remittances complement the social safety

net and reduce the burden on the welfare system. To compare the impact of remittances and social transfers on poverty reduction the World Bank (2007c) has worked on simulations. These suggest that in the absence of social transfers the national poverty rate would be higher by six percentage points, assuming no overlap between social assistance and pension benefits, and assuming that the social assistance programme did not have any impact on the labour supply of recipients. According to the same source, the poverty rate among remittance-receiving households is seven percentage points lower than the national poverty rate. Given this and that the remittance coverage is higher remittances may be more effective in poverty reduction at the national level than social protection. The social protection system is exclusively aimed at the poor, while remittances may be received by a wider stratum of society. Therefore, unlike the social protection system, remittances may reduce or sharpen income inequality. The only study that provides an analysis on the impact of remittances on income inequality is the World Bank (2007c). Therefore, this discussion will refer to this study. According to the World Bank (2007c), remittances have contributed to income inequality as the value of remittances received by the poor and extremely poor households was almost half the population average. The divergence is more pronounced in rural areas where the amount of remittances received was higher among the richest households. Results from the propensity score matching<sup>7</sup> show that consumption gains among migrant-households, compared to non-migrant households with the same characteristics, are equivalent to 25 per cent of the extreme poverty line (World Bank, 2007c). In summary, remittances appear to have reduced poverty, but simultaneously sharpened income inequality.

The UNDP (2010) study provides descriptives on the impact of remittances on non-income dimensions of poverty by type of area and gender of the head of the household. To assess the effect of remittances on access to health care, the study

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<sup>7</sup> A simple comparison of income levels between households that receive remittances and those that do not may provide biased results, as the difference may be also due to other characteristics influencing the fact whether the household receives or not remittances. To avoid this bias, the Propensity Score Matching is a methodology attempts to reduce the confounding effects of these factors providing unbiased effects.



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analyses the difficulty in meeting the cost of medicines. In rural areas, among female-headed households, the share of those finding it very or fairly difficult to meet the cost of medicines is larger among non-recipients compared to remittance-recipients. The opposite holds for male-headed rural households; similarly, in urban areas the share is slightly larger among female-headed non-recipient households compared to recipients, while the opposite holds for male-headed households. The impact on education is assessed by analysing the difficulty in covering the transportation costs to schools, cost of books and tuition fees, again by type of area and gender of the head of the household. The share of those finding it very or fairly difficult to cover travel costs is slightly higher among non-recipients in rural male-headed households. Among female-headed households the shares are similar. In urban areas, the share is slightly larger among non-recipients both in female-headed and male-headed households. Thus the share of those finding it fairly easy or easier to cover these categories of costs is slightly larger among remittance-recipients. It is no surprise that the shares are only slightly larger among recipients considering the expenditure pattern among recipient and non-recipients. Both household categories spend equal shares on education, 10 per cent, and recipients spend only 1 percentage point more on health compared to non-recipients. However, the study does not test the statistical significance of these differences. Therefore, these conclusions have to be taken with caution.

Another possible microeconomic effect is the remittance-induced disincentive to work. Remittances could lead to moral hazard where recipients increase their reservation wage and hence reduce their labour supply. Results from the UNDP (2010) indicate that the unemployment rate is higher among remittance recipients compared to non-recipients, 57 per cent and 50 per cent respectively. However, given the likely circular causation the report does not provide a clear picture with regard to the remittance-induced disincentive to work. At declared reservation wage levels less than 300 Euros and above 400 Euros, unemployed heads of remittance-receiving households are more likely to work compared to unemployed heads of non-recipient households. The opposite holds at wage levels between 300-400 Euros. So, the data do not offer clear support for the hypothesis

on remittances reducing the incentive to work. Again, no test of the statistical significance of these differences is presented.

### **1.4.2 The Macroeconomic and Multiplier Effects of Remittances**

Remittances, as a foreign financial inflow, are an important source of national income and aggregate demand. As explained in Section 1.4, remittances make up a large share of GDP, ranging from 13 to 15 per cent with annual variations (Table 1.9). The long-run expansionary impact of remittances is likely to be greater if they are spent on investment, when analysed within the traditional macroeconomic framework (World Bank, 2006c). The UNDP (2010) report shows that the expenditure pattern of remittance-recipients is similar to that of non-recipients. This expenditure pattern implies that the propensity to consume from remittances is similar to that of household income. The likely high propensity to consume together with the high propensity to import means that the growth effect on the Kosovan economy of remittances is likely to be relatively small. However, the opposite can be argued based on the expenditure pattern of remittances only. This shows that remittances are equally distributed between consumption and productive use (Figure 1.5). Still, even when used for consumption, through their multiplier effects, remittances may generate positive economic growth (Leon-Ledesma and Piracha, 2001). Through these they benefit the whole community and not just recipients. Spending on consumption, increases domestic demand and, in turn, generates income for the businesses. The latter, also spend their income to meet the remittance-induced additional demand, which in turn creates new jobs and income to other businesses, creating thus a chain of action. However, given its limited production capacities Kosova relies heavily on imports, the majority of which consists of consumption goods (section 1.3). Within this context, remittances, as an additional source of invisible exports, finance the large trade deficit through financing private consumption (Figure 1.5). An advantage of remittances compared to other foreign financial inflows is that they are not related to debt servicing,

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specific investment projects or other obligations (World Bank, 2006c). Another two sources of foreign monetary inflows are foreign aid and exports. Throughout the period of analysis, remittances have been between four and three times larger than exports. They have covered 25 to 36 per cent of imports annually. So, remittances are considered important contributor to the sustainability of the current account deficit in Kosova.

However, remittances have an impact on economic activity in general, implying that depending on the extent to which domestic supply meets the remittances-induced domestic demand, they could have positive employment effects or adverse inflation effects and increase imports. As an additional foreign inflow, remittances tend to increase the money supply at the macroeconomic level that, in turn, may result in rising prices. However, given the heavy reliance on imports, the additional remittance-induced money supply flows out of the economy not affecting price levels. This implies that the inflation in Kosova is mainly imported.

As explained in section 1.4, remittances are used for housing, education, entrepreneurship, savings and debt repayment. Through these uses they generate another range of multiplier effects. Through investment in education, remittances help improve employability and the national level of educational attainment. The latter should improve national productivity. Remittances provide start-up capital for businesses rationed out of the formal capital market<sup>8</sup> and hence directly impact on employment in the form of self-employment and/or employment of others. Through financing housing, remittances have effects on businesses involved in construction. The part of remittances that is saved is expected to increase bank deposits and hence may reduce credit constraints, while through debt-repayment they positively affect overall credit capacity. Remittances via increasing consumption also generates indirect tax receipts, increasing government revenues and in turn government consumption/ investment or savings. However, due to a lack of data these kinds of effects cannot be currently estimated.

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<sup>8</sup> The banking sector in Kosova does not issue loans to start-up businesses.

To sum up, remittances make up a significant part of GDP in Kosovo and are an important additional source of income for a large share of the population. Although a large share of remittances is used to cover consumption, a significant share is allocated to productive use. As shown above, there are disparities regarding the rate of remittance-recipient households between rural and urban areas and among regions. Remittances complement the social protection system and may be more effective in reducing poverty. However, remittances have sharpened income inequality, while their impact on other dimensions of poverty and reducing the incentive to work are not clear.

## **1.5 Concluding Remarks - Plans of the Thesis**

Kosovo has a long tradition of economic migration, which started in the early 1960s. For reasons given in section 1.2, migration spells are typically long and migrants mainly leave with their nuclear families. Migration incidence is higher in rural areas and there are significant regional disparities in the migration rate. Today, a large share of the Kosovan population intends to emigrate mainly for economic reasons. Kosovo is considered to be experiencing some 'brain gain' from its return migrants who have advanced their education and/or skills abroad. As noted previously, returnees are reported to perform better in the Kosovan labour market than the non-migrants. As discussed in section 1.3, these economic reasons include the differences in standards of living, paid employment opportunities and in the welfare system between Kosovo and the host countries. Remittances are sizable and an important part of household income in Kosovo. As such they are important both at the macroeconomic and the microeconomic level. Similar to the migration rate, the rate of remittance-recipients is higher in rural areas and there are sizeable regional discrepancies. As shown in section 1.4, remittances help to reduce poverty, but sharpen the income inequality. Although, as indicated above, there are several studies on Kosovan migration and remittances, none of them provides empirical analysis of the determinants of migration and/or of return migration.

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The aim of this thesis is to investigate the applicability of the household perspective to modelling migration behaviour, with special reference to Kosova. To address the key research objective several sub-objectives are identified and addressed in the following chapters. These sub-objectives can be translated into corresponding/separate research questions as follows:

1. Does the literature on migration economics provide a fully articulated conceptual approach to investigating the determinants of emigration and the optimal migration duration that is applicable to a country such as Kosova?
2. Does the nature and structure of KS-Albanian households support the developing of a theoretical framework using a household perspective to examine the determinants of the propensity to emigrate for economic reasons from Kosova? To what extent do the empirical results provide support for the theoretical expectations of the model?
3. Does the nature and structure of KS-Albanian households support the developing of a theoretical framework using a household perspective to examine the determinants of the probability of return conditional on migration duration? To what extent do the empirical results provide support for the theoretical expectations of the model?
4. To what extent are the results of the household model of the determinants to emigrate robust in the following contexts:
  - 4.1 stability over time, given the major political change of 2008, that is, the Declaration of Independence.
  - 4.2 transferability to the case of Albania. Is Albania an appropriate comparator country?
  - 4.3 to the redefinition of the household. Is the respecification stable over time? Is the respecification transferable to the case of Albania?
5. What policy implications can be derived from the answers to the above questions for Kosova?

## *Chapter 1: Introduction*

The evidence required to answer the above questions are developed in the following chapters which make up the main body of this thesis. The first research question is addressed in chapter 2 by critically reviewing the literature on the conceptual frameworks used to model the migration decision. The main focus in this chapter is on examining the extent to which a fully articulated and consistent conceptual rationale underpinning the household approach has been developed, in the context of the determinants of the emigration and return migration decision. Additionally, a brief critical review is provided on the literature on the stability over time and across countries of the migration decision. In sum, this chapter identifies the gaps in the literature that are addressed in the following chapters.

The second question concerns whether the nature and structure of KS-Albanian households support the development of a conceptual framework using the household perspective to investigate the determinants of the propensity to emigrate. In attempting to answer this question, in chapter 3 the literature on the applicability of the household utility maximisation framework to modelling decision-making in the field of economics is critically reviewed. In seeking to validate the applicability of the household perspective to modelling the migration decision, the literature on the socio-demographic and economic characteristics of KS-Albanian households is critically reviewed. Based on findings from this critical review an initial theoretical framework for analysing household migration behaviour is then outlined. The household as a social unit is modelled as deciding whether to send at least one or one additional member abroad for economic reasons. Accordingly, a theory-informed empirical model is next developed to test the applicability of the household perspective to economic emigration which addresses the second part of research question 2.

The concern of the third question is whether the nature and structure of KS-Albanian households support the developing of a theoretical framework based on the household approach to examine the determinants of the optimal migration duration. To provide evidence on this question a theoretical framework is developed in chapter 4. In pursuing to answer the second part of the question, the

## *Chapter 1: Introduction*

theoretical model is translated into an empirical proposition and estimated. Both the model developed and estimated in the previous chapter and this one is economic in nature. To control for any political influence on the decision of return migration, in the model in this analysis a variable is included to control for whether the household has emigrated during the 1989/9 War.

The fourth question deals with the extent to which the results of the household model of the determinants to emigrate are robust. This question consists of three parts. The first part of this research question is addressed in chapter 5 where the validity of the household model is further tested by examining the stability of the determinants of the migration decision between the period before and after the Declaration of Independence. In an attempt to answer this, two different approaches are deployed. The household model of the propensity of emigrating is replicated using a 2008 Kosovan data set and the results compared with those for 2007. Given the limitations of this simple comparison by variable, the Blinder-Oaxaca decomposition technique is deployed to test for stability over time of the model structure.

In chapter 6, in a second attempt to answer this question the same model of the propensity to emigrate deployed in chapters 3 and 5 is estimated using the Albanian LSMS 2008. To establish whether Albania is an appropriate comparator country for this analysis a comparison between Kosova and Albania in terms of structure and nature of the household, migration and remittances patterns and push and pull factors is initially undertaken. For reasons explained under the previous question, a simple comparison of results by variable is provided for the two countries and the differences/similarities in the estimated coefficient values are investigated. Following the approach in answering the fourth question, due to the limitations of the simple comparison by variable, the transferability of the model structure is examined using the Blinder-Oaxaca decomposition technique.

To provide evidence to the third part of this question the household is redefined as consisting only of household members living in the home country. This presents a complementary analysis to that conducted in chapters 3, 5 and 6. For this

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purpose, the respecified model is estimated and the results compared with those from the original specification. Two additional questions are addressed: whether the new specification is stable over time and whether the new specification is transferable to the case of Albania? Again, a simple comparison of results between the two years is provided and possible differences/similarities in model structure are investigated. The same approach is applied to investigating the transferability of the model to the case of Albania. Given the limitations of the simple comparison, both the stability over time and across countries is investigated through the Blinder-Oaxaca decomposition technique.

Based on the evidence from the preceding analyses, in chapter 7 the policy implications for Kosova and wherever applicable other migration-affected countries are developed.



## CHAPTER 2

### MODELLING EMIGRATION: A review of the literature

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#### 2.1 Introduction

This chapter aims at critically reviewing the literature on the conceptual frameworks, empirical propositions and the results from models of the decision to emigrate. Aiming at identifying inconsistencies/consistencies in the migration decision model, it critically examines the theoretical frameworks deployed by the two major strands of migration economics, the neoclassical theory and the new economics of labour migration (NELM), together with the two main extensions of these theories: the “eclectic approach” and the network theory. Studies introducing community characteristics in the migration decision are identified as a further extension. In addition to the general conceptual frameworks, the theoretical rationales and the corresponding definitions of the independent variables are critically reviewed for the two major strands and the extensions, focussing on similarities/differences between the studies. Following the same structure, the empirical findings generated by these different approaches to modelling emigration

are also critically reviewed, again concentrating on identifying similarities/differences.

To provide a sound basis for investigating the objectives of this thesis, in this chapter some other issues in migration economics are examined. Given that the model on the migration decision developed and estimated in chapter 3 is based on migration plans rather than actual migration behaviour, in this chapter a section is dedicated to the critical review of studies modelling either migration intentions or behaviour. The aim of this section is to identify possible similarities/differences in the determinants of migration intentions and/or behaviour. In this thesis, migration is examined within a dynamic framework as suggested in some recent literature. Therefore, another section of this chapter critically reviews the literature on return migration, focussing on the determinants of the optimal migration duration.

The rest of this chapter is structured as follows: section 2.2 critically reviews the different conceptual frameworks for analysing the migration decision, followed by a critical review of the corresponding empirical results in the same order. In the next section, other issues raised in the migration literature are examined, including the difference between ex-ante and ex-post migration and types of migration and concluding remarks are provided in the last section.

## **2.2 The Propensity to Emigrate**

The questions “why do individuals emigrate?” and “what is the typical migrants’ profile?” have been the centre of migration economics. Emigration typically flows from low-income to high-income countries (Freeman, 2006). According to the orthodox economic analysis of emigration, migrants are mostly motivated by differentials in earnings and the probability of employment between home and host countries (Sjaastad, 1962; Harris and Todaro, 1970; Stark and Bloom, 1985; Hatton and Williamson, 2002; Cassarino, 2004; Carrion-Flores, 2006; Dustmann and Weiss, 2007). The standard models of economic emigration conceptualise it typically as a one-off investment decision. Although the underlying theoretical framework is based on utility maximisation, two major migration theoretical approaches prevail given differences in the definition of the decision-

making unit: the neoclassical migration theory and the new economics of labour migration. In neoclassical models the decision to emigrate is based on an individual decision-making process and hence the emigration model is derived from the lifetime expected utility maximisation of the individual, where the role of the household is largely ignored (Sjaastad, 1962; Harris and Todaro, 1970; Borjas, 1987; Borjas and Bratsberg, 1996; Papapanagos and Sanfey, 2001; Libeing and Swoza-Poza 2004 and Chinquiar and Hanson, 2005; Constant and Massey, 2011). The new economics of labour migration shifts the focus from the individual utility to a household utility maximisation framework. This considers the household as the decision-making unit (Stark and Bloom, 1985; Stark and Taylor, 1989; Borjas and Bronars, 1991; Winters et al., 2001; Carletto et al., 2004; Phuong et al., 2008). Here, the household jointly makes the decision by sharing the resulting costs and benefits.<sup>1</sup>

Within the household strand of literature, several studies use an “eclectic” approach, rather than formally deriving a model based on a utility maximising household. The conceptual framework in this group of studies builds on the individual migration decision by controlling for the influence of household characteristics, albeit usually in an ad hoc manner. Similar to the neoclassical studies, the decision to emigrate is based on the individual decision-making process where the individual tries to maximise utility derived from the difference between the wage gap and migration costs. Accordingly, the decision is modelled as the probability to emigrate, representing either the migration intention (de Jong et al., 1985/6; de Jong, 2000; van Dalen et al., 2005a; van Dalen et al., 2005b; Gibson and McKenzie, 2011) or the actual migration behaviour of the individual (Lucas, 1985; Stark and Taylor, 1989; Curran and Rivero-Fuentes, 2003; Germenji and Swinnen, 2005; McKenzie and Rapoport, 2007). An advantage of the eclectic perspective compared to the individual approach is that it recognises, albeit in a limited way, the influence of the household on the individual’s migration decision.

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<sup>1</sup> Although jointly does not necessarily imply that the decision is made jointly. In patriarchal societies maybe the male of the household imposes the decision on the other household members.

A relatively new strand within migration economics is the network theory, which emphasises the importance of the impact of networks on the emigration decision (Boyd 1989; Winters et al., 2001; Curran and Rivero-Fuentes, 2003; Carletto et al., 2004; Lacuesta, 2006; Gibson and McKenzie, 2011). This view, though, builds either on the individual or household approach by adding a network effect. As will be explained below, the latter is best viewed as a complementary framework rather than alternative theory in migration economics. A stream of migration studies model emigration within an income differential framework using macroeconomic data. However, given the focus of this thesis on micro-level analysis exclusively, these studies have not been critically reviewed below. They have been referred to, though, whenever they were considered valuable for developing the theoretical rationale for the inclusion of specific explanatory variables.

To critically review the theoretical frameworks deployed in migration economics, first the studies taking the individual perspective are reviewed, starting with a relatively simple model and then considering additional variables that have been suggested in different studies.

### **2.2.1 The individual approach**

Migration studies following the neoclassical approach model the propensity to emigrate in different ways but share the common feature of the individual utility maximising framework. Thus, migration is modelled as typically a one-shot individual investment decision where the migrant maximises lifetime income weighing the expected discounted pecuniary and psychic benefits against economic and psychic costs (Sjaastad, 1962). So, emigration is considered to be permanent ignoring the possibility of any form of temporary migration (for consideration of this possibility see section 2.4.2). There are differences in the definition of the dependent variable. Within this approach, Papapanagos and Sanfey (2001) and Liebigh and Suosa-Poza (2004) model migration intentions, while most other studies deal with actual migration. Although whether using intentions or actual migration has important implications both theoretically and empirically, especially regarding endogeneity, none of the studies, not even those modelling migration intentions

provides a rationale for their definition of the dependent variable or a discussion of potential differences due to the definition of the dependent variable and the respective theoretical and empirical implications (for details see section 2.4.1).

According to the individual approach, the potential emigrant considers emigration as an alternative to staying in the home country conditional on the earnings differential between the home and host country, the direct migration costs, and the compensating differential in favour of the home country (Hatton and Williamson, 2002). The last term represents the ‘friends and relatives’ effect which will be explained later in this section. Given that benefits and costs are not incurred/observed at the same point in time, the migrant compares the discounted expected value of future benefits with the current costs of migration (Sjaastad, 1962). If expected future benefits outweigh the costs, and if this net discounted value is higher in the host country, the migrant is more likely to wish to emigrate (Sjaastad, 1962). Accordingly, the underlying framework of the standard model of individual migration behaviour is human capital theory (Sjaastad, 1962; Dustmann and Glitz, 2011; Gibson and McKenzie, 2011). Although all studies refer to the theoretical discussion in Sjaastad (1962), none of them provides a rigorous theoretical framework for their analyses. Hence, use is made of the theoretical approach provided in Gibson and McKenzie (2011) who employ an eclectic approach. The elaboration below of the theoretical rationales for the inclusion of variables representing the individual’s characteristics is based both on studies taking the individual and the eclectic view.

In what follows, the conceptual framework in Gibson and McKenzie (2011) is critically reviewed. Given that the focus of the migrant is on income maximisation, Gibson and McKenzie use a linear utility model associated with working in another location as developed in Grogger and Hanson (2008):

$$U_i = \alpha(w_i - c_i) + \varepsilon_i \quad (2.1)$$

where  $U_i$  denotes the utility of the individual from the wage  $w_i$  earned in the host country and the cost associated with emigrating,  $c_i$ , which is zero in the case of no emigration. From this utility function they derive an econometric model of the

log odds of emigrating, without any explanation of the deviations from the utility function. A critique of this is provided below. Assuming the term  $\varepsilon_i$  follows an extreme value distribution, they propose the following econometric specification:

$$\alpha(w_{id} - w_{ih}) + \alpha c_{id} \quad (2.2)$$

where  $w_{i,h}$  is the wage earned at home and  $w_{i,d}$  is the expected wage earned abroad by the individual considering emigration, and  $c_{i,d}$  the cost of emigrating to the destination country. As argued above, the main determinant of the decision to emigrate is the positive differential between the home and host country wages.

Although it captures two of the likely main determinants of the emigration decision, wage differentials and migration costs, this approach has several shortcomings. The cost of emigrating is modelled to capture the effect of the financial costs of emigrating, psychic costs and the emigration costs resulting from the risk and uncertainty associated with wages abroad. However, Gibson and McKenzie (2011) fail to recognise issues related to the definition of migration costs as suggested in Sjaastad (1962). The authors ignore that pecuniary costs include both the cost of travel and the likely higher expenditure on food and clothing in the host country and that it is the marginal pecuniary costs that have to be considered rather than absolute costs. In this regard, even Sjaastad (1962) fails to recognise that while transportation costs are one-off, additional food and clothing expenditure represent continuous costs. The second significant issue ignored in Gibson and McKenzie (2011) is a more detailed definition costs, including the foregone earnings resulting from travelling, job search and on-the-job-training. These are defined as psychic costs in Sjaastad (1962). But since these have rather financial values they are not truly psychic costs. However, Gibson and McKenzie recognise the role of uncertainty and risk related to finding a job which is considered as migration costs. Another component of migration costs is likely to be the host countries' immigration restrictions in terms of migrants investing time and effort and compete with others to obtain the visas as suggested in Borjas (1987). However, Gibson and McKenzie do not consider this type of cost. Another very important issue they ignore is discounting, van Dalen et al. (2005b), who also belong

to the pool of studies taking the eclectic approach, do consider the discounted future flow of income from emigration, though.

In their early model of rural-urban emigration, Harris and Todaro (1970) given the possibility of high unemployment rates prevailing in urban areas argue that the expected income differential is relevant, but that it is the income differential adjusted for the employment probability of the migrant rather than the unadjusted real income differential that is important in the migration decision. Many studies in the economics of international migration, however, ignore the importance of this issue, focussing only on the unadjusted wage gap in their conceptual frameworks. As discussed in detail below, both in their theoretical and empirical analysis studies ignore the wage gap or wage at home and abroad without providing an explanation for that. Instead, they typically introduce individual human capital variables as determinants of the decision to emigrate. Each individual is endowed with a stock of human capital composed of observable factors, such as gender, age and education, and unobservable factors at the time of making the emigration decision (Sjaastad, 1962; Stark and Bloom, 1985; Borjas and Bratsberg, 1996; Hatton and Williamson, 2002; de Coulon and Piracha, 2005; and Lacuesta, 2006). So, instead of wages or the wage gap heterogeneity is introduced in terms of skill levels among potential migrants, integrating human capital theory into the model and focussing on self-selectivity.

**Education** Borjas and Bratsberg (1996), assuming constant migration costs across potential migrants, argue that the less (better) educated are more likely to emigrate from countries with high (low) returns to skills and high (low) wage dispersion. Chiquiar and Hanson (2005), criticise Borjas and Bratsberg (1996) on the grounds that assuming constant migration costs is not realistic. They explain that migration costs are likely to be a decreasing function of skill level for three reasons: 1) the better educated are more informed and find it easier to manage the administrative requirements for legal migration, 2) the better educated are more likely to have higher wages and hence can cover the fixed costs of illegal migration, and 3) the better educated, being higher wage-earners have a higher probability of not having to resort to borrowing to cover migration costs, that is, they are less

likely to be constrained by credit markets; also, if they have to rely on credit markets, they have a lower probability of default, implying a lower borrowing and in turn migration costs. Allowing costs to vary by skill level, they hypothesise that it is those with intermediate education that are more likely to emigrate, compared to those with very low education levels and very high education levels. The probability of emigration by schooling level depends on the distribution of schooling in the home country. So, if fixed costs prevent those with low schooling and high skill premia preclude those with high schooling from emigrating, then it is those with intermediate schooling that have a higher propensity to emigrate. Chiswick (1999) adds that the more educated incur lower migration costs because they might be more efficient in job search and find economic and social integration easier because they have better knowledge of foreign languages. However, another group of studies emphasises that there are forces pushing in the opposite direction as well. The better educated have to invest time and money to get legal status, have their professional credentials and destination-country or firm-specific human capital recognised (McKenzie and Rapoport, 2010), their degree or diploma may not be recognised and/or high skilled jobs may require legal status (Germenji and Swinnen, 2005).

**Age** As argued above, the decision to emigrate is considered in neoclassical theory to be an investment decision, which, inter alia, depends on the probability of finding a job and the working life of the individual (Sjaastad, 1962; Harris and Todaro, 1970). Thus, aiming at maximising the expected benefits from emigration, based on the human capital approach it is disproportionately young people that emigrate (Freeman, 2006; McKenzie, 2008). The reason behind this is that: younger people are usually less risk averse, which is required given the uncertainty involved in emigration and especially in cases of illegal emigration (Germenji and Swinnen, 2005); they have higher lifetime returns due to their longer working lives, that is, they have a longer time horizon over which they can recover the costs and receive the benefits of migration (Harris and Todaro, 1970) and because their human capital consists more of generic skills and knowledge, rather than job-specific skills, and the former is more likely to be transferable to the host country (Sjaastad, 1962).



Additionally, because investment in family formation and in other contacts take place in later stages of the life-cycle, and therefore increases with age, younger people arguably incur lower non-pecuniary costs. However, the applicability of this latter argument is conditioned by the age at which people get married, which may differ across cultures. They may also have lower opportunity costs as they usually come from countries with high youth unemployment rates and large seniority premia in wage schemes, which imply that they are penalised in their domestic labour market due to their shorter span of service. This latter argument, however, is not emphasised in any of the studies. The potential migrant, however, has to be of a minimum age in order to be eligible to work, implying that at a very young age economic migration is unlikely. Accordingly, age is also likely to have a nonlinear impact on the decision to emigrate.

**Gender** Gender is also considered to play an important role in the migration decisions. Given the traditional nature of the developing countries, males are usually assigned the tasks of economic affairs while females are assigned tasks of child rearing and dependent care (Germenji and Swinnen, 2005). Consequently, males are more likely to be familiar with job search activities and have work experience leading to them being more efficient in job search and more productive in market employment in case of emigration. Additionally, given the social environment in traditional societies it is more acceptable for males to emigrate (Germenji and Swinnen, 2005; van Dalen et al., 2005b). Hence, males are more likely to emigrate than females, unless there is a compensating lower gender pay gap in host countries. Empirically, the gender effect is usually controlled for by a dummy variable (Lucas, 1985; Papapanagos and Sanfey, 2001; Curran and Rivero, 2003; Liebig and Suosa-Poza, 2004; Germenji and Swinnen, 2005; van Dalen et al., 2005a), though not all the studies control for this effect.

In Sjaastad (1962) the emigration propensity is allowed to vary by individual-specific non-pecuniary costs. This term accounts for the individual-specific consumption preferences of potential migrants (Bruecker and Schroder, 2006). In this regard, authors argue that psychic costs represent the disutility from consumption abroad, that is, the disutility from leaving family and friends for

starting a new life in a new country (Sjaastad, 1962; Bruecker and Schroeder, 2006). In this context, Cebula and Alexander (2006) explain that “disamenities” or “negative quality of life” factors reduce migrants’ utility from consumption abroad. Thus, the marginal utility from consumption at home is typically higher than that of the same consumption in the host country. Accordingly, the decision to emigrate depends also on non-pecuniary costs, that is, the differential in consumption preferences between the home and host country. Therefore, the component is modelled as having a negative impact on the utility of emigration and, in turn, on the decision to emigrate.

In sum, the typical neoclassical model employing the individual utility maximisation framework considers the decision to emigrate as being made independently by the individual, that is, it depends solely on the individual’s characteristics. The eclectic model also considers the individual as the decision making unit, but introduces the influence of household characteristics in an ad hoc manner. In both models, the decision is considered as permanent. The conceptual framework is based on human capital theory and hence the majority of the explanatory variables controlled for capture the effect of human capital characteristics of the individual. The critical review provided above suggests that the studies, within the individual and the eclectic approach are not consistent in their theoretical rationales provided for the inclusion of the individual’s characteristics. This leads also to inconsistencies in the definition of the variables in their empirical models.

### **2.2.2 The household approach**

The new economics of migration introduces portfolio investment theory into the emigration decision model. It considers the decision to emigrate as a calculated strategy where migrants and the family jointly make the decision, thus sharing costs and returns (Stark and Bloom, 1985; McKenzie, 2008). In doing so, the migrant and the family enter into a “mutually beneficial contractual arrangement...” (Stark and Bloom, 1985, p. 174). According to them, the earnings of those left behind will be either “negatively correlated, statistically independent, or not highly positively

correlated with the earnings of those abroad” (Stark and Bloom, 1985, p. 175). This enables a household to diversify its risk, in the case of mutual support commitments and income sharing, by sending a member to work abroad. Household members here benefit from coinsurance and therefore the decision to emigrate is a “calculated strategy” where the whole household benefits and/or incurs the costs. This hypothesis is indirectly supported by evidence which suggests that such an inter-temporal contractual arrangement is the reason behind migrants sending remittances to those left behind, rather than the result of pure altruism (Rapoport and Docquier, 2005; Shimada, 2011). This helps the migrant overcome missing insurance or capital markets and the family to better cope with financial and natural shocks (Winters et al., 2001). Within this framework, the household as an entity weighs the expected benefits against the costs of emigration and decides to send a household member abroad if the net present value of emigration is positive (Winters et al., 2001; Phuong, 2008). So, the utility maximisation model as in Equation 2.1 could now be applied to model the migration decision of the household. However, in the empirical proposition the dependent variable represents the household’s rather than the individual’s emigration decision and none of the studies taking this perspective develop a formal model of household utility maximisation. To fill this gap in the literature, in chapter 3 a theoretical framework based on the utility maximisation is developed to model the household decision to send at least one or one additional member abroad. Similar to the individual view, household studies introduce variables that capture the effects of the benefits and the costs of migration. In what follows these variables will be discussed below and compared with those in the individual view in order to examine similarities/differences between the two approaches.

**Household Income** Among the variables used to reflect the impact of the household’s socio-economic situation on the decision to emigrate is household income. As elaborated in section 2.2.1, emigration is theorised as being induced by economic factors: differences in employment probabilities and wages and relative costs. Within the household approach, the argument implies that relatively poorer households have a higher incentive to support the emigration of a member abroad

as this is considered by the household as a unit to be a strategy for improving their economic situation and diversifying income risk. The eclectic view posits that individuals from poorer households should be more likely to emigrate (van Dalen et al., 2005b; Germenji and Swinnen, 2005). However, given that the eclectic framework models the individual's decision the income level of the individual, rather than of the household, compared to the expected income level abroad would be anticipated to be important. However, studies taking the eclectic approach control for household income instead, thus lapsing into the household approach without recognising it. However, migration involves costs. In the eclectic framework it is argued that this cost cannot always be covered by individuals themselves. Therefore, they may have to rely on household support to overcome such liquidity constraints. In this context, poorer households may not be able, given the credit market constraints, or willing to risk their lifetime savings to support the emigration of its members. This argument would suggest that a certain level of income is necessary to cover migration costs and therefore some households may be too poor to be able to fund emigration. The same argument is used also within the household approach. However, these studies ignore an additional argument provided by Phuong et al. (2008), who take the household view, that due to the diminishing marginal utility from income, higher-income families are less likely to emigrate. This argument is suggestive of a nonlinear relationship between migration and household income. Although only Phuong et al. (2008) provide a rationale for this nonlinearity in the relationship between household income and the probability to emigrate, all studies within the household approach control empirically for the nonlinearity.

Within the eclectic approach, the theoretical rationale provided in Germenji and Swinnen (2005) ignores the complementary argument provided in Phuong et al. (2008) and therefore suggests opposing effects of income. They ignore the fact that the theoretical rationale they develop only suggests that the effect of income is ambiguous, that is, it is statistically not well defined and empirically introduce the relationship to be nonlinear. Van Dalen et al. (2005b) recognise that wealthy families may be less likely to emigrate, but fail to provide a rationale for it and fail to

recognise the nonlinearity hypothesising income as having an ambiguous impact. The rationale for wealthier households being less likely to support the emigration of a household member is provided in Gibson and McKenzie (2011) who argue that wealthier households may be able to provide income opportunities in the home country through direct employment in family business or through family networks arrange better paying jobs. They also argue theoretically that higher-income families can better afford the migration costs and explain that the effect of income is ambiguous. Through this argument, they too, switch from the individual approach to the household approach without recognising it. Additionally, they fail to argue that a certain level of income is likely to be necessary to cover migration costs which would imply poor households would be liquidity constrained and therefore less likely to emigrate suggesting a nonlinear relationship between income and migration.

**Household Asset Ownership** In addition to income, studies of both the household and the eclectic approach add measures of household wealth. Germenji and Swinnen (2005) hypothesise that in addition to the wealth effect, asset ownership also captures an income diversification effect. Given the latter effect they expect higher wealth to have a negative impact on the probability to emigrate. However, they fail to recognise that there may again be a nonlinear relationship between financial resources and the probability of emigrating. Conceptualising the effect of asset ownership within the portfolio diversification framework, allows also for a negative impact on emigration which the authors fail to recognise. This is because households may use other sources of wealth to cover the costs of migration, that is, to relax their liquidity constraints if they consider migration as a means of escaping economic hardship under credit and insurance market imperfections. Phuong et al. (2008) expect asset ownership to provide additional employment opportunities for the household, reducing their surplus labour (under- and unemployment). Several studies that control for these household characteristics do not provide a theoretical rationale for their inclusion.

Another important issue related to the impact of household income and asset ownership is that it may be endogenously determined. In models of actual

migration, while household income may spur emigration, the latter may affect income through the remittances sent by the migrants causing endogeneity. To address the potential endogeneity between income and migration, four studies modelling actual migration behaviour instrument for household income or use household income and other assets owned prior to emigration (Winters et al., 2001; Carletto et al., 2004; Germenji and Swinnen, 2005; Phuong et al., 2008).

**Remittances** Only one of the studies reviewed controls for the effect of remittances on emigration and hypothesises it to have an ambiguous effect for reasons provided below (van Dalen et al., 2005a). However, although this study considers remittances to affect the decision of the individual, it deviates from this by providing a rationale from the perspective of the household. The authors even explicitly acknowledge that this way of conceptualising the relationship between remittances and emigration assumes the decision is made by the household. Since remittances may contribute to relaxing financial constraints on emigration, they may trigger additional emigration. Also, they may work in the opposite direction as they satisfy a household's perceived needs for income and insurance, rendering further emigration unnecessary (van Dalen et al., 2005a). Remittances may also have a signalling effect through which they show that emigration is a profitable investment strategy inducing additional emigration.

**Human capital** Only Phuong et al. (2008) provide a theoretical rationale for the inclusion of human capital in the household model, though such a measure is included in all the studies modelling migration from the household perspective. According to Phuong et al., households with a higher share of members with higher levels of education are more likely to be better informed about host countries leading to lower uncertainty and hence a higher probability of sending a member abroad. This argument extends that provided in the individual approach that the better educated are more efficient in job search and in social and economic integration as, by definition, they are assumed to have better knowledge of foreign languages and cultures and hence have a higher probability of emigrating. Phuong et al. (2008) also hypothesise that such households are more likely to have higher expected gains from emigration and therefore are more likely to emigrate.

However, they fail to recognise other arguments, which are provided within the individual approach, including: 1) the possibility that the better educated are more likely to face lower migration costs and hence have a higher probability to emigrate and 2) that the better educated may find it difficult to get their degrees and diplomas recognised in the host countries leading to a negative effect. With the exception of Gibson and McKenzie (2011) who control for the mother's education without providing a rationale, the rest of the studies deploying the eclectic approach do not account for the impact of household educational attainment.

**Household employment ratio** Phuong et al. (2008) argue that having a greater number of household members in wage employment and/or in private sector employment implies a higher probability of emigration, unlike purely agricultural households or those with members employed mainly in the public sector. However, they do not further elaborate the rationale for inclusion of these two variables. An argument, ignored by this study, may be that it implies a greater risk diversification leading to a negative impact on the probability of emigrating. A further reason for a negative impact could be that these households have better access to credit markets and therefore, they do not have to rely on emigration as a hedge against risk. Lacuesta (2006) and Carletto et al. (2008) also control for the effect of the household employment ratio, although they do not provide a rationale. Although the eclectic view claims to model the individual's emigration decision taking into account the influence of household characteristics, only van Dalen et al. (2005a) control for the influence of the number of household members employed but they again do not provide a rationale for it.

**Household size** Household size is another characteristic considered to influence the decision of emigration controlled for by studies within the household and eclectic approach. Within the household view, Phuong et al. (2008) explain that larger households have a higher probability of allocating a household member to emigration because they are more likely to have a labour surplus. This theoretical rationale is difficult to follow given that the study controls for per capita agricultural land, which should capture the employment generation effect. Curran and Rivero-Fuentes (2003) taking the eclectic approach argue that a larger household size

implies a higher probability of an individual new migrant having access to social networks in potential host countries and therefore it is expected to positively affect the probability to emigrate. According to this argument household size is a proxy for the network effect, which, as explained below, some of the studies control for in a more direct manner. Van Dalen et al. (2005a) and Lacuesta (2006) include household size without providing an argument for its theoretical importance.

**Household demographic characteristics** Although both the household and eclectic approach control for the effect of household demographic characteristics, they hypothesise them differently. Within the household view, Phuong et al. (2008) argue that having a higher share of young adults implies a higher emigration probability but do not provide a rationale for this. Among studies taking the eclectic view, Germeji and Swinnen (2005) hypothesis that having dependent children implies a higher attachment to the home country as one has to take care of them and hence a lower probability of emigration. So, this variable captures the effect of psychic costs. However, according to other studies, having children and/or elderly implies a higher economic pressure which increases the likelihood of households relying on emigration as a last resort of relaxing budget constraints (de Jong, 2000; Mude et al., 2007). Having children and elderly dependents reduces potential household labour supply to the market and suggests a lower potential migration pool within the household, reducing the probability of emigration. On another basis, children may imply higher budget constraints due to having to invest in their education and/or health. A similar argument applies to having elderly dependents in the household. These arguments, though, are not discussed in any of these studies.

**Household gender composition** The possible impact of household gender composition is ignored by eclectic studies as they only control for the effect of the individual's gender. Carletto et al. (2004) control for this effect by interacting it with household age composition shares, whilst Winters et al. (2001) define it as the share of males in the household. However, none of these two studies provides a theoretical explanation for doing so. Phuong et al. (2008) without any prior explanation deviate from the household approach as instead of household gender composition they control for whether the head of the household is male. They



hypothesis this variable as having a negative impact on household emigration due to the increasing demand for female labour in export-oriented industries.

**Family norms** Paradoxically, family norms and customs are included as variables only in the models concerned with modelling an individuals' migration decision. The study that introduces this variable defines it as "the perception of the household members' attitude towards migration of the respondent" (de Jong, 2000, p. 312). Family norms are expected to have a positive impact on the propensity to emigrate as migration is considered a norm within the household.

To sum up, the new economics of labour migration takes a different approach to the neoclassical model deploying the household utility maximisation framework. It models the migration decision as being based on a household calculated strategy. Given this approach the theoretical rationales of the independent variables are from the household perspective. Though, as shown above, frequently no formal theoretical rationale for the inclusion of independent variables is provided. Therefore, there are inconsistencies in the definition of these variables and differences in model specification among the studies.

### **2.2.3 Network theory**

A new strand of migration economics has emerged which complements both the neoclassical theory and the new economics of labour migration by introducing a non-pecuniary benefit represented by the social network effect (Stark and Bloom, 1985; de Jong, 2000; Hatton and Williamson, 2002; Curran and Rivero-Fuentes, 2003; Carletto et al., 2004; Liebig and Suosa-Poza, 2004; Germenji and Swinnen, 2005; Lacuesta, 2006; Gibson and McKenzie, 2007; McKenzie and Rapoport, 2010). These studies argue that this is a new theory within the economics of migration as it provides a conceptual framework for distinguishing between economic and non-economic factors. According to these studies, networks in addition to financial assistance provide non-pecuniary support. So, the interpretation attached to this variable is that the experience of previous migrants in the target host country provides valuable information on the modes of migration, living conditions, job opportunities, food, shelter, or even financial means to overcome the liquidity

constraints of migration (Stark and Bloom, 1985; Hatton and Williamson, 2002; Germenji and Swinnen, 2005). Networks may also be able to arrange smugglers to transport migrants across the border (McKenzie and Rapoport, 2007). It may, however, also reduce their loss of ethnic capital, encompassing native language and the knowledge inherited from older generations and maintained through contact within the network, and thus increase destination-specific utility (Hatton and Williamson, 2002). Van Dalen et al. (2005b) argue conditional on the type of experience of the migrant, positive or negative, migrants may convey information either in favour or against migration. This is the only study raising the issue of an ambiguous impact of networks on migration. Access to such networks presumably reduces future uncertainty (Winters et al., 2001) and also the cost of migration and increases expected returns for potential migrants (Stark and Bloom, 1985) and may enhance economic performance abroad (Schuller, 2000). Hence, although the network approach captures non-pecuniary effects, it also incorporates factors which affect both migration costs and migration benefits. For this reason this study supports Winters et al.'s (2001) argument that network theory rather than being a separate and distinctive approach is merely a supplementary and complementary line of research to the individual and household approaches.

### **2.2.4 Other characteristics common to all these approaches**

Following the approach taken in the studies that deploy a macroeconomic analysis, microeconomic studies of migration typically control for the influence of community characteristics. They do so in the same manner as they control for the network effect, that is, they add to their models proxies for these characteristics. Since these studies simply add a possible community effect to either of the two main conceptual approaches, this represents simply a further extension of the previous approaches.

To reflect the idiosyncrasies of the countries on which they conduct the analyses different variables are introduced to capture the effect of community characteristics. However, only a few of them provide theoretical rationales for the

variables. Theoretically, community characteristics are largely modelled as affecting migration costs or benefits. Stark and Taylor (1989) have coined the term “relative deprivation” into the theory of migration economics. According to them, there is a difference between the utility and the deprivation concept for two reasons. First, the latter concept is conditioned by the existence of a reference group. Second, relative deprivation is the loss in foregone utility from not having a commodity, implying that it depends on the income of the others and not just absolute income as is the case within the utility concept. This implies that the feeling of relative deprivation is an increasing function of the number of individuals in the reference group owning the commodity. Given that international migration implies a transfer to a totally different culture and social environment, migrants consider their original reference group as the benchmark and are protected from a reference-group substitution process. Accordingly, relatively more deprived households are hypothesised as being more likely to emigrate given their initial absolute income and their expected income benefits from migration. This approach was followed by Carletto et al. (2004) and Germenji and Swinnen (2005).

Other studies introduce other community characteristics which represent different dimensions of the level of socio-economic development in the community. Phuong et al. (2008) argue that the poorer the commune and the more climate problems the higher the likelihood of emigration given the potential for migration benefits. They also posit that the likelihood of emigration is lower if the commune has a significant number of non-farm job opportunities and employment programmes and if the commune has electricity, while for the level of transport infrastructure they expect an ambiguous effect. Winters et al. (2001), however, claim that the level of development in infrastructure is endogenous to migration. Where public investments usually require co-financing by the community, as is common in the western Balkans then such investments are likely to be the result of remittances sent back home and used for co-financing. Additionally, such investment may also be the result of migrants’ lobbying power.

Germenji and Swinnen (2005) introduce also regional dummy variables to capture their effect on migration costs. Accordingly, they hypothesise that proximity

to an international border and the coast and a higher level of socio-economic development may lead to a higher probability of emigration. Carletto et al. (2004) control for regional differences in the same manner, but do not provide their corresponding theoretical explanations. Gibson and McKenzie (2011) introduce the real effective exchange rate and the average GDP per capita growth rate relative to the host country and hypothesise the two community characteristics as having a negative impact on the probability to emigrate given that they imply lower gains from migration. In general, although different in their definitions, whenever they proxy a lower level of socio-economic development community characteristics are hypothesised as increasing the pressure on migration. So, unlike with respect to the other groups of variables, studies are relatively consistent regarding the hypothesised effect of the set of variables proxying community characteristics.

In sum, studies introduce different characteristics in their conceptual frameworks aiming at best representing the idiosyncrasies of the countries. Only a few of the studies provide a theoretical rationale for the variables controlled for. In general studies consider rural areas to have a higher likelihood of emigration due to being less developed and variables capturing the low level of socio-economic development are hypothesised as having a positive impact on the probability of emigrating. Once again there is no consistency in the literature regarding the inclusion and treatment of community characteristics.

### **2.3 Empirical results from the approaches**

In the previous section the different conceptual approaches to modelling the decision to emigrate are critically reviewed and a lack of consistency in the theoretical rationales developed for the explanatory variables and in the respective definitions of the variables emerged. Given these inconsistencies, in this section the focus will be on examining whether there are inconsistencies also in the results from these studies. This section follows the same approach as the previous one in that the discussion of the results of all variables for which in the eclectic approach the theoretical expectation is provided from the individual perspective is put together with the discussion of the results for the variables provided by the studies

in the individual approach and similarly so where the origin of the variable's inclusion lies in the household approach. Also, the discussion of the groups of variables and the variables within each group is undertaken in the same order as in section 2.2. Accordingly, the discussion of results is organised by variable and will start with the individual characteristics. For brevity and clarity, for each variable its definition and the corresponding results by study are summarised in separate tables.

Prior to the discussion of results by variable, some common shortcomings of the studies are summarised. Although all the studies empirically estimate the probability of emigrating, half of them report coefficient estimates rather than the corresponding marginal effects. Given that the relationship is modelled to be nonlinear, providing marginal effects would enrich the interpretation of the relationship between emigration and its determinants. Also, although by default econometrics software calculates these at the mean values, this is not mentioned in any of the studies. To give a full picture of the impact of the explanatory variables and the probability of emigrating, predicted probabilities at specific values of the independent variables have to be calculated. This analysis, however, is not conducted in any of the studies reviewed. The "other things being equal" does not apply in the case of nonlinear models (Norton et al., 2004). Therefore, marginal effects of variables introduced as being nonlinear, through their terms and square terms, cannot be interpreted separately. This issue is also ignored in the literature. Additionally, although diagnostic tests are not well developed for nonlinear models, none of the studies discusses this issue. Another shortcoming of the studies reviewed is that although their analyses are based on survey data, which are usually affected by missing data, none of the studies raises this issue. To fill this gap, the analysis in chapter 3 addresses all of the abovementioned issues

### **2.3.1 Summary of results for the individual characteristics**

In this section, the results from the studies are critically reviewed regarding the individuals' characteristics. In this subsection of the summary of empirical

results, the dependent variable is defined as the individual's migration decision or migration intention.

**Education** As shown in the table below, four studies introduce education in a linear fashion, while seven control for possible nonlinearity in the relationship through dummy variables representing different education levels, while only one controls for the nonlinearity by introducing education and its squared term. Given this it is not surprising that there is lack of consistency in the results from these studies. In three of the studies the results suggest a positive impact of higher education levels. One study finds a negative relationship between education and emigration. One study finds support for the a priori expected non-monotonicity and five studies report insignificant coefficients on education.

**Table 2.1 Summary of empirical results regarding education of the individual in studies taking an individual or eclectic approach**

Studies	Variable definition	Theoretical expectations	Tested for nonlinearity	Results
<b>Individual approach</b>				
Papapanagos and Sanfey (2001)	Some secondary education Secondary education Higher education Primary education or less = reference	No No No No	Dummy variables	+ + +
Liebig and Suosa-Poza (2004)	Education levels, Middle education = reference High education Low education	No	Dummy variables	+ -
Chiquiar and Hanson (2005)	Years of schooling, no education = reference: 1-4 5-8 9 10-11 12 13-15 16+		Dummy variables	- - - - - - -
Lacuesta (2006)	Years of schooling, no education = reference: 1-8 9-11 12 12+	Yes, non-monotonic	Dummy variables	- - + -
<b>Eclectic approach</b>				
Lucas (1985)	Years of schooling	No	No	-
De Jong et al. (1985/6)	Migration intention: Years of schooling Migration behaviour: Years of schooling	No No	No No	Insignificant Insignificant
Stark and Taylor (1989)	No, as it is used as instrument in household			

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	income			
De Jong (2000)	Migration intention: Secondary education Migration behaviour: Secondary education	No No	No No	Insignificant Insignificant
Curran and Rivero-Fuentes (2003)	Years of schooling, 0-6 = reference 7-9 10-12 13+	No	Dummy variables	Insignificant Insignificant Insignificant
Germenji and Swinnen (2005)	Years of schooling and its squared term	Yes, inverse U-shape	Yes	+
Van Dalen et al. (2005a)	Education level, no education = reference Primary education Secondary education Higher education	No No No	Dummy variables	Insignificant + +
Van Dalen et al. (2005b)	Education level, no education = reference Primary education Secondary or higher education	Yes, + Yes, +	Dummy variables	Mixed results
Gibson and McKenzie (2011)	Studied all three science subjects: biology, chemistry and physics Studied a foreign language	Yes, + Yes, +	No No	+ +

**Age** Empirically, some studies introduce age in a linear fashion, some control for the nonlinearity in the age effect by including age and its squared term.

**Table 2.2 Summary of empirical results regarding age in studies taking an individual or eclectic approach**

Studies	Variable definition	Theoretical expectations	Tested for Nonlinearity	Results
<b>Individual approach</b>				
Papapanagos and Sanfey (2001)	Age of the individual	No	No	-
Liebig and Suosa-Poza (2004)	Age and age squared*10-3	No	Yes	U-shaped
Chiquiar and Hanson (2005)	Age and its squared term	No	Yes	+
Lacuesta (2006)	Age and its squared term	Yes, negative	Yes	U-shaped
<b>Eclectic approach</b>				
Lucas (1985)	Age	No	No	-
De Jong et al. (1985/6)	Migration intentions: Age Migration behaviour: Age	No No	No No	+ Insignificant
Stark and Taylor (1989)	Age and its squared term		Yes	Inverse-U shape
Germenji and Swinnen (2005)	Age and its squared term	Yes, inverse U-shape	Yes	Inverse U-shaped
Van Dalen et al. (2005a)	Age and its squared term	No	Yes	U-shape
Van Dalen et al. (2005b)	Age	Yes, -	No	-
Gibson and McKenzie (2011)	Age	Yes, +	No	+

As shown in Table 2.2 the results in two studies indicate a negative impact but do not provide an a priori sign for it, whilst three studies report a positive effect. Some studies report a U-shaped relationship between age and emigration. One study finds support for its hypothesised inverse U-shaped relationship. Three studies do not control for the effect of age in their migration models. Again, results with respect to age are mixed.

**Gender** From first principles, as discussed above it might be hypothesised that males are more likely to emigrate. The summary of results provided in the table below shows that the majority of the studies are consistent with this view. However, two studies provide insignificant results for the gender effect, whilst six of the studies do not control for it.

**Table 2.3 Summary of empirical results regarding gender in studies taking an individual or eclectic approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Individual approach</b>			
Papapanagos and Sanfey (2001)	Male, female = reference	No	+
Liebig and Suosa-Poza (2004)	Male, female = reference	No	+
<b>Eclectic approach</b>			
Stark and Taylor (1989)	Male, female = reference; however, interacted with age	No	Insignificant?
Curran and Rivero-Fuentes (2003)	Female, male = reference	No	-?
Van Dalen et al. (2005a)	Male, female = reference	No	+?
Germenji and Swinnen (2005)	Male, female = reference	Yes, +	*
Gibson and McKenzie (2011)	Female, male = reference	No	Insignificant?

**Marital status** As shown in the table below, there are differences among the studies in the definition of this variable regarding its reference category. Among the studies that provide a theoretical rationale for this variable, the results in one of them are in line with the hypothesised negative effect, results in one are inconsistent with the hypothesised effect, while in the third study results indicate the effect is insignificant (Table, 2.4). Among the studies that do not provide a theoretical rationale for this variable four of them report a positive effect, three of the studies report a negative impact, whilst two studies find the impact to be insignificant. In summary, there is lack of consistency in the empirical results with respect to the impact of marital status on the probability of emigrating.



**Table 2.4 Summary of empirical results regarding marital status in studies taking an individual or eclectic approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Individual approach</b>			
Liebig and Suosa-Poza (2004)	Married, single = reference	No	-
Chiquiar and Hanson (2005)	Married, single = reference	No	+
Lacuesta (2006)	Married, single = reference	Yes, -	+
<b>Eclectic approach</b>			
Lucas (1985)	Married, single = reference	No	Insignificant
De Jong et al. (1985/6)	Migration intentions: Married, widowed, separated, never married = reference	No	+
	Migration behaviour: Married, widowed, separated, never married = reference	No	+
De Jong (2000)	Migration intentions: Married, reference not defined	No	-
	Migration behaviour: Married, reference not defined	No	-
McKenzie and Rapoport (2004)	Married, single = reference	No	+
Germenji and Swinnen (2005)	Single, married = reference	Yes, +	+
Van Dalen et al. (2005a)	Married, not married = reference	No	+
Van Dalen et al. (2005b)	Married, widowed, separated, never married = reference	Yes, -	Insignificant

In sum, there are inconsistencies regarding the definitions for the variables except for gender. One of the reasons for the inconsistencies in the findings is maybe the different definitions used for the variables. Though, in the case of gender where no such problems arise the results suggest a positive impact of being male on the probability of emigrating in most of the studies. So, the neoclassical and the eclectic studies do not reach an agreement on the importance of individuals' characteristics on the migration decision.

### 2.3.2 Summary of results for the household characteristics

In this subsection, the results for household characteristics are summarised by variable. In all these studies reviewed for the purposes of this section, the dependent variable is the decision or intention of the individual to emigrate.

**Household income** Given the differences in the theoretical rationale for the inclusion of an income measure provided by the studies (section 2.2.3) it is no surprise that the definition of the variable is inconsistent in their empirical

propositions. As shown in the table below, in some studies the nonlinearity is captured by income and its squared term, whilst in others it is captured through dummy variables representing different groups of income levels. The variable is introduced in a linear fashion in two studies, whilst others within the eclectic approach do not even control for the influence of household income on the individual's migration decision. Other income apart from wages and remittances is included in Lacuesta (2006), although in a linear fashion, but he does not provide any rationale for its inclusion or discuss its potential endogeneity with the migration decision. One argument in favour of using this variable could be portfolio diversification. As explained in the next paragraph, this theoretical rationale is used Germenji and Swinnen (2005) for controlling for variables other than income to proxy for wealth. The results from studies vary. Most of the studies find the impact of household income to be insignificant. The results in two studies suggest a positive impact for lower levels of income, whilst only two studies find support for nonlinearity, although only one of them hypothesises the nonlinear effect of income. Two studies find a negative effect in one of their specifications, and an insignificant effect in other specifications. So, the results regarding this variable are mixed.

**Household Asset Ownership** In addition to the income variable, the table below summarises results for household assets. There are five studies that control for this variable and they include different proxies, such as land ownership, livestock or equipment, and additional employment opportunities within the household (Table 2.5). They are different also with respect to the results provided. In two studies, the results suggest an insignificant impact, while in another two studies the results suggest a negative impact for some and an insignificant for other proxies of household assets. One study, though, finds a positive impact. In sum, although the results in most of the studies indicate a negative or insignificant impact of this variable, there is one study indicating a positive impact.

**Table 2.5 Summary of empirical results regarding household income and ownership of assets in studies taking an eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Tested for nonlinearity	Results
<b>Household approach</b>				
Winters et al. (2001)	Land owned	No	Yes	Insignificant
Carletto et al. (2004)	Agricultural land, ha	No	No	Insignificant
	Number of heads of cattle	No	No	-
	Own car/truck	No	No	-
	Number of rooms per capita	No	No	Insignificant
Lacuesta (2006)	Other income apart from wages and remittances	No	No	+
Phuong et al. (2008)	Per capita household expenditure and its square term	Yes, nonlinear	Yes	Insignificant
	Per capita household agricultural land	Yes, -	No	Insignificant
<b>Eclectic approach</b>				
Lucas (1985)	Number of cattle owned	No		Insignificant
De Jong et al. (1985/6)	Migration intentions: If migrant has money to move	No	Dummy variable	-
	Migration behaviour: If migrant has money to move	No		Insignificant
Stark and Taylor (1989)	Instrument for total household income excluding income abroad	No	Yes	Insignificant
De Jong (2000)	Migration intentions: Annual household income	No	No	Insignificant
	Migration intentions: Annual household income	No	No	-
Germenji and Swinnen (2005)	Per capita household income excluding remittances	Yes, ambiguous	Yes	Inverse U-shaped
	Livestock	Yes, +	No	Insignificant
	Nonfarm business	Yes, +	No	-
	Wage employment	Yes, +	No	-
Van Dalen et al. (2005a)	Perceived adequacy of income Sufficient or more than sufficient = reference - Insufficient - Barely sufficient	No	Dummy variables	+ +
Van Dalen et al. (2005b)	Perceived adequacy of income Sufficient or more than sufficient = reference - Insufficient - Barely sufficient	Yes, ambiguous Yes, ambiguous	Dummy variables	+ Mixed
McKenzie and Rapoport (2007)	Log of nondurable consumption	Yes, inverse U-shaped	Yes	Inverse U-shaped
Gibson and McKenzie (2011)	Household wealth in high school		Dummy variables	
	Average wealth = reference			+
	- Above average - Below average	Yes, ambiguous Yes, -		Insignificant

**Household educational attainment** The appropriate modelling of the effect of education has differed between the studies and a consistent view has not yet emerged. Winters et al. (2001) and Carletto et al. (2004) use the average years of schooling among adults and its squared term to proxy for an expected nonlinear impact of education on the migration decision. However, Phuong et al. (2008) control for education through three dummy variables, the share of household members having primary education, lower secondary education and upper secondary education, with the share of those with no education serving as the reference. Lacuesta (2006) introduce yet a different proxy, controlling for whether the household currently has students but, again, does not provide any rationale for this choice.

**Table 2.6 Summary of empirical results regarding household educational attainment in studies taking an eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Household approach</b>			
Winters et al. (2001)	Average number of years of schooling among adults and its squared term Percent of literate adults	Yes, inverse U-shaped  No	U-shaped  +
Carletto et al. (2004)	Average adult education and its squared term Temporary migration – Italy Temporary migration – Greece Permanent migration - Italy Permanent migration - Greece	No	Inverse U-shaped Insignificant Insignificant
Lacuesta (2006)	Student in the household	No	+
Phuong et al. (2008)	Share of household members with no education = reference Share of household members with primary education Share of household members with lower secondary education Share of household members with upper secondary education	Yes, +  Yes, +  Yes, +	  +  +  +
<b>Eclectic approach</b>			
Gibson and McKenzie (2011)	Mother has secondary school	Yes, +	Insignificant

As shown in the table below, the comparison of the results across all these studies shows that the effect is insignificant in two of them, whilst another two of them report a positive effect. One of the studies finds the relationship to have a U-shape and a positive effect for another proxy of education. So, the results broadly

support the positive relationship between this variable and the probability of emigrating. Only one of the studies taking the eclectic view controls for this variable and finds it to be insignificant.

**Household employment ratio** As shown in the table below, although just a few studies control for this effect, they are very different in the definition of this variable.

**Table 2.7 Summary of empirical results regarding household employment ratio in studies taking an eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Household approach</b>			
Carletto et al. (2004)	Total number of unemployed adults divided by the total number of household adults in the labour force Temporary migration – Italy Temporary migration – Greece Permanent migration - Italy Permanent migration – Greece	No	+ + Insignificant Insignificant
Lacuesta (2006)	Number of household members working	No	+
Phuong et al. (2008)	Number of household members in wage employment divided by household size Number of household members employed in private sector divided by household size	Yes, +  Yes, +	+  Insignificant
<b>Eclectic approach</b>			
Van Dalen et al. (2005a)	Number of household members in wage employment	No	Insignificant

Two studies define it as the total number of household members in employment, one study introduces the share of household members in employment, whilst another proxies it by the share of adult members not in employment. The results suggest an insignificant effect in most of the studies, whilst a positive effect is reported in two of them. Given the differences in the definitions provided for this variable it is no surprise that the results regarding this variable are mixed. Only one of the eclectic studies controls for household employment characteristics.

**Household size** As explained in section 2.2.3, different studies provide different theoretical explanations for the effect of household size. Also, the definition of this variable varies as some studies exclude migrants from the total household size. The table below shows that the results from the studies taking the

household approach all indicate a positive impact of household size on the probability of emigrating. However, all three studies taking the eclectic approach report an insignificant effect for this variable. In general, support is provided for a positive impact of household size on the probability to emigrate.

**Table 2.8 Summary of empirical results regarding household size in studies taking an eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Household approach</b>			
Winters et al. (2001)	Household size	No	+
Lacuesta (2006)	Household size	No	+
Phuong et al. (2008)	Household size	Yes, +	+
<b>Eclectic approach</b>			
Lucas (1985)	Household size	No	Insignificant
Stark and Taylor (1989)	Household size	No	+
Curran and Rivero-Fuentes (2003)	Household size	No	Insignificant
Van Dalen et al. (2005a)	Household size excluding migrants	No	Insignificant

**Household demographic characteristics** All studies deploying the household perspective control for the effect of household demographic characteristics, whilst within the eclectic approach there are only three studies that control for it. Empirically, studies taking the household approach control for the share of different age groups. Without providing any rationale, one study controls for a possible nonlinear effect of the age of the household head. In the eclectic approach, this effect is captured by a dummy variable which equals one if the household has dependents and zero otherwise. Although, in most of the studies this household characteristic is introduced through dummy variables representing different shares of household age compositions, the studies are very different in its definitions. The table below shows that the results indicate an insignificant impact among studies taking the eclectic approach. The results in the other set of studies are mixed. Again, there are inconsistencies in the results regarding this variable.

**Table 2.9 Summary of empirical results regarding household demographic characteristics in studies taking an eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Household approach</b>			
Winters et al. (2001)	Age and age squared of the head of the household	No	Inverse U-shaped
Carletto et al. (2004)	Five different age groups by gender; reference = females aged over 59	No	Mostly insignificant
Lacuesta (2006)	Number of children aged under 15	No	-
	Number of elderly aged over 65	No	+
Phuong et al. (2008)	Share of those aged over 55 = reference Share of those aged under 15 Share of those aged 15-25 Share of those aged 25-35; 35-45; 45-55	Yes, but not clearly specified; households with a large share of young adults +	- + Insignificant
<b>Eclectic approach</b>			
Germenji and Swinnen (2005)	Number of children aged under 15	Yes, -	Insignificant
Van Dalen et al. (2005a)	Presence of those aged under 18 Reference = none	No	+
	Presence of those aged over 65 Reference = none	No	Insignificant
McKenzie and Rapoport (2007)	Number of children aged under 18	No	Insignificant

**Household gender composition** Among the studies taking the household perspective only two introduce this variable, while only one of them provides a theoretical rationale. These two studies use different proxies for household gender composition. The results in both studies suggest the effect of this variable is insignificant. As shown in the table below, none of the studies taking the eclectic approach control for the gender composition of the household.

**Table 2.10 Summary of empirical results regarding household gender composition in studies taking an eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Household approach</b>			
Winters et al. (2001)	Share of males within the household	No	Insignificant
Carletto et al. (2004)	Gender is interacted with age groups (see discussion about household demographic characteristics)		
Phuong et al. (2008)	Whether household head is male	Yes, -	Insignificant

The summary of their empirical results confirms the lack of consistency. There are differences among the studies in the results on all the household

characteristics. Consequently, similar to the concluding remark regarding the individuals' characteristics, the studies belonging to the new economics of labour migration and the eclectic approach are not consistent in modelling household characteristics and maybe therefore their empirical results are inconsistent.

### **2.3.3 Summary of results for the network effect**

For consistency, the results regarding the network effect are now discussed. Though the majority of the studies that provide a theoretical explanation expect a positive network effect empirically, the definitions for this variable differ both across and within studies. It is introduced as the current migration experience of household members, previous migration experience of household members, current community network, a previous community network, return migrants within household, current migration experience of female and male household members separately and interacted with the gender of the potential migrant, that is, the respondent. In some studies, several of these definitions are included. Given the differences, it is not surprising that even within studies the results on the different proxies for the network effect are mixed. There are only three studies the results from which indicate a positive effect for all proxies of the network effect. In six studies the results suggest a positive or an insignificant effect for the different proxies, a positive, negative or insignificant network in two studies, while in one study the results indicate a positive effect for one proxy and a negative effect for the other. This summary of results shows that although most of the studies find a positive effect they have not yet reached any consensus either regarding the theoretical explanation or the definition of the network effect.



**Table 2.11 Summary of empirical results regarding networks in studies taking an individual, eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Individual approach</b>			
Lacuesta (2006)	Previous household migration	No	+
<b>Eclectic approach</b>			
De Jong et al. (1985/6)	Migration intentions:		
	Current family networks	No	Positive
	Current communication with family networks	No	Positive
	Previous family networks	No	Positive
	Migration behaviour:		
	Current family networks	No	Positive
Stark and Taylor (1989)	Current communication with family networks	No	Insignificant
	Previous family networks	No	+
	Close relatives in Mexico	No	
De Jong (2000)	Close relatives in the US	No	
	Migration intentions:		
	Previous migration experience	No	+
	Current networks	No	Insignificant
Curran and Rivero-Fuentes (2003)	Migration behaviour:		
	Previous migration experience	No	+
	Current networks	No	Insignificant
	Family migrant networks where no family migrant networks = reference	+	
	Family migrant network*Woman	+	Insignificant
	Female migrant network in the US where no female migrant network in the US = reference	+	Insignificant
	Woman*Female migrant network in the US	+	+
	Male migrant network in the US where no male migrant network in the US = reference	+	+
Woman*male migrant network in the US	+	Insignificant	
Germenji and Swinnen (2005)	Family migrant network in Mexico where no family migrant network in Mexico = reference	+	Insignificant
	Migratory experience in the US where no migratory experience in the US = reference	+	+
Van Dalen et al. (2005a)	Previous network	+	+
	Current network	+	+
Van Dalen et al. (2005b)	Number in Europe	No	Insignificant
	Number if Asia/Middle East	No	Insignificant
	DV where non-migrant household = reference	Ambiguous	Insignificant and +
McKenzie and Rapoport (2007)	If household has return migrants	Ambiguous	+ and insignificant
	If household has current migrants	Ambiguous	+ and insignificant
	If household has current and return migrants	Ambiguous	+ and insignificant
McKenzie and Rapoport (2007)	State migration rate in 1955-59	+	+
	Proportion of other heads in community with migrate experience in period t-1	+	+
	Father is a migrant		
	Brother is a migrant		+

			+
McKenzie and Rapoport (2010)	Community migration prevalence Community migration prevalence interacted with years of schooling	Network +, even more so at lower levels of schooling	+ -
<b>Household approach</b>			
Winters et al. (2001)	Historical migration: Family network Community network Family*community network Current migration: Family network Community network Family*community network	No	Insignificant Insignificant Insignificant + + -
Carletto et al. (2004)	Experience of temporary migration to Greece (ln of number) Experience of temporary migration to other countries (ln of number) Household network in Greece (ln of number) Household network in other countries (ln of number) Community network in Greece (ln of number) Community network in other countries (ln of number)	No	+ in temporary and – in permanent migration + in temporary and insignificant in others + and – + in permanent Italy + in temporary Greece and insignificant + in temporary Italy and insignificant
Lacuesta (2006)	Previous household migration	No	+

### 2.3.4 Summary of results for the community characteristics

As shown in the table below, there are several studies that introduce either a dummy variable to control for whether the household is in an urban area, combine this with regional dummy variables, or in addition introduce also regional dummy variables. One study controls for the effect of relative deprivation only, while others introduce this variable in addition to other community characteristics. In another study the community effect is proxied by dummy variables of the level of development combined with community network variables, whilst yet another study uses 11 different variables to proxy for community characteristics controlling

for loan opportunities, cost of illegal migration, transportation opportunities, currency depreciation and employment opportunities abroad. Phuong et al. (2008) introduce nine variables to capture the level of development, among others, in terms of poverty, employment opportunities, road infrastructure as well as electricity. Another study controls for six different community characteristics to capture the effect level of development in terms of education in addition to income inequality. In a similar vein, another study captures the community effect through the municipal marginality index and other development characteristics. Gibson and McKenzie (2011) introduce the GDP growth relative to that in the destination country.

The empirical results for community characteristics are summarised separately in this subsection. The general expectation among studies that provide a theoretical rationale is that community variables that proxy a lower level of socio-economic development are hypothesised as having a positive impact on the probability of emigrating. However, given the idiosyncrasies of the countries for which the analyses are conducted, studies introduce different community characteristics. So, there are differences in the definition of community characteristics both within and among the studies. This makes summarising the results regarding the direction of effect of this variable very difficult. Still, attention is paid both to the direction of impact and the level of statistical significance. The empirical results indicate significant and insignificant effects for the different proxies used in eight studies, while in two studies the results suggest an insignificant effect for all the proxies, while two studies introduce only one proxy and report significant effects. In summary, there are differences in the definition of this variable both within and among analyses and the results provided. In sum, despite the broadly similar theoretical explanations regarding the community characteristics, there is lack of consistency in the empirical results among the studies. This may be due to differences in model specification.

**Table 2.12 Summary of empirical results regarding community characteristics in studies taking an individual, eclectic or household approach**

Studies	Variable definition	Theoretical expectations	Results
<b>Eclectic approach</b>			
Lucas (1985)	Urban household where rural household = reference Village catchment area type where large village catchment area = reference Peripheral Sub-peripheral	No  No No	Insignificant  + -
De Jong et al. (1985/6)	Migration intentions: Community percentage of urban households Migration behaviour: Community percentage of urban households	No  No	Insignificant  Insignificant
Stark and Taylor (1989)	Relative deprivation	Inverse U-shaped	Inverse U-shaped
De Jong (2000)	Migration intentions: Non-agricultural households in community, totally agricultural = reference Number of households in community Community crop loss in the last 10 years Migration behaviour: Non-agricultural households in community, totally agricultural = reference Number of households in community Community crop loss in the last 10 years	No  No No  No  No No	Insignificant  Insignificant Insignificant  +  - Insignificant
Papapanagos and Sanfey (2001)	Dummy variables for the size of town where villages = references, <=20,000 20-50,000 50-100,000 Tirana	No	Insignificant Insignificant + Insignificant
Germenji and Swinnen (2005)	Gini coefficient Regional DVs where reference unclear North Border Coast	+  - + +	+  Insignificant + +
Van Dalen et al. (2005a)	DV where urban = reference	No	+
Van Dalen et al. (2005b)	Interaction DVs between regional migration history and regional level of economic development where more developed and established migration region = reference If more developed and recent migration If less developed and established migration If less developed and recent migration	Not clearly referring to the interaction DVs	+ and insignificant  + and insignificant  +, - and insignificant
McKenzie and Rapoport (2007)	Number of bank branches Mean real coyote payment 1970-98	No No	Insignificant Insignificant

Chapter 2: Modelling Migration: A Review of the Literature

	Any money lenders in community Train station in community Proportion with less than minimum wage in 1970 Proportion in agriculture in 1970 Minutes to federal highway Distance in miles to principal US destination Average real depreciation over current and last year (*100) Average US unemployment rate over current and last year Average real depreciation*education of the head (100)	No No No No No No No No No	Insignificant Insignificant Insignificant Insignificant Insignificant Insignificant - Insignificant Insignificant
McKenzie and Rapoport (2010)	Proportion of rural households owning land in 1910 School attendance in 1930 (6 to 10 year olds) Gini of Income in 1960 Number of schools per 1000 population in 1930 Gini of years of schooling for 15-20 year olds in 1960 Average years of schooling in 1960	No No - No No No	Insignificant Insignificant (+ for Females) - Insignificant Insignificant Insignificant Insignificant
Gibson and McKenzie (2011)	Real exchange rate when of prime migration age GDP growth relative to destination countries when of prime migration age	- -	Insignificant Insignificant
<b>Household approach</b>			
Winters et al. (2001)	Community member of a formal organisation Community with majority indigenous Share of irrigated in total community land Community with paved road Municipal marginality index	No	Insignificant Insignificant Insignificant +
Carletto et al. (2004)	Commune Gini index of inequality Commune Unemployment rate Regional DVs where Tirana = reference Coastal urban Coast rural Centre urban Centre rural Mountain urban Mountain rural	No	Insignificant Insignificant + and insignificant + and insignificant + and insignificant + and insignificant + and insignificant + and insignificant + and insignificant
Phuong et al. (2008)	Urban Several dummies controlling for different regions DV on whether the commune is poor DV on whether the commune has enterprises, factory or trading village within 10 km DV on whether the commune has job creation programme DV on whether the commune has a	No No + - - -	- Insignificant Insignificant Insignificant

	good climate for agriculture		Insignificant
	Distance to the nearest road accessible for cars	Ambiguous	Insignificant
	DV on whether the commune has electricity	+	Insignificant
	DV on whether the commune has three certain main illnesses	+	Insignificant

Regarding community characteristics, however, the studies are broadly similar regarding the theoretical expectation but not the definitions of these characteristics. In this section, it is shown that there are inconsistencies also in the results from the studies for each group of the variables considered. So, there is a lack of consistency in the migration literature both with respect to modelling and estimating the decision to emigrate.

## 2.4 Other issues in modelling the propensity to emigrate

### 2.4.1 Ex-ante versus ex-post migration behaviour – migration restrictions

In chapter 3, the model specified and estimated is based on households' plans to send at least one or one additional member abroad for economic reasons. Therefore, a discussion of possible similarities/differences between the determinants of migration intentions and actual migration behaviour is considered important. Some of the studies reviewed above model migration intentions (de Jong et al., 1985/6; de Jong, 2000; Papapanagos and Sanfey, 2001; Liebig and Suosa-Poza, 2004; van Dalen et al., 2005a; van Dalen et al., 2005b; Gibson and McKenzie, 2011), while the rest focus on realised outcomes of migration decisions. De Jong et al. (1985/6) and de Jong (2000) investigate the determinants both of migration intentions and behaviour analysing possible differences between the two decisions. Early studies on migrants' self-selection usually relied on host country data on realised migration decisions (Borjas, 1987; Chiswick, 1999; Chiquiar and Hanson, 2005). Jasso et al. (2000) criticise such studies on the grounds that they ignore potential differences between migration intentions and decisions resulting from

host countries' migration policies, migration networks and historical links. Liebig and Suosa-Poza (2004) and van Dalen et al. (2005b) argue that revealed migration data poses a limitation on the selectivity test as host country restrictions are bound to cause sample-selection bias. They analyse source-country data on emigration intentions, hence eliminating the problem of self-selection bias.

Although there are studies that analyse migration intentions/behaviour without recognising possible differences between the two decisions, those that do raise this issue usually frame it within Ajzen's (1988) theory of reasoned action derived from social psychology. Among the studies reviewed above only de Jong et al. (1985/6) and de Jong (2000) test for the hypothesis of migration intentions being a determinant of migration decisions and that there are differences between the models of migration plans and migration decisions. They find support for both hypotheses. Although the latter study relies on internal migration data, it is considered here for its potential contribution to the discussion about potential similarities/differences between planned and realised migration decisions and the importance of intentions in determining revealed behaviour. Despite this difference both studies, de Jong et al. (1985/6) and de Jong (2000) build on the theory of reasoned action about the relationship between intentions and behaviour (Ajzen, 1988) and focus on the importance of expectations in behavioural intentions and subsequent action.

According to the theory of reasoned behaviour, intentions are a predictor of actual behaviour under the following assumptions: a) correspondence between the measurement of intentions and behaviour with respect to time, context, action, and target, b) the decision-maker having volitional control over the behaviour in question, and c) behavioural intentions being stable over time (de Jong et al., 1985/6). Both studies recognize the role of constraining and/or facilitating factors of the intention-behaviour relationship. Accordingly, both studies test the hypothesis that intentions are the proximate theoretical determinant of behaviour, conditional on controlling for the impact of other facilitating and constraining factors and unchanged intentions prior to the measurement of behaviour. In de Jong (2000), social norms and expectations of future quality of life are considered to shape

migration intentions which then determine migration behaviour. The social norms are defined as perceptions of the opinion of “significant others” on the behaviour and expectations that one will achieve their objective through their own endeavours.

While de Jong (2000) runs only the model in which migration intentions are controlled for, de Jong et al. (1985/6) estimate the actual migration model with and without the variable controlling for migration intentions. Both studies include all the explanatory variables as in the intentions’ model. The results in both studies are in line with the hypothesis that migration intentions positively affect migration behaviour, but are not the only determinant. The results in de Jong et al. (1985/6) also indicate that the migration decision model, controlling for the impact of migration intentions explains only 17 per cent of actual behaviour and is less efficient compared to the migration intentions model which explains around 50 per cent of the intentions. Also, their results suggest that the explanatory power of the migration behaviour model including migration intentions is similar to the migration behaviour model excluding migration intentions. According to them, this suggests that migration intentions are better predicted than migration behaviour. The explanation for this they argue is that the inclusion of a time lag of two years allows the possibility of constraining and/or facilitating factors to alter migration intentions. A comparison between the model of intentions and that of behaviour in de Jong (2000) is not strictly possible as the latter is estimated separately for temporary and more permanent migration behaviour. Nonetheless, these authors do attempt to make a comparison and argue that the results suggest differences in the determinants of migration intentions and migration behaviour. However, although the time lag between the survey on migration intentions and that on migration behaviour is similar to that in de Jong et al. (1985/6), two years, unlike that study de Jong (2000) ignores the possibility of factors having altered the intentions to emigrate. Instead, according to de Jong (2000) the explanation for the difference between the two models is that, unlike migration intentions, actual migration behaviour is the result of a household decision. This argument is based on



the finding that family norms are statistically significant in the migration decision, but not the intentions model.

Papapanagos and Sanfey (2001) and van Dalen et al. (2005a) can only model migration intentions due to data limitations. The former study considers the possibility of differences between the rate of migration intentions and realised migration, but they do not discuss any possibility of differences in their determinants. Van Dalen et al. (2005a), however, raise the issue of the potential meaning of the intention to emigrate arguing that it could imply a specific plan to emigrate, a vague aspiration, or intention to emigrate but constrained by resources or the volition to make the decision. In their linked study van Dalen et al. (2005b) the intentions variable is ordered to distinguish between the levels of detail of the emigration intention to reflect their firmness.<sup>2</sup> Also, similar to the approach in de Jong (2000), they use variables capturing the effect of expectations, which are considered the main driver in translating migration plans into behaviour. Their results are in line with the hypothesis that expectations about emigration benefits and a higher probability of finding employment abroad trigger emigration. However, their results are ambiguous with respect to the expectations variables controlling for self-efficacy and family norms.

An important advantage of modelling planned rather than realised migration behaviour is that the former models do not face endogeneity issues. The literature on migration economics reveals that both actual and planned migration is motivated or constrained by income. At the same time, income may be the result of actual emigration. Income may include the remittances that migrants send back. This leads to income being endogenous in the emigration model. However, by definition income cannot be endogenously determined in models of migration intentions as they represent a pre-migration event. This advantage of modelling migration intentions is not discussed by any of the studies reviewed. Only some of the studies dealing with realised migration decisions consider and try to remedy for

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<sup>2</sup> The answer to the questions based on which the dependent variable is defined includes four options: “definitely”, “probably”, “probably not” and “definitely not”.

endogeneity (Winters et al., 2001; Carletto et al., 2004 and Germenji and Swinnen, 2005).

One of the assumptions of the theory on reasoned behaviour is that except for unforeseen events people are rational and realise their intentions. In this regard, having more information at the time of intentions reduces the probability of facing unexpected events. Given the network effect migrants are well informed about employment and wage opportunities and about host countries' restrictions and that the only possibility is probably illegal emigration. Accordingly, in the context of emigration, this implies that migrants are less likely to be challenged by differences in information at the time of intentions and decisions. Most studies raise the issue of host countries' restrictions biasing immigration and implicitly acknowledge that illegal emigration is common as they consider the network effect to capture, among others, the effect of support in finding smugglers to facilitate illegal emigration (Germenji and Swinnen, 2005; van Dalen et al., 2005b; Gibson and McKenzie, 2011). However, they fail to recognise that migration decisions may also be based on information conveyed by networks about expectations regarding income and employment. Therefore, the selection bias common to analyses based on host country data as introduced at the beginning of this section is dampened or rendered inapplicable if illegal migration is common. This may also eliminate the difference between migration intentions and behaviour resulting from potential differences in information at the two stages of the decision-making process. Therefore, the theoretical framework of the household migration plan developed in chapter 3 assumes that households are aware of the potential for illegal emigration at the time of planning it.

### **2.4.2 Types of migration**

As explained in the introduction to this thesis, one of the objectives is to investigate the determinants of the optimal migration duration deploying the household approach. For this purpose, the model on the applicability of the household approach in the context of the determinants of the propensity to emigrate for economic reasons is extended in chapter 4 to examine the

determinants of the optimal migration duration. Accordingly, in this thesis migration is considered as a dynamic rather than a static decision. This phenomenon, as explained below, has belatedly been recognised by the migration literature.

The studies reviewed in the previous sections address the determinants of emigration within a static, utility maximisation framework, considering the decision to emigrate as being a one-off decision to move following a utility-maximising strategy. Accordingly, migration is considered to be permanent. Migration economics studies eventually recognised that despite persisting wage differentials both temporary and circular migration occurred (Dustmann, 2001; Dustmann and Weiss, 2007). Azzari and Carletto (2009) argue that modelling emigration within the dichotomous choice framework ignores the dynamic and repetitive nature of a significant component of the migration process and therefore may be limited and misleading. Accordingly, several authors extended the theoretical framework to consider migration as a dynamic process within an optimal lifecycle framework. Within this strand of literature there are differences between studies in their theoretical approaches. Early studies, employing the optimal lifecycle approach modelled emigration and return as one decision and focussed exclusively on its determinants (Borjas and Bratsberg, 1996). The approach was later amended to address the optimal length of stay abroad (Djajic, 1989; Dustmann, 2001; Dustmann and Kirchkamp, 2002). This approach has been further enriched to integrate the possibility of remigration, that is, repeat emigration into the decision (Azzari and Carletto, 2009; Vadean and Piracha, 2009). These different conceptual frameworks are considered below in the same order. Unlike for the decision to emigrate, a detailed critical review of the empirical approaches deployed in investigating return migration is not provided here. This is because it is taken up in chapter 4 where the migration duration decision is conceptualised within the expected utility maximisation framework from which an empirical proposition is derived and estimated. Circular migration is not common among KS Albanians for reasons provided in chapter 1 and is therefore out of the scope of this thesis. So, although it is briefly introduced the conceptual and empirical frameworks applied to investigating circular migration are not included in the discussion.

In the context of human capital theory, Borjas and Bratsberg (1996) use the optimal lifecycle residential location sequence framework to model migration as a reversible decision where migrants consciously and simultaneously plan to move abroad and return after fulfilling their savings target considering both migration and remigration costs. Alternatively, return may be the result of the migrant failing to achieve their planned target due to the uncertainty about economic conditions abroad. The aim of this analysis is to identify the self-selection process underlying return migration. The same approach is followed by Lacuesta (2006). Stark (1995) takes a slightly different approach in that he addresses return migration from the perspective of host country employers' information asymmetry where migrant workers are unable to gain premiums for their education and skills developed in the home country, providing different reasons for return. The author points at the possibility that the reason for return is that the migrant has facilitated high return investment at home by others, rather than the migrant accumulating capital with an expected high return at home. Another reason, according to this study is the higher purchasing power of the savings accumulated abroad. In his earlier study, Stark (1995) explains return as the result of migrants having become less relatively deprived within their reference group in the home country as compared to that in the host country. Yet another explanation is provided in Djajic and Milbourne (1988) who allow for location-specific preferences to influence the return decision. Within this conceptual analysis elaborated in Borjas and Bratsberg (1996) the migrant chooses the sequence of residential options that maximise his/her benefits net of migration and remigration costs. Accordingly, the migrant emigrates if the expected wage from permanently emigrating or the expected wage from moving abroad for a limited time period is higher than the actual wage in the source country net of the migration and remigration costs. Once a migrant, return is realised if the opportunities in the home country - either in terms of the wage in the home country or the gain in wage in the home country from a temporary stay abroad - are better than the actual income available in the host country net of emigration and return migration costs. Other studies modelling the probability to return but with a slightly different focus include Galor and Stark (1991), Waldorf (1995), de Coulon and Wolff (2006) and Sanders (2007).

The limitation of constant migration costs across migrants assumed in the previous model on emigration (Borjas, 1987) applies to this approach too. Another assumption is that the migrant is considered to be risk neutral, that the return to human capital accumulated while staying abroad is constant among migrants, while discounting is also ignored. Borjas and Bratsberg (1996) argue that the migrant is modelled to return after either having failed in the host country or after having accumulated sufficiently large levels of savings. The second argument is, however, not clearly formulated. If migrants return after having reached their savings target, they would return even if the wage differential in favour of the host country prevails, though this is not made clear in the conceptual framework. Another limitation of this model is that it ignores the relevance of time for the return decision. If the reason for emigration is related to a savings target time is an important determinant of the return decision. This is because due to employment and earnings abilities some migrants may never be able to accumulate enough savings and therefore not return. In this context, differences in migration and remigration costs among migrants as well as in returns to stays abroad are relevant too. However, considering the time relevance within this model is rendered impossible because the model assumes constant migration and remigration costs and constant returns to the stay abroad among migrants. There are other studies that investigate the determinants of the return decision (Waldorf, 1995; de Coulon and Piracha, 2005; de Coulon and Wolff, 2007; Sander, 2007).

To fill the gap resulting from ignoring the relevance of time in the return decision, some studies conceptualise the return decision in terms of migration duration, rather than the probability of return (Djajic and Milbourne, 1988; Dustmann, 2001; Carrion-Flores, 2006; Dustmann and Weiss, 2007; Gundel and Peters, 2008; Azzari and Carletto, 2009; Gaule, 2011). The first three studies provide a conceptual analysis in addition to the empirical investigation of the determinants of migration duration. For illustration the theoretical approach in Dustmann (2001) is discussed below. The conceptual framework in Carrion-Flores (2006) is identical to that in Dustmann (2001) but does not report that it is based on that model.

The former study models the individual decision to return home by weighting the benefits of staying for another period against the costs of it. This is then maximised given a budget constraint using a utility maximisation framework. Individuals optimise their migration duration conditional on wage differentials, consumption preferences, relative price of consuming in the host country and cost of migration. The author hypothesises the wage differential to have an ambiguous effect on migration duration. Given the relative wage effect, an increase in the wage differential has a positive impact on the marginal benefit of staying in the host country increasing migration duration. The income effect, however, has the opposite effect. Because wage differentials increase the lifetime wealth of migrants, due to the decreasing marginal utility from wealth the incentive to stay for another period abroad decreases. Given this ambiguous effect, wage alone cannot determine the duration of stay and therefore additional determinants are assumed to be at work. So, the study assumes a relatively higher preference for consumption at home and a relatively higher purchasing power of the host country currency at home in the model of optimal migration duration. Accordingly, migrants may return despite the more favourable economic conditions in the host country because of their relatively higher preference for consumption in the home country and because of the higher purchasing power of the host country currency at home. The migrant benefits from remaining an extra time unit abroad due to the assumed positive wage differential in favour of the host country, and/or preferences and favourable relative prices. So, the migrant's lifetime wealth increases with each additional unit of time abroad. The cost the migrant incurs consists of the forgone utility resulting from not being able to consume at home. This is positive given the assumption about the migrant preferring consumption at home or the assumption about the higher purchasing power of the host country currency at home, or both and increases in total time spent abroad. Hence, the optimal duration of migration is achieved when the expected total benefits equal the total costs of staying one extra time unit. As in the static models of migration and previous dynamic models of return, both Dustmann (2001) and Carrion-Flores (2006) ignore discounting. However, unlike Borjas and Bratsberg (1996) they introduce heterogeneous migration costs among migrants. This model is extended in Dustmann and Weiss

(2007) introducing the impact of human capital. They argue that return migration may be a result of the return to the human capital acquired/accumulated in the host country is higher in the home country. This study too ignores discounting. Other studies, employing this approach investigate the optimal length of stay abroad by allowing for different activity choices upon return to the home country (Dustmann and Kirchkamp, 2002). A similar approach is taken by Piracha and Vadean (2009) and Borodak and Piracha (2010) who allow for the possibility of jointly deciding on return and activity choice but ignore the length of stay abroad. However, this is not discussed here given that it is out of the scope of this thesis.

An important limitation of studies modelling the optimal migration duration, as raised by Vadean and Piracha (2009), is that they ignore temporary migration. Azzari and Carletto (2009) also recognise the circular nature of some migration in terms of migrants remigrating to the host country after having spent time abroad. However, in their empirical analysis they ignore this issue and investigate the determinants of the optimal migration duration. A recent study in migration economics, considering migration as a selective process has moved from understanding conceptually and empirically the selection process guiding emigration and return migration to the self-selection characterising circular/repeat migration (Vadean and Piracha, 2009). Following the approach in Hill (1987), they use the utility maximisation framework to model the decision of repeat migration as integral to the initial migration decision. In this context, given the wage differential in favour of the host country and the preference for living in the home country, the migrant maximises utility by choosing the optimal amount of time spent abroad and the frequency of trips conditional on a time path of residence in the home and host country. Next, the authors amend the model to allow for uncertainty and information asymmetry about prospects in the destination country while at home and about prospects in the home country while abroad. Accordingly, the migrant while abroad makes the return decision. Upon return, the migrant decides on remigration. The reasons for this may include re-integration problems, failure to find a suitable job or the need for additional capital for the business started after return (Vadean and Piracha, 2009).

All the studies focussing on return migration or circular migration take either the individual or the eclectic approach to model the decision. To fill this gap, in chapter 4, return migration is modelled using the expected utility maximisation framework from the perspective of the household. As explained above, given that circular migration is not common among KS-Albanian migrants, the exclusive focus in chapter 4 is the investigation of the determinants of the probability to emigrate conditional on the length of stay abroad.

## **2.5 Concluding Remarks**

This chapter provides the foundation for the analyses in the next chapters of this thesis in that it identifies the gaps in the literature through critically reviewing it. According to the critical review, there are two major strands of literature on the migration decision, the individual and the household approach. However, these provide only limited conceptual frameworks and are based on different decision-making contexts. So, no fully articulated model on the decision to emigrate has yet emerged in the literature. Therefore, no strong theoretical basis is provided for the choice of independent variables in favour of the empirical models. To fill this gap in the literature, in chapter 3 an initial theoretical framework based on the household utility maximisation framework is outlined. This is then transformed into a model suitable for estimation using Kosovan data.

Although there is a lack of a sound theoretical basis for the inclusion of independent variables, their theoretical rationales and the respective definitions according to the two major conceptual frameworks and their respective extensions are also critically reviewed. It is concluded that there are inconsistencies among the studies with respect to all variables proxying household characteristics, both in terms of theoretical explanations and definitions. The same holds also for the network variables. However, studies introducing community characteristics hypothesise their impact in broadly the same manner. Yet, aiming, at best, representing the idiosyncrasies of the countries these studies introduce different community characteristics. Hence, there are inconsistencies regarding their definition. Additionally, a detailed comparison of the empirical findings is



conducted. This suggests differences between the studies for all independent variables. Given the lack of a coherent conceptual framework, inconsistencies in the theoretical expectations and the definitions of the independent variables, a lack of consistency in empirical findings is to be expected.

Given the relevance for chapter 3, which specifies and estimates the model of households' migration intentions, in this chapter the potential similarities/differences between the determinants of migration intentions and actual migration behaviour are examined. From the critical review it can be concluded that intentions are the proximate theoretical determinant of behaviour conditional on facilitating and/or constraining factors. In that section two advantages of using intentions data are identified. The first advantage is that the use of intentions data eliminates the problem of self-selection bias resulting from host countries' migration policies. However, given that networks may also convey information about possibilities for illegal migration eliminating the difference between migration intentions and behaviour the selection bias is rendered inapplicable. Accordingly, the conceptual framework outlined in chapter 3 is based on the assumption of households being informed about the potential for illegal migration. A second advantage is that the use of intentions data renders endogeneity between income and migration inapplicable.

## CHAPTER 3

### THE PROPENSITY TO EMIGRATE

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#### Contents

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#### 3.1 Introduction

As elaborated in chapter 1, despite its robust economic development in the aftermath of the 1998/99 war the Kosova economy still faces challenges linked to its past. It has a depressed labour market with the highest unemployment rate, 40 per cent, in the region. Furthermore, 45 per cent of its population live under the poverty line (World Bank, 2007a) and a low coverage and low level of social assistance per recipient household persists. Consequently, it is no surprise, that the dissatisfaction with their household's current economic situation is a major reason for emigration among KS-Albanians (Kosovar Albanian).

In chapter 2 it is concluded that no coherent conceptual framework of the decision to emigrate has yet emerged in the migration literature. To explore how this gap in the literature may be filled, in this chapter a model of a household intending to send at least one or one additional member abroad for economic reasons is developed in a broader unitarian (neoclassical) approach and estimated. Within this framework, the plan to emigrate is considered to be based on a household decision-making process where the household, as a whole, seeks to

maximise its expected present value of utility, subject to its income constraint. In this approach the household is assumed to have its own utility, though the decision process which lies behind the household's emigration decision remains a 'black box'. The outcome of this maximisation problem differs between: a) the household intending to send at least one or one additional member abroad or b) the household not intending to send any or any further members abroad for economic reasons. So, this analysis ignores the second stage of the decision making process of which member of the household should be sent abroad. It assumes that the decision-making processes in the two stages are independent. The model has been customised to reflect the peculiarities of the socio-economic conditions prevailing in Kosova in 2007 and 2008.

Empirically the choice between the two alternatives is examined using a probit specification. The determinants of the intentions to migrate are summarised into three groups representing the characteristics of households (including pecuniary income), determinants of psychic income and the household's present location. The data set on which the estimation is based is from a random sample survey of 1,384 Kosovar households conducted in 2007. The data set has a significant proportion of missing observations, hence basing the empirical analysis only on observed data may cause a loss of efficiency and possible biases. Therefore, Multiple Imputation, a method for handling missing data, is undertaken and the ensuing results compared with the case where only observed data are considered.

The chapter is structured as follows. The first part introduces a critical review of the models used previously in analysing the propensity to emigrate and summarises their main empirical findings. Section three gives an overview of the survey and data. In this section, a theoretical model of the determinants of the intentions to emigrate is outlined. From this, in section four, an econometric model is specified which estimates the probability of economic emigration, conditional on the impact of remittances and other possible determinants. Results are compared with results from Multiple Imputation in part five and conclusions are provided in the last section.

## 3.2 The theoretical framework

According to the critical review in chapter 2, there are several conceptual approaches to modelling the migration decision and there has yet not emerged a coherent conceptual rationale underpinning the household approach. Consequently, there are inconsistencies regarding the theoretical rationales for the inclusion of independent variables and hence regarding model specification. Given the lack of a fully articulated theoretical framework in the literature, in this chapter a conceptual framework is outlined based on the household perspective to model households' emigration intentions. Prior to theorising the decision to emigrate, to provide a priori case for examining the applicability of the household perspective, a critical review of the literature on the structure and nature of KS-Albanian households is provided.

Since the seminal work of Samuelson (1956) there has been considerable theoretical and empirical debate on the appropriateness of using households as the decision-making unit and representing the utilities of household members by one single household utility function as in the traditional unitarian approach. Samuelson (1956), opposing this approach, considered the family utility function as a weighted function of family members' individual preferences where the household maximises joint utility by taking account of its members' individual preferences. Within this framework the household is assumed to reach consensus in the decision-making process.<sup>1</sup> The collective model introduced by Chiappori (1992) in his theoretical analysis of labour supply is a similar approach. He opposes the traditional view on the grounds that it fails to conform to the basic principles of microeconomic analysis according to which individuals need to be characterised by personal preferences. Also, he argues, it fails to model the internal decision-making processes, that is, it considers the intra-household allocation to be even. According to him, this assumption is unrealistic and there is no supporting evidence. To overcome these shortcomings his collective model allows individuals to maximise their utilities and at the same time achieve Pareto efficiency in collective decisions. The whole

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<sup>1</sup> He considered it more realistic to assume that there is family consensus, rather than assuming that one member has dictatorial power in the decision making process.

decision process is based on a predetermined sharing rule, which the author does not define but argues that it may depend on the “cultural environment, the weight of tradition,...” (Chiappori, 1992, p. 443). So, there is cooperation among household members, who based on a rule of altruism or coercion maximise their individual utilities making the household decision Pareto efficient. The author considers both the case when individuals are egoistic and altruistic. Altruism in this intra-household resource allocation model is introduced using Becker’s “rotten kid theorem” where household joint income maximisation is achieved even if only one of the household members is altruistic. According to Chiappori (1992), the theoretical solution will be similar for both egoistic and altruistic household behaviour. Using Canadian family expenditure data Browning et al. (1994) show that households do not act as if they were maximising a single criterion. They found that intra-household sharing depends on the differences in age and income of household members, and on household wealth, which they argue supports Chiappori’s caring/ collective model. The approach of modelling intra-household decisions can be extended to the bargaining approach. This is based on the assumption that the household decision-making process is a negotiation process where household members bargain/negotiate and reach a compromise. The benefits to household members from maintaining the unity of the household consist of the consumption surplus, derived from economies in consumption, and the insurance surplus, derived from altruism within the household. In this regard, the household represents an insurance institution for its members based on their mutual promises of support substituting for market insurance. Members also benefit from psychic income. According to this approach, it is the commitment to mutual support that maintains the cohesion of the household.

According to Rrapi (1995)<sup>2</sup>, KS-Albanian households are usually extended households, consisting of more than one nuclear family and sometimes of up to 40 members. KS-Albanian households constitute predominately stable institutions within which home production and labour are performed jointly and assets are

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<sup>2</sup> Rrapi (1995) focuses on the extended KS-Albanian family, which consists usually of more than one nuclear family. Nevertheless, this does not alter the support his findings provide to the approach used in this analysis.

shared. Furthermore, the household as a unit jointly offers protection and defence for all its members. The author argues that common ownership of property means that risk is pooled within the household. These findings about social relations and the system of values within KS-Albanian households support the hypothesis that in these households, decisions are taken at the household level. Given this, it seems sensible to assume the household, as a whole, to be the elementary decision unit and represent its utility by a unique utility function, which is maximised subject to the household income constraint when analysing the emigration plans of KS-Albanians.

Given the above arguments about social relations within KS-Albanian households, in this conceptual framework the household has a broader definition compared to that usually used in the new economics of labour migration. The household is defined as consisting of both members living in Kosova and those abroad. The implications of this for the definition of other variables is illustrated in the following example: the variable share of those under the age of 16 (TSU16) is defined as the number of those under the age of 16 living in Kosova and those living abroad divided by the number of household members living in Kosova and those abroad. So, in this specification the variables are based on the whole household, which consists of both members living in Kosova and abroad (see Table 3.4 for variable definitions).

As introduced in section 2.4.1, this analysis investigates the determinants of ex-ante economic emigration, namely household plans to send at least one member abroad for economic reasons. Given the discussion in section 2.4.1, it can be argued that these may differ from the determinants of realised economic emigration because the characteristics of households, which would like to send a member abroad, may be different from those of households that manage to send members abroad. Households, which ex-ante would consider emigration, due to entry barriers and the high cost of illegal migration resulting to some extent from the former, may not ex-post actually send a member abroad. However, rationally households when making plans to emigrate should explicitly consider these barriers suggesting that there should be no deterministic differences between ex-ante and

ex-post emigration. Based on evidence provided in chapter 1, amongst KS-Albanians, especially after the 1999 War, there has been widespread experience of emigration, and information about emigration barriers is widespread amongst the population. There is a lately launched saying in Kosovar society that “Kosova is the only place, which you can enter without a visa, but not leave without visa”. Given this, the assumption that households are well-informed about emigration barriers at the start of the decision making process would seem appropriate.

Following Deaton and Muellbauer (1980), this analysis expects households to differ in their emigration behaviour as a result of their different characteristics, such as size, educational attainment, age composition and other characteristics. This forms the basis of the model developed below.

### **3.2.1 The household utility maximisation framework**

The basic model of a household planning with respect to sending members abroad is based on the expected utility maximisation framework, where the household as a decision-making unit tries to maximise utility from consumption, including in its choices the possibility of sending at least one or one additional member abroad. So, the assumed objective here is the maximisation of the total expected present value of household utility from current and future consumption at home and abroad. Given this, it is assumed that the decision whether to send part of the household abroad is a joint household decision. This strategy implies an increase in the lifetime utility of those who have to move due to wealth transfers within the household discussed in the previous section. However, it would not necessarily imply an increase in the individual lifetime utility of movers if they were not part of the household. The household as the decision-making unit analyses both the positive and negative impacts of alternatives on all household members prior to making its decision. Hence, it only chooses to send members abroad if the resulting positive effects offset the negative effects, that is, if total expected utility is higher than if that member remained in the resident household. Households are considered to be risk-averse which will affect their utility and this assumption is incorporated into the analysis.

Following the above and as introduced in section 3.1, this theoretical framework is based on the household approach and is concerned with only one stage of the decision-making process, that is, whether to send a member abroad for economic reasons. As such, it ignores the second stage of the decision-making process on which household member/s should be sent abroad. In doing so, this theoretical framework is assuming that these two stages are independent. Additionally, the conceptual framework is customised to reflect the socio-economic idiosyncrasies prevailing in Kosovo during the period of investigation. As such, certain characteristics and assumptions may not apply or may need amending if the model were to be applied to another country.

Let  $H_i$  with  $i = 1 \dots n$  be the household in the home country  $h$  that has the opportunity to send at least one member to a destination country  $d$  for economic reasons. The household utility is assumed to be additively separable over time and future utility is discounted. Hence, the household is assumed to consider both current utility and future values of the stream of expected utility under the two alternatives when planning to send a member abroad. Thus, it is the sum of the expected, discounted utilities from consumption that motivates households and the objective of this analysis is to investigate the determinants of whether households plan to send at least one member abroad. Within this scenario, households are assumed infinitely lived. Hence, in case of retirement of the emigrant/s, the household may decide to substitute her/him with another household member. Given this and that the focus of the analysis is whether or not the household plans to send at least one member abroad for economic reasons, and not the duration spent abroad, the length of stay is assumed not to be relevant. Household utility is assumed to be independent of the intra-household distribution of consumption as the household utility is the sum of individual utilities.

So, the household lifetime utility function is as follows:

$$\sum_{t=1}^{\infty} (1+i)^{-t} U_i(c_t) \quad (3.1)$$



where  $U_i(c_i)$  denotes the expected utility from consumption  $c_i$  of the household, including both members remaining home and those abroad  $i=1, \dots, n$ . The term  $(1+i)^{-t}$  denotes the discount rate where  $i$  is the rate of time preference and  $t=1, \dots, n$  denotes future time.

Consumption is considered to consist of two components. The first is the total expected household consumption of goods and services. The second comprises psychological consumption, that is, the consumption of personal relationships and reduction of risk, which is considered in more detail below. Given that income constrains the consumption of goods and services, the former will be a function of income:

$$c_i = f(Y_i) \quad (3.2)$$

where  $Y_i$  denotes total expected household disposable income.

As introduced above, the household maximises the expected present value of utility from current and future consumption:

$$\max E_{t=1}^{\infty} (1+i)^{-t} [U_i(c_i)] \quad (3.3)$$

subject to the income constraint:

$$\sum_{t=1}^{\infty} (1+i)^{-t} c_i \leq \sum_{t=1}^{\infty} (1+i)^{-t} y_i \quad (3.4)$$

This varies according to two alternatives facing the household: 1) the household may plan to send at least one or one additional member abroad for economic reasons, or 2) may not plan to send any member or any further member abroad for economic reasons. Hence, the utility function takes the following form:

$$\sum_{t=1}^{\infty} (1+i)^{-t} U_i(c_i) = \sum_{t=1}^{\infty} (1+i)^{-t} U_i(c_j) + \sum_{t=1}^{\infty} (1+i)^{-t} U_i(c_k) \quad (3.5)$$

where  $U_i(c_j)$  and  $U_i(c_k)$  denote the expected household utility from consumption  $c_j$  at home and from consumption  $c_k$  abroad.

Under alternative one, the second RHS term is positive, under alternative two it is equal to zero.

Disposable income is the sum of after- tax wage and psychic income adjusted for migration costs:

$$Y_i \equiv py_i + psy_i - mm_i \quad (3.6)$$

where  $py_i$  denotes total expected household pecuniary income after tax which includes both the household income of those remaining at home and the income of the emigrant/s,  $psy_i$  denotes total expected household psychic income and  $mm_i$  denotes total household costs of emigration. In what follows, four scenarios will be presented in order to show the changes in migration costs and psychic income of different household emigration plans. The household may or may not have and/or be planning to send a member abroad which gives four combinations. Given this, psychic income and migration costs in the above identity take different values (Table 3.1).

As shown in the table above, if the household has no member abroad and does not plan to send a member abroad  $mm_i=0$ , under all other three scenarios  $mm_i>0$ . Under the third scenario,  $mm_i>0$  because, as will be explained below, migration costs are modelled as consisting of both a one-off cost and continuing costs. Psychic income also varies across these different combinations. It does not change if the household does not plan to send a member abroad and decreases if it does, irrespective of whether it already does or does not have members abroad.

**Table 3.1 Migration costs and psychic income by different scenarios of household emigration plans**

Scenario	Household has members abroad (yes/ no)	Household plans to send at least one member abroad for economic reasons (yes/ no)	Migration costs, $mm_i$	Psychic income, $psy_i$
1	No	No	0	Remains the same
2	No	Yes	>0	Decreases
3	Yes	No	>0	Remains the same
4	Yes	Yes	>0	Decrease

## Pecuniary Income

Higher pecuniary income increases the total expected utility, as utility from consumption of goods and services increases with the expected increase in household income after sending a member abroad.

Pecuniary income here consists of three different income sources: household disposable income of those working at home, household disposable income of working emigrant/s and government transfers.

$$py_i \equiv N_j w_j + N_k w_k + T_i \quad (3.7)$$

where  $N_j w_j$  and  $N_k w_k$  denote household disposable income of those employed at home and abroad, with  $N_j$  being the number of those employed at home and  $w_j$  their wages and  $N_k$  being the number of those employed abroad  $w_k$  their wages.  $T_i$  represents government transfers.

Government transfers are estimated as follows:

$$T_i \equiv S_i * S65_j * t \quad (3.8)$$

where  $S_i$  is household size and  $S65_j$  is the share of household members aged 65 and over at home and  $t_i$  stands for transfers.<sup>3</sup>

In what follows, the focus of the analysis is to model total household disposable income of those remaining at home and those who leave. However, household characteristics do not directly impact on the wage offered to individuals and therefore the analysis starts with the Mincer (1974) earnings function. In general, wages for economic migrants in destination countries are higher than those at home, though Borjas and Bratsberg (1996) explain that returns to each of the characteristics at home may be different from returns abroad, partly because household members face greater uncertainty with regard to economic prospects in the host country. Differences are also a result of the different relative demand and supply of educated labour in the two countries. Furthermore, for reasons given in

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<sup>3</sup> Given that the conceptual approach is customised to reflect the socio-economic characteristics of Kosova, use is made of the peculiarities of the safety net prevailing in Kosova. Transfers in Kosova include the social assistance for poor households, pensions to those aged 65 or over, pensions to those who have worked prior to the 1990s and social assistance to war veterans and their families.

Chapter 2, the transnational transferability of pre-emigration skills acquired through schooling, experience and on-the-job-training is imperfect (Brzozowski, 2007; Nielsen, 2007; Chiswick and Miller, 2009). Job-specific skills are generally less transferable internationally than generic skills and knowledge (McKenzie, 2008, Chiswick and Miller, 2009). Hence, labour market returns from schooling and experience in the home country are different from those in the host country. To control for these differences, two separate earnings equations are specified, one for those employed in the home country and one for those employed abroad.

The expected lifetime earnings equation for domestic employment is as follows:

$$\sum_t (1+i)^{-t} \ln w_j = \sum_t (1+i)^{-t} (\alpha_1 + \alpha_2 s_j + \alpha_3 x_j + \alpha_4 x_j^2 + \alpha_5 RU_j + \alpha_6 TA_j + u_j) \quad (3.9)$$

and the expected lifetime earnings equation for foreign employment is:

$$\sum_t (1+i)^{-t} \ln w_k = \sum_t (1+i)^{-t} (\beta_1 + \beta_2 s_k + \beta_3 x_k + \beta_4 x_k^2 + v_k) \quad (3.10)$$

where  $\ln w$  is log earnings and it is assumed to be a function of educational attainment,  $s$ , and experience,  $x$  of those employed.<sup>4</sup> However, wages are assumed to increase non-linearly with schooling levels (Heckman et al., 2003).<sup>56</sup> Experience,  $x$ , too is assumed to have a nonlinear positive impact on wages, therefore both experience and its square is introduced. For reasons explained in section 2.2.2, there are differences in returns to both skills and experience between the host and home countries. It is conventionally assumed that there may be gender differences in returns to each of the variables introduced in the earnings equation. Oaxaca

<sup>4</sup> This analysis assumes that all individuals will be employed upon emigration.

<sup>5</sup> This analysis assumes that quality does not vary between school establishments.

<sup>6</sup> Educational attainment has a positive impact on wages (Mincer, 1978). However, educational attainment is positively correlated with ability, implying that increases in returns to education are partially a result of increases in returns to ability (Heckman and Vytlačil, 2001). Given that the basic Mincer equation fails to control for ability it leads to endogeneity as education is correlated with the error term. Hence, it causes an upward bias in returns to education, but here the concern is with the estimated earnings rather than the coefficients on the elements of the Mincer equation. However, there is an opportunity cost between household income and years of schooling of household members as more years of schooling of household members imply higher forgone household earnings and higher education expenditure. Hence, household education decisions are constrained by household income and preferences (Becker, 1991). Therefore, the education decision and household income are endogenous.

(1973) runs separate equations for males and females and finds that there are gender differences in returns to each of the variables introduced in the Mincer equation. For simplicity, the current analysis does not introduce separate equations, however it is assumed that households consider that female members employed will earn less than their male members and thus differences in household gender composition might affect aggregate household income. Differences in household earnings due to the gender composition of those employed will be introduced in equation 3.11 by the term  $SFWA_j$ , which represents the share of females of working age. Female household members are offered lower wage rates and therefore, the higher the share of females the lower household earnings, all else equal.

Differences in employment opportunities can be expected between rural and urban areas and also among the seven regions in Kosova. In addition, according to the “wage curve” the higher the unemployment rate in the region/area the lower is the wage rate, all else equal (Blanchflower and Oswald, 2006). If wages are determined within the labour supply and demand framework then this negative relationship may be anticipated. Assuming that the discouraged worker effects are similarly distributed across the regions, the higher the unemployment rate the higher is the excess labour supply and the lower the relative availability of jobs. Therefore, the bargaining power of employees is relatively lower resulting in employers managing to attract workers at lower wage rates due to the lack of alternative job opportunities. The importance of these differences in the KS-Albanian context is explained later in this section.

Following the above, all else equal, the actual Mincer relationship changes with the type of area (urban or rural) controlled for by  $TA_j$  and regional unemployment rate represented by  $RU_j$ . The terms  $u_j$  and  $v_k$  are the random error terms. The latter is assumed to be greater due to imperfect information and/or luck, which is unknown unless the individual emigrates. The subscripts  $j=0, \dots, n$  and  $k=0, \dots, n$  stand for household members remaining at home and those leaving, respectively. The prevalent currency both at home and abroad is assumed to be the Euro, given that this is the legal tender in Kosova.

Prior to introducing the determinants of household wage income, the impact of remittances on household utility is elaborated. Within this framework, remittances as part of household income may relax the budget constraint increasing household utility. In addition to this income effect, given that remittances have a different source of risk compared to income at home they may reduce overall perceived risk. Thus, remittances may have a further positive impact on the expected utility of risk-averse households.

As household wage income consists of the earnings of those employed it will depend on household demographic characteristics and location related characteristics which determine the number employed at home and abroad

$$N_j + N_k = n(S_i, SWA_i, SFWA_i, St_i, RU_i, TA_i, \varepsilon_i) \quad (3.11)$$

where  $SWA_i$  and  $St_i$  denote the share of household in working age and the share of students in the household. Other terms are as previously defined.

Subject to the number of household members of working age being:

$$N_j + N_k \leq S_i * SWA_i \quad (3.12)$$

where the LHS when added together gives the total household labour supplied. The household demographic structure is seen to affect the labour supply by the household in various ways. Firstly, there is the number in the household of working age (that is, excluding children under the age of 16 and those over the age of 65), which is considered to positively impact on the number of those in employment and hence income, all else equal. The gender composition of those of working age,  $SWA_i$ , has an important impact on household employment. The share of females of working age,  $SFWA_i$ , is assumed to have a negative impact on the number of those employed. As well as their lower wage offer rate, a reason behind this is the traditional nature of KS-Albanian households where females are assigned the tasks of child rearing and dependent care. Hence, their reservation wages, given household characteristics, may be higher than those of males, all else equal. Furthermore, the productivity of females in home production increases with the number of dependents due to economies of scale (Lokshin and Fong, 2006).

Consequently, their reservation wages are a positive function of the number of dependents relative to the number of females in the household. Hence, they are less likely to be employed than males, all else equal. Another reason is that females may have a lower probability of getting employment due to labour market discrimination. Currently, females make up only 20 per cent of those employed in Kosova.

Those under the age of 16,  $SU16_i$ , are assumed to be in education and therefore not in the labour force. This assumption is based on two facts. In Kosova, children under the age of 14 are by law not allowed to work. Additionally, net enrolment rates in Kosova for those aged 6 to 15 are estimated at around 90 per cent. So, they would more likely be using household income for investment in education than earning income for the household. This changes the allocation of income in favour of education investment increasing the household need for income. The share of those over the age of 65 has a similar impact on household labour supply. However, as explained above, contrary to the first category, they contribute to household pecuniary income through government transfers. Furthermore, these two categories are considered as dependents within households. As explained in the previous paragraph, they may also have an indirect negative impact on  $N_j$  through adding to the workload of females increasing their reservation wages.

Students,  $St_i$ , are of working age but given that they are attending post-compulsory education they probably do not contribute to household labour supply and thus, not to household earnings. Therefore, the number of students has a negative impact on  $N_j$ . The number of students raises another perspective into the model, that of household liquidity constraints for investment in education which then impacts on the probability of gaining future employment and also on wages through increased human capital. Individuals are time-constrained: the allocation of time to schooling reduces the current time available for work. Hence, pursuing post-compulsory education can result in forgone earnings and lower current household income. Post-compulsory education implies also direct costs. Therefore, household members in post-compulsory education have a higher cost, that is, they are more

expensive than those not pursuing post-compulsory education, all else equal. This sharpens the household short-term budget constraint, increasing the need for household earnings and possibly imposing restrictions on further investment in education. Under the assumption that some households lack the ability to cover these costs they rely on the credit market (Rapoport and Docquier, 2005). However, developing countries, such as Kosova, are characterised by capital market imperfections where credit institutions typically impose collateral conditions as an insurance against defaults in repayment. The degree of credit market imperfection for education loans is sharpened by investment in human capital being relatively risky. Human capital is an important source of risk in the allocation decision due to it being an illiquid asset (Schwartz and Tebaldi, 2006). It is a non-tradable good, which has a future dividend in the form of labour income. Given the uncertainty of employment, labour income, working life, possible asymmetric information and the illiquidity of human capital it cannot be used as collateral in loan arrangements. This imposes constraints on households' borrowing opportunities or even makes it impossible for some to have access to loans for such investments. Thus, capital market imperfections lead to underinvestment in education and increases in labour supply. Therefore, having students in the household may increase the need to rely on economic emigration in order to finance other members' education as part of household's long-run decision-making.

As explained above, differences in the household labour supply may also be apparent by type of area,  $TA_j$ , that is, rural or urban, and regional unemployment rate,  $RU_j$ . In chapter 1, it is shown that there are significant socio-economic differences between the seven regions and between rural and urban areas in Kosova. The development of non-agriculture sectors in rural areas is limited as the service sector, which is the most important sector in the Kosovan economy, is concentrated in urban areas. Furthermore, the agriculture sector is lagging behind in terms of development as a result of a lack of investment and technology enhancements due to which it cannot compete with cheaper imports. Also, there



are differences in the unemployment rate among the regions.<sup>7</sup> Hence, employment opportunities and the probability of receiving wage income is lower in rural than in urban areas and lower in regions with a higher relative unemployment rate. Consequently,  $N_j$  is expected to depend on the type of area,  $TA_j$ , and the regional unemployment rate,  $RU_j$ .

As argued at the beginning of this section, the model assumes households to be risk averse. Given that all household members share the same labour market in the home country, irrespective of whether employed or unemployed they all share the same income risk source. Under credit market imperfections, which are more prevalent in less developed countries, households generally lack risk-mitigating devices such as insurance. According to the economics of risk, if household members face statistically independent economic risks then the costs of risk-bearing are lowered through risk-sharing among household members (Milgrom and Roberts, 1992). Stark and Bloom (1985) argue that the cost of risk sharing is also reduced when the correlation between risks of household members is negative, or not highly positive. One strategy, which allows for statistical independence of risk for household members, is emigration. In this case, part of the household would enter a foreign labour market, while the rest would remain in the home country labour market. Thus, the household, which shares the risk, diversifies the risk portfolio and benefits in the reduction of the cost of risk bearing. Therefore, risk-averse households may have a higher incentive to choose to send at least one or one additional member abroad as a means of reducing the cost of risk, all else equal.

### **Psychic Income**

The second component of the income identity (3.6) is psychic income. Given the household approach, changes in psychic income are a result of both the effect on household members remaining at home and of those of the emigrants. Unlike in other studies, which consider this effect as psychic cost, in this analysis it is introduced as psychic income but has broadly the same effect.

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<sup>7</sup> This dataset does not provide information on wage offers by region. Therefore, to control for regional differences regional unemployment rates have been included in the theoretical and empirical model.

$$\text{psy}_i = q(S_i, \text{Nuc}_i, e_i, L_i) \quad (3.13)$$

where  $\text{Nuc}_i$  is the number of nuclear families within the household,  $e_i$  is the share of household already abroad and  $L_i$  is the share of household planning to leave. Psychic income is assumed to be an increasing function of household size,  $S_i$ . However, this relationship is complicated because in addition to the size also the structure of the household in terms of the number of nuclear families is important. For example, if households are of equal size but one consists of just one nuclear family, the loss of social interactions perceived is higher than when the household has two or more nuclear families. This is because an additional pair of parents will be available to provide social interactions for the dependents compared to a family with only one pair of parents. Given this complicated relationship, both the household size and number of nuclear families are considered as important determinants of psychic income. The former is expected to have a positive impact on psychic income, while the latter is assumed to have a positive nonlinear impact on psychic income and through that on household utility. Psychic income is assumed to be a non-linear decreasing function of the share of the household already abroad and the share of those planning to leave as the household has to sacrifice social interactions with those abroad reducing household utility.

The same is true for the impact of  $e_i$  on psychic income. Household members, who emigrate, also experience disutility from having to leave their family behind. This type of disutility may be higher for emigrants and it adds to the total household disutility. Emigrants will have to sacrifice a higher proportion of psychic income due to consuming social interactions with a lower number of household members as compared to the remaining household, which usually comprises a larger proportion of the total household. Furthermore, additional disutility for leavers flows from the fact that they have to start a new life in a new country. As elaborated in details in section 2.2.3, this negative effect may be partially offset by the non-pecuniary positive effect of social capital abroad, that is networks,  $e_i$ . These include friends and/or other household members and may partially make-up for the lost household social interactions. Networks help reduce disutility from having to start a new life in a new place through their direct support in terms of finances,

accommodation and food. Also, networks are a source of important information on job opportunities which reduces uncertainty (Stark and Bloom, 1985) and may enhance economic performance abroad (Schuller et al., 2000). Given that networks consist of both friends and household members already abroad the term  $e_i$  has also a positive impact on psychic income. Despite the information and support provided by networks some level of uncertainty still exists ex ante. This reduces psychic income as households are considered risk averse.

### Emigration costs

Emigration costs are modelled by the following cost function:

$$mm_i = p_i(L_i rm_i, crm_i q(L_i e_i)) \quad (3.14)$$

where  $L_i rm_i$  and  $crm_i q(L_i e_i)$  denote the one-off relocation costs of the number of household members planning to leave and the continuing relocation costs of the number of those planning to leave and those already abroad. See the explanation of Table 3.1 for changes in migration costs by different scenarios of household emigration plans. Both costs have to be covered by the household when choosing to send at least one member abroad. In this regard, households are assumed to have perfect knowledge about immigration restrictions of host countries, which may even prevent emigration or lead to illegal migration, and of the cost of illegal migration. Also, the household has to forgo the benefits from economies of scale of living together as it has to run two separate households. This increases household costs both by adding to the one-off relocation costs,  $L_i rm_i$  and the continuing relocation costs,  $crm_i q$ . However, both  $L_i$  and  $e_i$  have a reducing impact on the continuing relocation costs due to economies of scale of living together abroad. Hence,  $L_i rm_i$  is a non-linear increasing function of  $L_i$  and  $e_i$ .

Given all the above, the household considers sending at least one or one additional member abroad for economic reasons only if the expected discounted utility under this alternative is higher than under the alternative of not sending at least one or another member abroad. The household then maximises the higher utility given the income constraint, which, as argued above, varies between the two alternatives.

The above elaboration implies that the probability of the household intending to send at least one member abroad depends on the following variables:

$$P_i(Y = 1|x) = r(Y_j, T_j, R_k, N_j, N_k, H_i, Loc_i, psy_i, mm_i, \omega_i) \quad (3.15)$$

where  $Y_j$ ,  $T_j$ ,  $R_k$  and  $N_j$  and  $N_k$  are defined above.  $H_i$  is a vector of household characteristics,  $Loc_i$  is a vector of variables related to the location of households at home,  $psy_i$  is a vector of variables representing psychic income,  $mm_i$  is a vector of migration costs and  $\omega_i$  is the error term.

Developing further the comparison between household and the individual view elaborated in chapter 2, the dependent variable in the latter approach is the individual's decision to emigrate. In the household view, the dependent variable is the decision of the household as a whole to send a member abroad. Here, an individual emigrates even if s/he does not maximise his/her own personal expected discounted utility, unlike in the individual approach. Household characteristics are now rendered important rather than individual characteristics. For example, household income (and share of those of working age who are in paid employment in the household) is important rather than the income (employment status) of the individual alone. The individual may not be in paid employment and, other things being equal, it may well be in his/her best interest to emigrate, but because the household pools and diversifies risk and provides coinsurance to all its members, what is privately optimal for the individual may not necessarily be optimal for the household given his/her role in household production, all else equal. The household income includes that earned by household members living abroad. With respect to the expectations related to the economic, demographic characteristics and the psychic income characteristics, these relate to the household view/characteristics rather than the expectations with regard to the individual economic situation alone, his/her age and attachment to the home country. A similar argument applies also to migration costs. Due to risk pooling both the one-off and continuing relocation costs of any household members planning to emigrate, rather than just those of the individual are considered important. Networks and the location related

characteristics are theoretically considered to have the same impact on the decision to emigrate within both frameworks. These are the only similarities between the two theoretical frameworks.

Unlike other studies reviewed in chapter 2, the coherent conceptual framework developed above provides a clear basis for choosing the independent variables. So, the next section translates the theoretical approach into an empirical proposition.

### **3.3 The empirical specification, survey and data**

Empirically we examine the choice between two alternatives, intending to send at least one or one additional member abroad for economic reasons or not, guided by the theoretical model elaborated above. This implies that the decision is binomial, that is, it is bounded between 0 and 1. Hence, the probit or logit specification can be used. Both likelihood functions are concave, that is, they have similar shapes, and they assume diminishing marginal magnitudes of partial effects.<sup>8</sup> The probit is marginally more leptokurtic and has a different variance from the logit. Therefore, their results are directly comparable only after mathematical calculations (Wooldridge, 2008). The predicted probabilities of the probit and logit are almost identical in the majority of cases; differences in results may arise only if observations are more concentrated in the tails due to the logistic distribution having flatter tails (Gujarati, 2009). In either model the error term is independent of the explanatory variables and symmetrically distributed around zero. In probit, the error term is assumed to be normally distributed. Although this assumption makes the analysis of several specification problems easier there are no clear criteria for the choice between the two models (Long and Freese, 2006; Wooldridge, 2008, p.532). Still, in the recent literature probit is favoured (Wooldridge, 2008). In this analysis the probit model is deployed.

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<sup>8</sup> Probit is based on the standard normal cumulative distribution, while logit is based on the logistic distribution (Gujarati, 2009).

The objective here is to derive the probability of the household intending to send at least one additional member abroad for economic reasons conditional on explanatory variables, which will be elaborated later:

$$P_i(Y=1|X) = P(U_{A0} \leq U_{A1}) = P(Z_i \leq \beta_i + \beta_i X_i) = F(\beta_1 + \beta_2 X_i) \quad (3.16)$$

where  $P_i = \Pr(Y=1|X)$  shows that the probability of an event occurring given the values of  $X_i$  and  $Z_i$  is the standard normal variable, that is,  $Z_i \sim N(0, \sigma^2)$  (Gujarati, 2009).  $P_i$  is the probability of intending to send at least one member abroad of household  $i$  with  $i=1, \dots, N$ , where  $N$  denotes the total number of households in the sample that choose between the two alternatives. A vector of observed explanatory variables describing household, regional and type of area characteristics is denoted by  $X_i$ .

The probit distribution function,  $F$ , has the following form:

$$P_i = \Pr(y=1|x) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\beta_1 + \beta_2 x} e^{-z^2/2} dt \quad (3.17)$$

where  $P_i$  measures the probability of the household sending at least one member abroad as compared to sending zero members abroad.

To get information about  $U_{A1}(c)$  and  $\beta_1$  and  $\beta_2$  the inverse of (3.13) is taken:

$$U_{A1} = F^{-1}(U_{A1}) = F^{-1}(P_i) = \beta_1 + \beta_2 X_i \quad (3.18)$$

where  $F^{-1}$  is the inverse of the normal cumulative distribution function. The term  $X_i$  is the set of explanatory variables, which will be explained below.

### 3.3.1 The survey and data

The empirical analysis of the propensity to emigrate conducted in this chapter is based on a data set drawn from a sample survey of 1,250 Kosova households conducted by the Riinvest Institute in July 2007 and is the first comprehensive dataset on emigration in Kosova. The observation unit is the household and the survey was conducted through direct interviews with the head of the household, the respondent. The survey sample is random and stratified by area, namely rural and urban, by region and within regions by municipality. The Voters

Official Registry, compiled for the needs of the Election Commission in 2004, was used to weight the percentages for the municipalities, regions and types of area, that is, rural and urban.<sup>9</sup> Given that Kosova has not conducted a census of population since 1981, and as since then demographic changes have been relatively strong due to the emigration wave of the 1990s and due to the war in 1999 where the population was both internally and externally displaced, the sample selection was based on the Kosova Voters Registry of 2004 as the most reliable source of information.

As explained above, the sample is stratified by type of area where the structure of distribution is 49% in rural and 51% in urban areas. The distribution by region and municipality given in the Voters Official Registry was also used for sampling purposes (see Appendix 3, Table 1). Technical details on how the survey was conducted are explained in Appendix 3.

The survey questionnaire was designed in a way that for each question the respondents were given the option of refusing to answer. So, as is common in such surveys, there is missing data as a result of respondents refusing to answer. Data missingness in this research is also a result of clerical errors in not having entered some sections of the questionnaires. The issue of data missingness and approaches for handling it are discussed later in section 3.4. For the present the analysis proceeds by the method List-wise deletion, which considers only complete observations.

The survey provides information on both the household and household members. In addition to information on migration plans of household members, including the head of the household, the survey provides also information on the socio-economic status of the household. The last section of the survey covers issues related to migration networks and remittances. An attitudinal question as to whether the household head expects the household economic conditions to improve, remain the same or worsen is also used as part of the analysis.

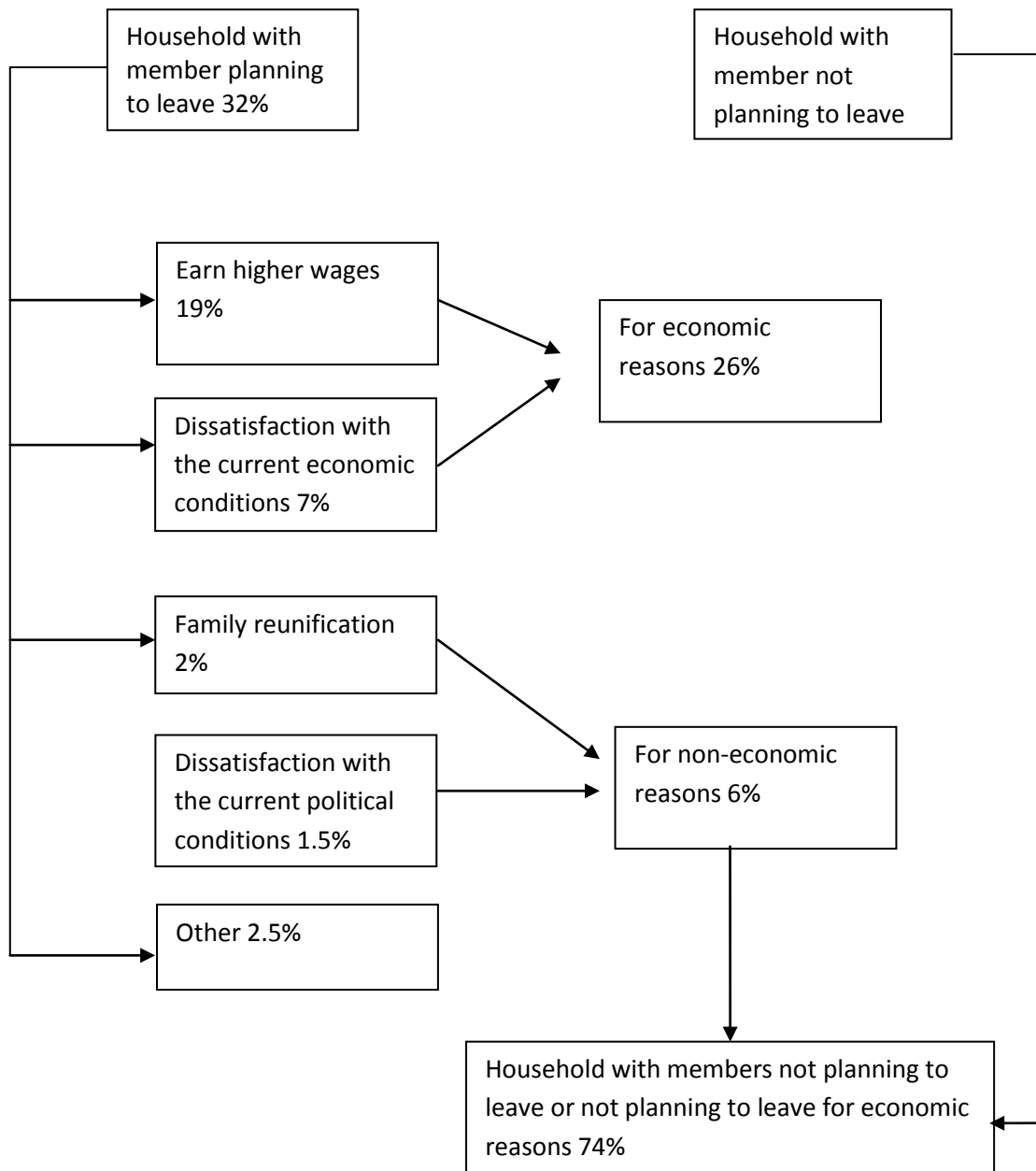
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<sup>9</sup> This registry included only inhabitants aged 16 or over. This may be a source of bias. However, as the household is the sampling unit this bias is not considered to impact significantly on the results.

The questions of interest are “do you or any other household members plan to emigrate?” where the answer may apply to more than one household member and “what is the major reason?” followed by the following options: a) earn higher wages, b) family reunification, c) dissatisfaction with the current economic conditions, d) dissatisfaction with the current political conditions, and e) other. In the dataset, 32 per cent of the households reported plans to leave. Out of the total, 19 per cent and 7 per cent, respectively, declared that a member was planning to leave a) to earn higher wages or c) due to the dissatisfaction with the current economic conditions. Given that this analysis focuses on investigating the determinants of emigration plans only for economic reasons of household members, these households, were taken as the focus of attention. According to this restructuring of households, 26 per cent of households reported planning to send at least one or one additional member abroad for economic reasons (see Fig 3.1).



**Figure 3.1 Household plans to send at least one additional member abroad, per cent of sample households**



### 3.3.2 Some issues regarding the dependent variable

Prior to the specification of variables it is important to introduce some issues related to the specification of the dependent variable. The dependent variable is based on the household's intentions to emigrate and not on actual migration behaviour. In addition to this data set, the analyses in this thesis are based on another two data sets: the Kosova 2007 data set and the Albanian Living Standard

Measurement Survey 2008. As a consequence, some inconsistencies in terms of the definition of the dependent variable have arisen. As explained below, action was taken to ensure comparability between the data sets for the purposes of the analyses to be conducted.

Although the intention question in the three data sets used in the empirical analyses is similar (see chapter 6 for details) it is actually identical in the two KS data sets, however here the intention outcome options are different. In the Kosova 2007 data set an additional intention category is “no answer/ refuses to answer”, while in the Kosova 2008 data set only two intention options are available “yes” or “no” and it is considered as missing if none of the two options is selected. In the Albanian LSMS 2008 the intention question also includes a “don’t know” option. Differences in these intention categories make their comparison in terms of similarities and/or differences difficult. Starting with the KS data set 2007, one cannot unambiguously distinguish between “no answer” and “refuses to answer”. “No answer” may imply “have not thought about it until now” or “don’t know” in terms of “do not know whether I will think about it or whether I will intend to emigrate”. The option “refuses to answer” could mean “intend to emigrate but do not want to reveal the intention”, “do not intend to emigrate but do not want to reveal the intention” or “don’t know and therefore don’t want to reveal the intention”. Given the difference in the potential meanings of these two intention categories, it is difficult to unambiguously determine whether the options are different or the same. The blank option provided in the KS data set 2008 can mean any of the above listed potential meanings of the categories of the KS data set 2007.

The option “don’t know” available in the Albanian LSMS 2008 may suggest that the respondent “intends to emigrate but does not want to answer” or “does not intend to emigrate but does not want to answer”, but since that was not an option chooses “don’t know”. However, the “don’t know” category may also be considered similar to the “no answer” category in the KS data set 2007 as argued above. However, in the latter data set the option is introduced only in combination “no answer/refuses to answer” making it impossible to find out which one of the options applies in any single case. Consideration of the Albanian LSMS 2008 option

“don’t know” with the blank in the Kosova data set 2008 shows that the two cannot unambiguously be distinguished or considered similar. Due to the different potential meanings of all three intention categories, it is impossible to unambiguously determine whether they are different or similar. Given this and the focus of the thesis on fairly clear emigration intentions for economic reasons these categories were not considered as falling into the same category in the empirical analyses. Instead, the approach in van Dalen et al. (2005) was followed and these categories were excluded from the analyses, that is, were treated as missing cases.

### **3.3.3 The specification of the variables**

As explained in the previous section, the dependent variable of interest,  $P_i$ , measures the probability of the household intending to send at least one or one additional member abroad for economic reasons (see Table A.3.1.1 for variable labels and definitions). The probability is modelled as being conditioned by explanatory variables, which represent earnings abroad and at home, the number of those employed abroad and at home, a set of household characteristics, a set of location-related characteristics, psychic income, and migration costs. In this section, the empirical counterpart to the theoretical model is elaborated. Also, descriptive statistics are presented for each variable, these only show unconditional relationships between the respective independent variables and the probability of economic emigration. Please note that for simplicity in the descriptive analysis all continuous variables have been amalgamated into groups.

The household is defined as including household migrant members. This specification is referred to as the model including migrant members or Model 1. There are implications for the definition of other variables that are calculated based on household size (Table A3.1.1). For example, the variable share of those under the age of 16 (TSU16) is defined as the number of those under the age of 16 living in Kosova and abroad divided by the number of household members living in Kosova and abroad. An alternative definition of the household is provided in chapter 5 and that specification is referred to as Model 2. The variable labels and definitions for the new specification are given in Table A3.1.2.

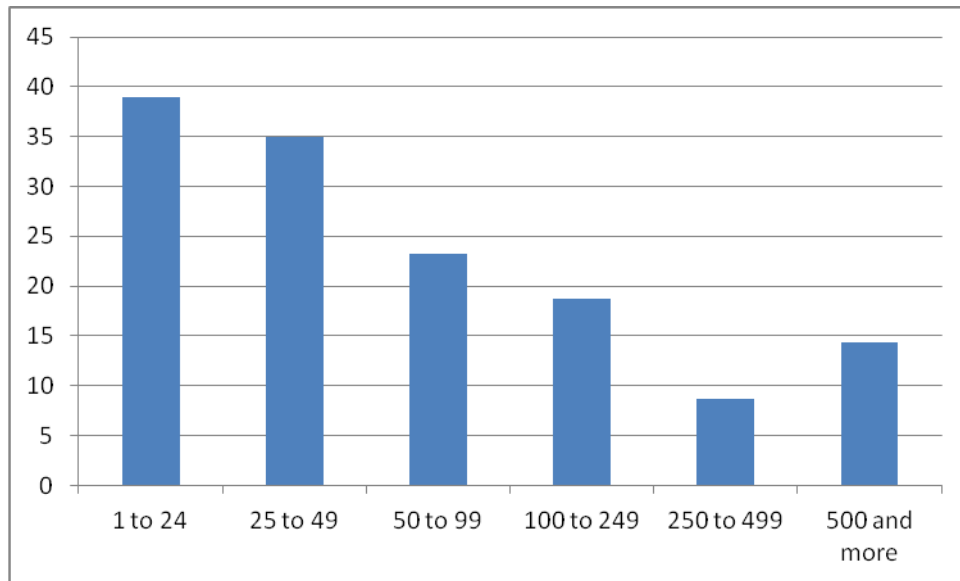
## Household characteristics

**Household income (TY, TYA)** Household wealth consists of a wide range of valuable goods and resources. However, due to lack of data this analysis will have to be limited to analysing the influence of household wealth through the impact of household income deflated by household size and a set of household characteristics that may affect expected household wealth, as will be explained below. Using wages at home and abroad as suggested in the theoretical framework is impossible due to lack of data. Instead, this study uses data on current average monthly household income per capita of those at home,  $TY_i$ , and of those abroad,  $TYA_i$  as there is variation in these two variables across households but not over time.

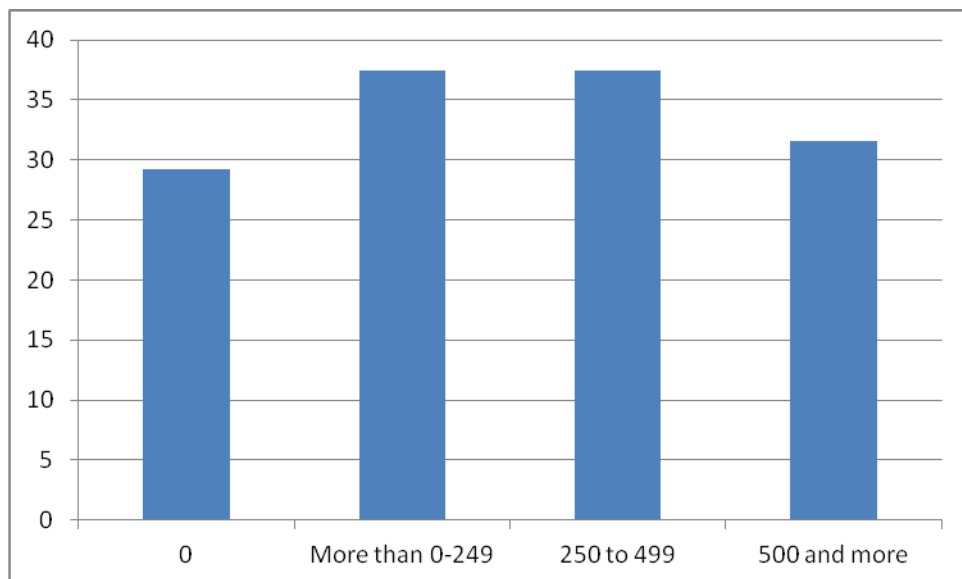
Given that the focus of the analysis is on emigration for economic purposes, a priori, poorer households are assumed to be more likely to send a member abroad as due to diminishing marginal utility from income, wealthier households have a lower incentive to send a member abroad, all else equal. However, given that migration is costly and given household budget constraints and domestic credit market imperfections, poorer households may not be able to cover migration costs. Therefore, they may have a lower probability of choosing emigration because of liquidity constraints. These arguments suggest the possibility of a nonlinear relationship between emigration and household income, that is, a 'migration hump'. To capture this effect average monthly household income per capita and its squared term at home and abroad are introduced separately.

Although an inverse U-shaped relationship between household per capita income earned at home and the migration probability is expected theoretically, the figure below shows the opposite. However, this only gives the unconditional relationship between this variable and the probability of planning economic emigration. Figure 3.3, though, shows the expected migration hump with respect to income per capita earned abroad.

**Figure 3.2 Percentage planning emigration by household income per capita earned at home (in €)**



**Figure 3.3 Percentage planning emigration by household income per capita earned abroad (in €)**



Deaton and Muellbauer (1980) argue that deflating household income by household size, as in Germenji and Swinnen (2005) and Phuong et al. (2008), provides a “crude” remedy for the problem of differences in household size and compositions. This proxy fails to control for the variation of need with age (Deaton and Muellbauer, 1980). As they explain “babies need less food than adults”, while

adults need more investment in human capital and large families benefit from economies of scale as needs do not proportionately increase with household size (Deaton and Muellbauer, 1980, p. 192). Therefore, they suggest using household equivalence scales<sup>10</sup> as a more sophisticated deflator to convert the income of different households into needs-corrected basis. These scales measure the relative income needs of households of different size and composition, making comparisons among households based on equivalence scale more reasonable (Deaton and Muellbauer, 1980).<sup>11</sup> The most common method of calculating equivalence scales is based on demand models (Betti, 2000). Engel (1985) suggests using the share of household expenditure on food as an indirect indication of welfare as he found that poorer households have larger food shares than richer households. He finds similar evidence for large households compared to smaller ones. However, this approach too is criticised on the grounds that it lacks plausibility as it fails to control for the variation in children's needs and economies of scale by type of commodity (Deaton and Muellbauer, 1980). Given that equivalence scales are not available for comparisons between Kosovar households and that it may be inappropriate to use equivalence scales of other countries for Kosovar households, due to the specificities of the latter, in this analysis such measures of household wealth cannot be used. Thus, due to data availability, in addition to current average monthly household earnings, per capita household demographic characteristics are controlled for. The expected impact of these latter variables on the probability of planning economic emigration is explained after the discussion on remittances.

**Remittances (TR)** This analysis is the first of its kind to use household income, including income per capita earned at home and abroad, and remittances separately. To capture the effect of remittances, remittances per capita is introduced. In addition to an income effect, they capture the effect of overall household risk diversification. For the same reasons used to explain above the effect of household income, remittances may have a nonlinear impact on the

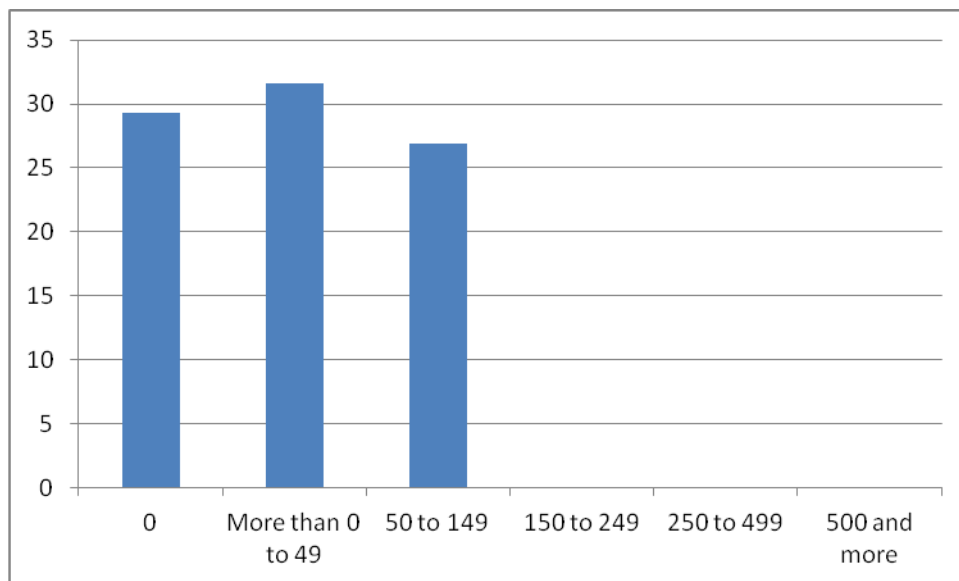
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<sup>10</sup> Equivalence scales are economic index numbers, which deflate household income by certain household characteristics. These assume that the only difference in tastes between households results from variations in observable characteristics (Deaton and Muellbauer, 1980).

<sup>11</sup> Nelson (1993) argues that this measure assumes that welfare levels between household members are equal, therefore failing to control for intra-household differences in welfare.

probability of emigration, all else equal. Remittances are independent of the risk associated with home-country income. As such, remittances are considered to lower overall household risk leading to a lower probability of emigration, all else equal. So, the effect of remittances is in principle different from that of income. This supports the argument these two variables should be introduced separately into the empirical model. Following the above, the remittances effect is a priori ambiguous. For the purpose of the descriptive analysis, the percentage planning to emigrate is plotted by level of remittances. The statistical description indicates that remittances and the probability of emigration have an inverse U-shaped relationship. At average monthly remittances per capita of 150 Euros and above there are no households planning to emigrate.

**Figure 3.4 Percentage planning emigration by level of remittances per capita (in €)**

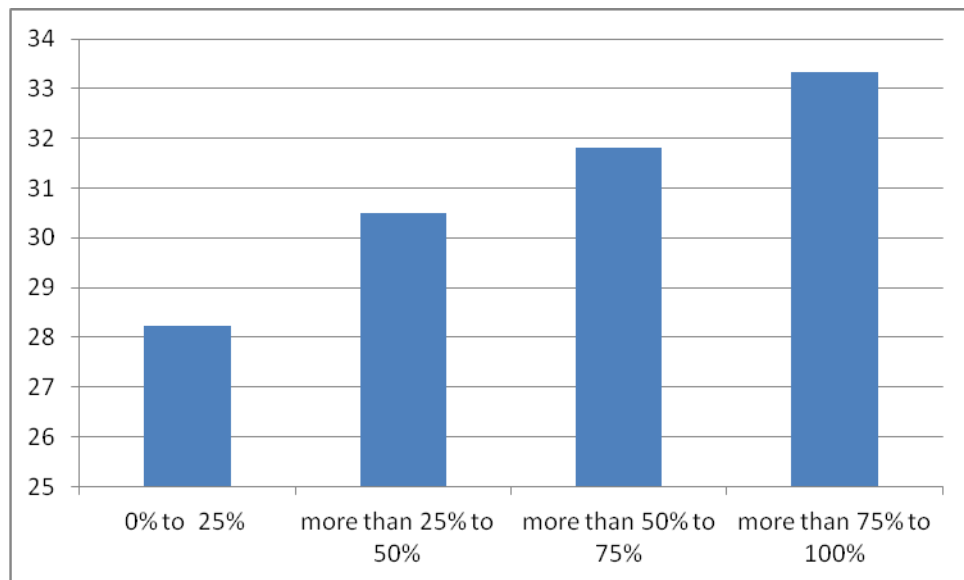


**Share of those under the age of 16 (TSU16)<sup>12</sup>** As argued under **Household Income**, either in absolute or per capita terms household income is not considered an appropriate basis for comparing the wealth of households with different

<sup>12</sup> The household share, instead of the number of household members, is used throughout this analysis. The reason behind this is that using the latter is not considered appropriate as households in Kosovo may consist of more than one nuclear family. Thus, having three nuclear families within a household with three members with certain characteristics is not the same as having one nuclear family within a household with three members with those characteristics.

compositions (Deaton and Muellbauer, 1980). To remedy this issue this analysis controls for the influence of the household age composition on the probability of emigration which is considered to affect household wealth. For reasons given in section 3.2.1, those under the age of 16 are assumed to be in education and therefore not in the labour force. So, they would more likely be using household income for investment in education than earning income for the household. Given that this changes the allocation of income in favour of education investment and therefore increases the household need for income, that is the economic pressure, it is expected that the larger the share of those under the age of 16, all else equal, the higher the likelihood of the household sending a member abroad for economic reasons. However, a higher share of those under the age of 16 implies a lower pool of potential migrants within the household leading to a lower probability of planning economic emigration. Consequently, all else equal, the expected impact of this variable on the probability of emigration is ambiguous. As shown in the graph below, in this dataset the probability of planning economic emigration increases with the share of those under the age of 16.

**Figure 3.5 Percentage planning emigration by share of those under the age of 16**

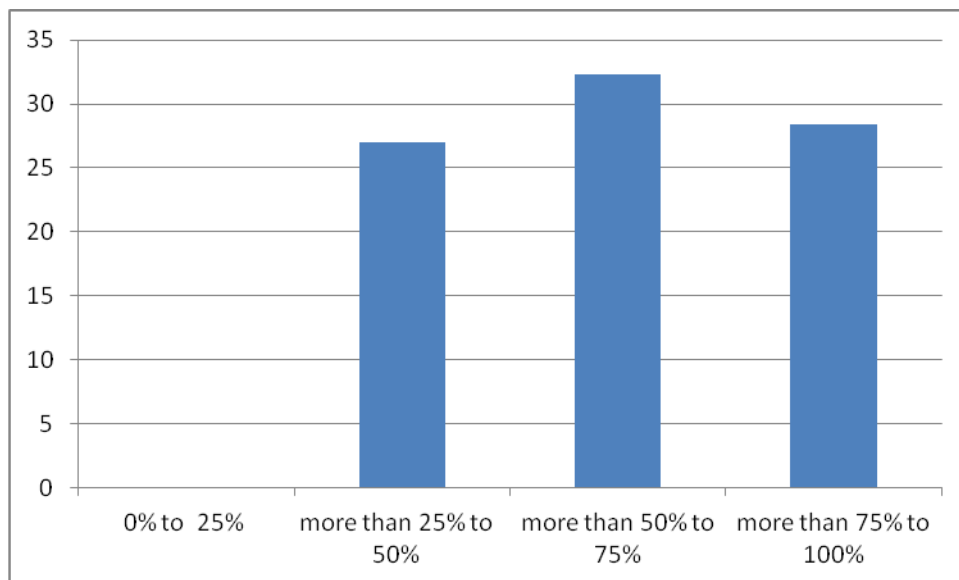


**Share of those of working age (TSWA)** This variable represents the household share that may be in the labour force, since it is in working age. Given the high unemployment rate prevailing in the Kosovan labour market, the higher the share of those of working age the higher the probability of the household having



excess labour supply. Therefore, the probability of emigrating for economic reasons is higher. Figure 3.6 suggests that the unconditional relationship between the share of those of working age and the percentage of households planning emigration has an inverse-U shape.

**Figure 3.6 Percentage planning emigration by share of those of working age**

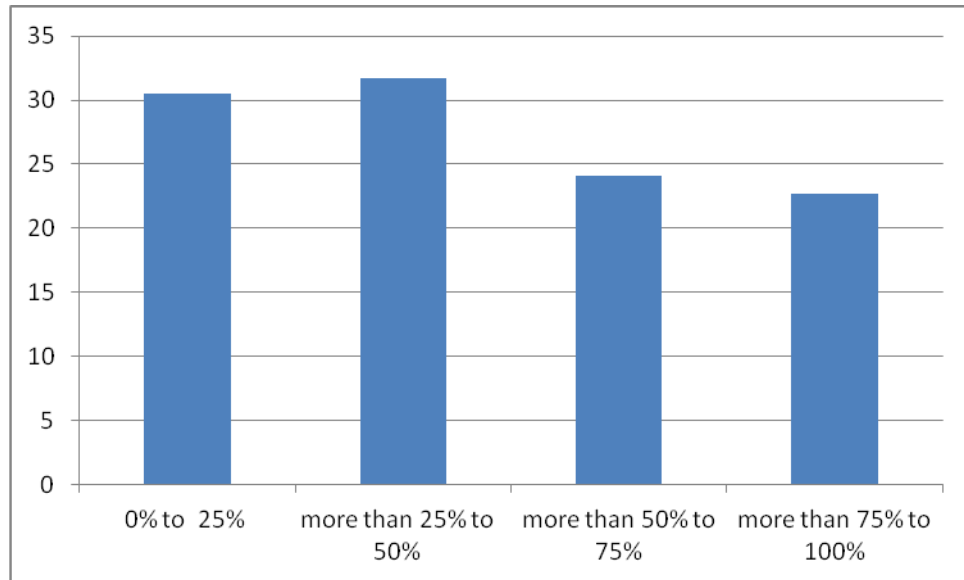


**Share of females in those of working age (TSFWA)** For reasons explained in section 3.2, female members are less likely to be employed and more likely to have lower wage rates. Therefore, their contribution to household earnings is lower, all else equal. This results in the share of females in those of working age having an anticipated positive impact on the probability of emigration. However, due to the traditional nature of Kosovan households, where females are assigned the tasks of child rearing and dependent care, the female reservation wages may be higher than those of males, resulting in SFWA<sub>j</sub> having a negative impact on the probability of employment. Therefore, the probability of sending daughters abroad would be lower than that of sending sons abroad, all else equal. This leads to an anticipated negative relationship between this variable and the emigration propensity, all else equal. The two effects make the a priori sign of the impact of this variable on the emigration propensity ambiguous.

As shown in the graph below, the unconditional relationship between the probability of emigration and SFWA is nonlinear. At low levels of SFWA the

probability of planning emigration increases, and there is a tendency to decline as the SFWA increases (Figure 3.7).

**Figure 3.7 Percentage planning emigration by share of females of working age**

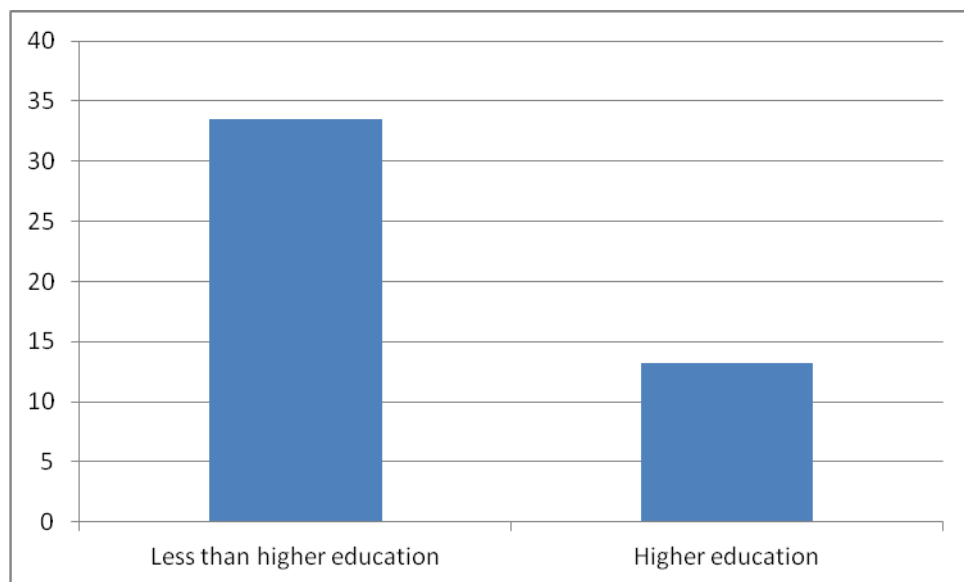


**Household educational attainment (Edu)** As this study takes the household approach a measure of the household’s education level is required. However, the dataset offers information only on the educational attainment of the head of the household. One possible strategy is to use this variable as a proxy for household educational attainment. Plug and Vijverberg (2005) find that children’s educational attainment is a positive function of parents’ IQ scores. This finding may provide some support to the use of household head’s educational attainment to proxy the household educational attainment. According to human capital theory, earnings are a positive function of educational attainment (Mincer, 1974). Due to lack of alternative data this variable will be used as a proxy for wage differentials. As explained in section 3.2.1, the better educated may benefit more from positive wage and employment opportunity differentials at home. Therefore, all else equal, households with a higher level of human capital are less likely to plan to send a member abroad. Yet, the better educated may have less transaction costs as they are more likely to have more information on employment opportunities in host countries and better knowledge of foreign languages, making it more profitable for them to send a member abroad. However, the better educated have to invest time and money to get legal status, have their professional credentials and destination-

country or firm-specific human capital recognised (McKenzie and Rapoport, 2010). There may be labour market discrimination against non-EU citizens and their degree or diploma may not be recognised (Germeji and Swinnen, 2005). Therefore, a priori household human capital has an ambiguous impact on the emigration propensity. The effect of this variable is controlled for by a dummy variable taking the value of one if the household head has higher education, zero otherwise.

As shown in the figure below, the likelihood of emigration is lowest among sample households whose head has higher education.

**Figure 3.8 Percentage planning emigration by education level of the household head**

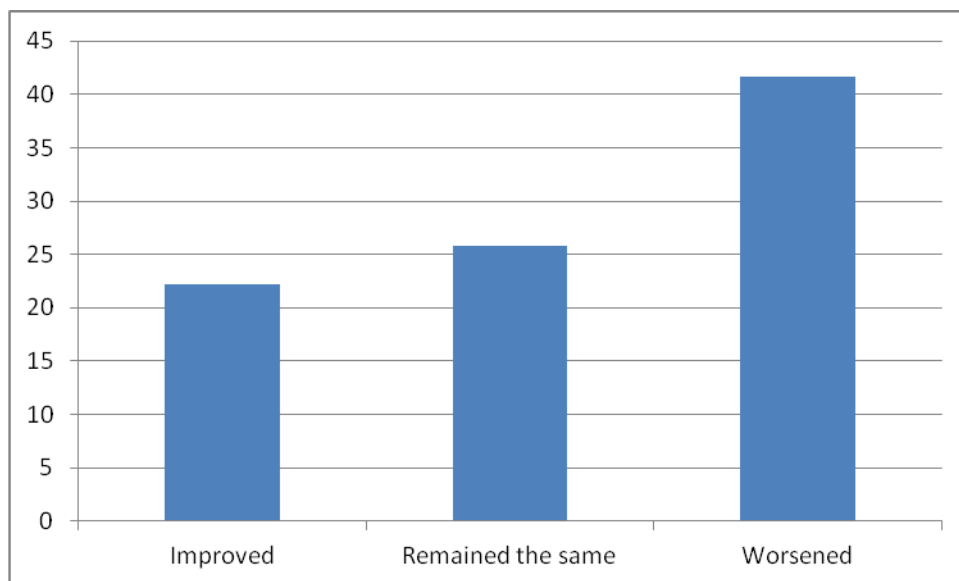


**Perception of the household head of the economic situation of the household compared to one year ago (Attitudinal variable).** This analysis is the first to control for the effect of habituation on the probability of emigration. This question provides an indicator of relative household wealth compared to one year ago which may affect decision-making. The relative income hypothesis suggests that current and future consumption also depends on the level of previous consumption. So, if expectations are adaptive the answer to this question may be considered as being a forward-looking opinion of the near future. Additionally, applying the loss-aversion hypothesis to this analysis implies that a loss of one Euro has a larger absolute effect on household utility than that of a gain of one Euro, given an initial reference position (Tversky and Kahneman 1991). The variable is measured by three

dummy variables, namely whether economic conditions have improved, remained the same or worsened. The middle option is used as the benchmark. If the household head views the economic situation of the household to have improved (worsened), s/he might perceive it as reducing (increasing) household utility given their current decisions and hence negatively (positively) impacting on the migration propensity, all else equal. The effect of a reduction in household wealth is expected to be greater in magnitude than that of an increase, all else equal.

According to the descriptives, the likelihood of planning emigration is highest among households that have a negative attitude to the current economic condition compared to last year. It is much lower among the other two categories of households, but lowest among those who perceive their economic conditions to have improved.

**Figure 3.9 Percentage planning emigration by perception of the economic situation compared to one year ago**



### Psychic income

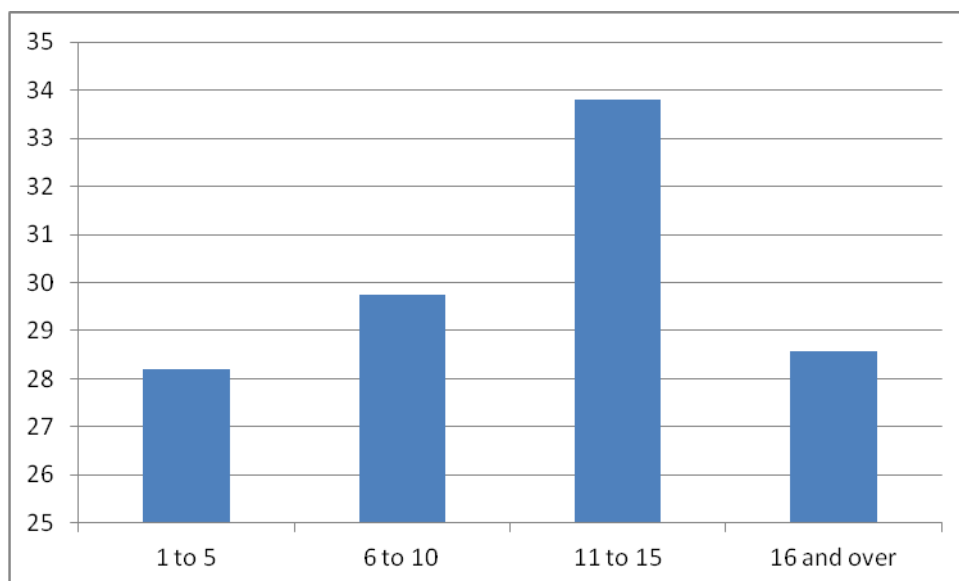
As presented in the theoretical model, psychic income is a function of household size, number of household members already abroad and number of those planning to leave. In the empirical model, the impact of psychic income will

be made operational through all these three variables and the number of nuclear families within the household.

**Household size (TS)** For the purpose of this analysis household size is measured as the total number of household members. Based on the explanations in the theoretical model, the impact of household size on psychic income and in turn on the probability of emigrating is complicated. However, as discussed below, given that the variable ‘number of nuclear families’ is introduced to capture the possible nonlinearity, household size is hypothesised as having a negative impact on the loss of psychic income from emigration. Hence, it is expected that larger households are more likely to allocate a member to migration, all else equal.

In the graph below, it is shown that there is a nonlinear unconditional relationship between household size and the probability of emigrating, with it being highest among households that consist of 6-15 members.

**Figure 3.10 Percentage planning emigration by household size**

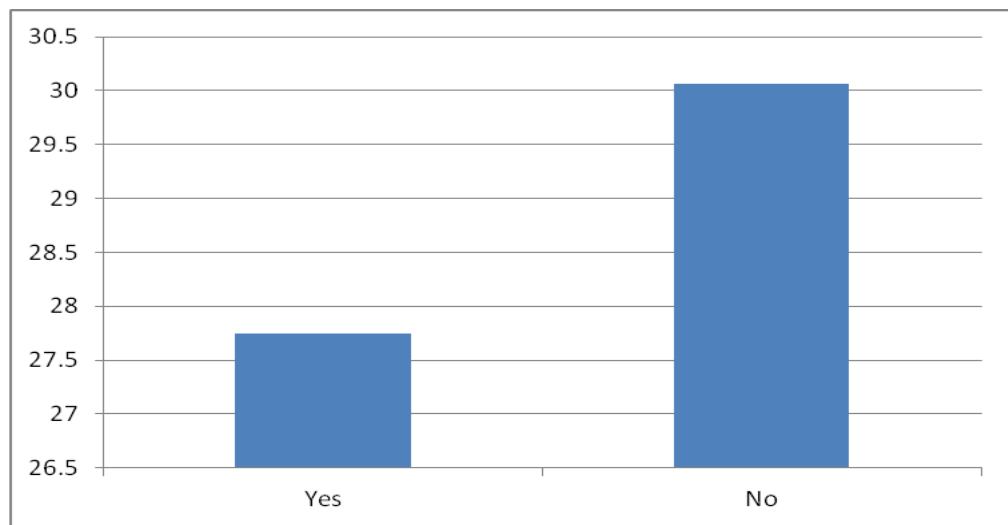


**Networks (Network)**<sup>13</sup> Following the critical review of literature presented in section 2.2.3 and the explanation in section 3.2.1, networks have an ambiguous impact on possible migrants’ destination-specific utility. They may also capture the nonlinear positive effect of continuing migration costs. So, the variable is expected

<sup>13</sup> The possible network effect resulting from having friends abroad cannot be controlled for because the questionnaire only asks about whether the household has family members living abroad.

to have an ambiguous impact on the probability of migration, all else equal. As the dataset only gives information on whether households have members abroad, the expected nonlinear relationship cannot be considered. Consequently, this variable is constructed as a dummy, taking the value of one if the household has members abroad. The variable is hypothesised as having an ambiguous impact on the probability of emigrating.

**Figure 3.11 Percentage planning emigration by network**

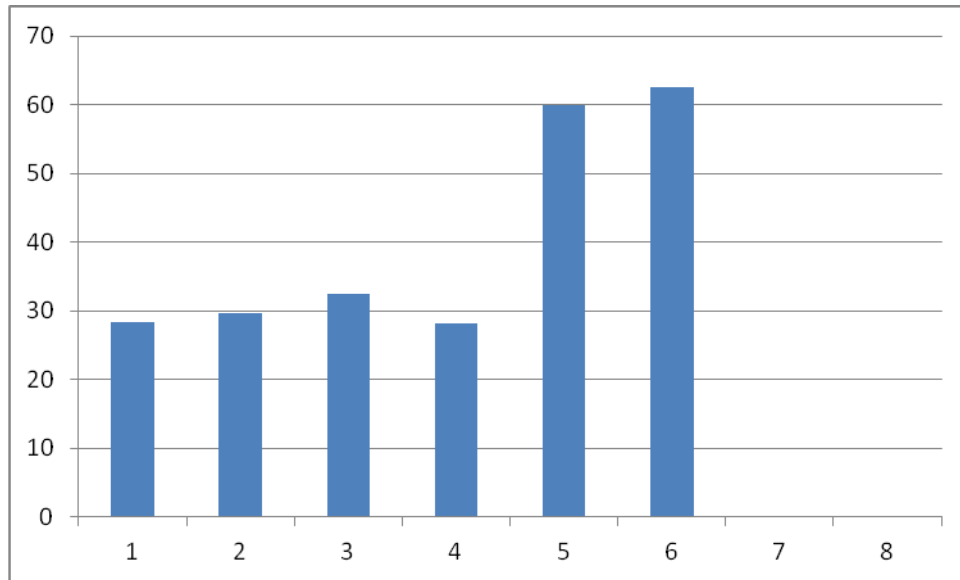


**Number of nuclear families (TNuc)** As explained in section 3.2.1 and under Household size, a larger number of nuclear families implies a larger number of parents within the household. Such households may benefit from economies of scale in child rearing and dependent care which lower the psychic costs of emigration. Therefore, households with a larger number of nuclear families are more likely to plan emigration, all else equal. This specific impact of the demographic structure of the household which cannot be controlled for by household size provides the rationale for including both variables separately.

The majority of households consist of one or two nuclear families, 60 and 30 per cent respectively. The figure below shows that there is a nearly constant unconditional relationship between number of nuclear families and the probability of planning emigration for households that have up to four nuclear families. The probability of emigrating is much higher among households that have five or six

nuclear families. However, this category of households consists of just a few households in the sample.

**Figure 3.12 Percentage planning emigration by number of nuclear families**

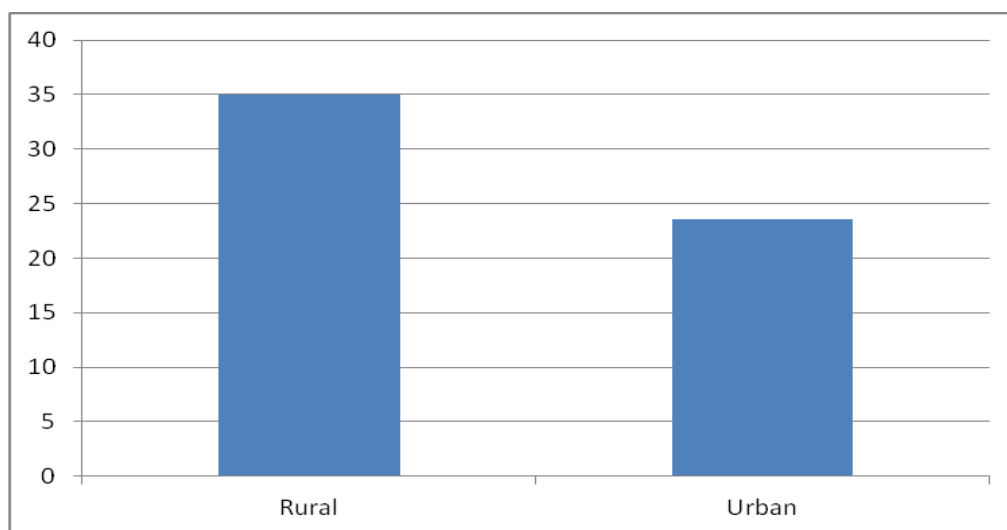


### Location-related characteristics

As noted in section 3.2.1, in Kosova there are significant spatial differences which impact on the opportunities for wage employment. The impact of location-related differences will be examined through the regional unemployment rate and a dummy variable denoting the type of area.

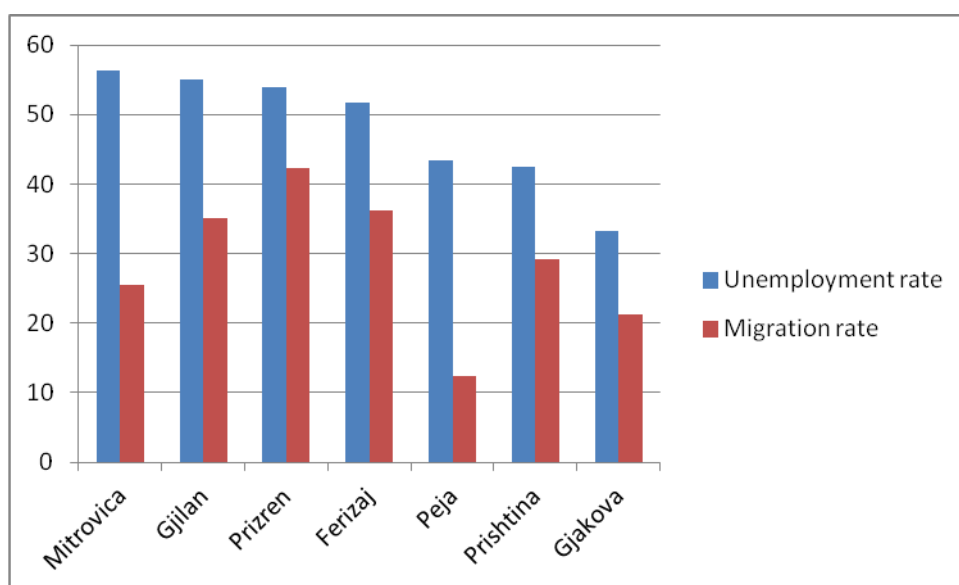
**Regional unemployment rate (RU) and Type of area (TA)** Households living in regions where unemployment rates are higher are expected to have a greater probability of planning the economic migration of a household member, all else equal. The same prediction applies to households living in rural areas as compared to those in urban areas. The first effect is measured using the respective unemployment rates in the seven regions. The second effect is controlled for by a dichotomous variable taking the value of one for rural areas.

**Figure 3.13 Percentage planning emigration by type of area**



As expected, Figure 3.13 shows that the likelihood of planning economic emigration is higher among rural households. The descriptives are similar to those reported by the World Bank (2007a) (see section 1.2 in chapter 1 for details). The probability of planning emigration is higher in rural areas of each region (Figure 3.14).<sup>14</sup> The regions with the highest likelihood of emigration in rural areas include Ferizaj, Gjilan and Prizren.

**Figure 3.14 Percentage planning emigration by regional unemployment rate and the corresponding unemployment rate**



<sup>14</sup> For simplicity, the graph is not reported here.



In the figure above, a higher regional unemployment rate does not necessarily correspond with a higher rate of households planning emigration. The highest rate of households planning emigration is recorded in Prizren, followed by Ferizaj and Gjilan. These regions have very high unemployment rates. Mitrovica, although it has the highest regional unemployment rate, has the third lowest probability of emigration. Additionally, Peja has a very low likelihood of planning emigration although it has a very high unemployment rate.

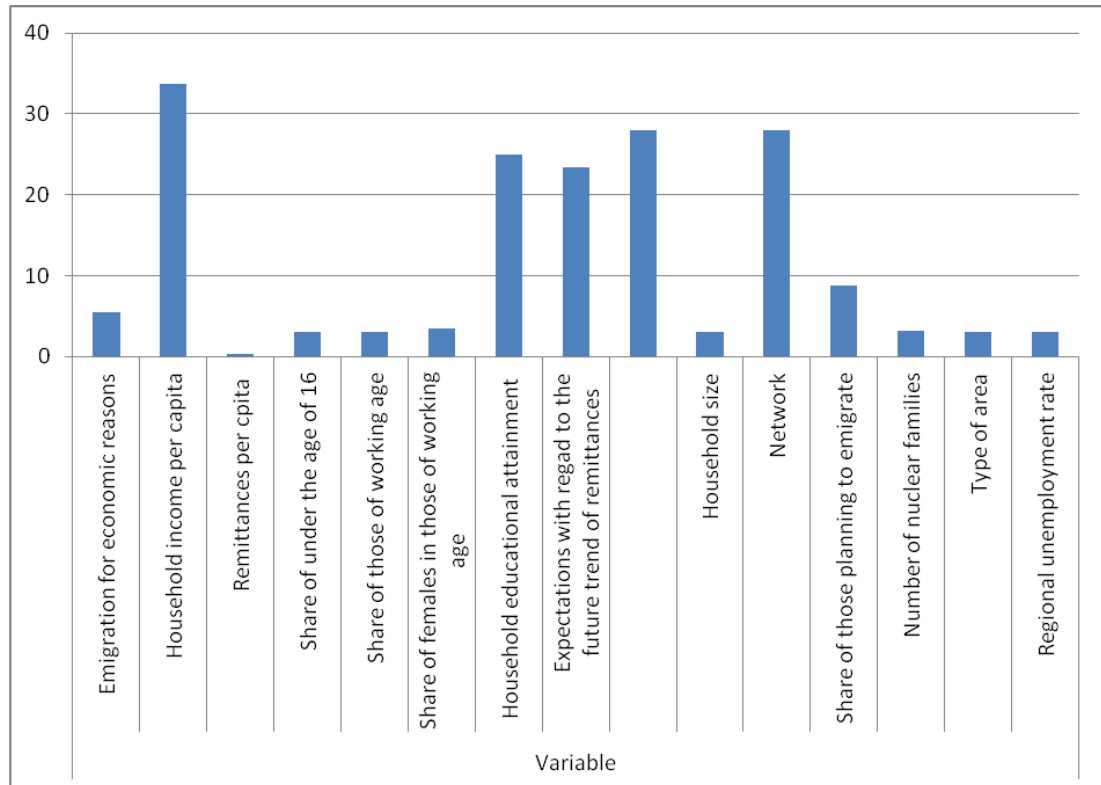
Comparing these regional migration rates with those reported in the World Bank (2007a) shows that there are differences (chapter 1, section 1.2). Though given the short time gap between this survey and that used in the World Bank study, one possible explanation for these differences is that the two data sets stem from two different random samples.

### **3.4 Data Imputation**

As common in household survey research (Acock, 2005), the data set on which this analysis is based has missing data. Most of the studies reviewed in chapter 2 are based on survey data. However, unlike in this chapter, the issue of missing data is not raised or dealt with by any of the studies reviewed. Therefore, this is the first migration analysis to deal explicitly with problems associated with missing data. In this data set, there are two reasons for missingness. First, for unknown reasons some respondents have refused to answer certain questions. Second, for some questionnaires data entry was incomplete, that is, some sections of some questionnaires are missing. As shown in the Table A3.2.1 and in the graph below, every variable has some data missingness but at different levels. The data-missingness level is around 3 per cent for five variables: household size (TS), total share of those under the age of 16 (TSU16), total share of those of working age (TSWA), total share of females of working age (TSFWA) and total number of nuclear families (TNuc). The dependent variable (P) and TNuc have around 5 per cent of their observations that are missing. The rest of the variables record a higher missingness rate, around 24-33 per cent which is more problematic. Note that the

variables TSU16, TSWA and TSFWA have been calculated from TS and the age and gender of household members, inheriting the rate of missingness from TS.

**Figure 3.15 Rate of missingness by variable**



According to the literature, missing data are accompanied by three types of concerns: loss of efficiency, complication in data handling and analysis and bias due to possible differences between the observed and unobserved data (Barnard and Meng, 1999). As a result, different methods have been developed for treating missing data which are discussed in the sections below. As these methods are based on different assumptions regarding the missingness mechanism, this issue is dealt with first.

### 3.4.1 Missingness Mechanisms

Prior to the analysis of missing data, assumptions have to be made regarding the missing-data mechanism. The missingness mechanism gives the relationship between the missing data and missingness. Assumptions about the missing-data mechanism on which the analysis is based cannot be validated definitively, as there is no fully adequate test for the missingness mechanism (Royston, 2005). The

properties of missing-data methods depend on the missingness mechanism. Therefore, considering the mechanism prior to the analysis is crucial. According to Little and Rubin (2002), depending on the conditional distribution of missing data given the data set three missingness mechanisms can be observed: 1) the mechanism missing completely at random (MCAR), 2) the mechanism missing at random (MAR), and 3) the mechanism not missing at random (NMAR). The MCAR mechanism implies that the missing data are randomly distributed across the data set, that is, they are independent of the values of the data, observed or missing. Yet, this assumption is very stringent in real situations (Sarkisian, 2005). This implies that the missing data values are a simple random sample of all data values (Schafer, 1997). In terms of this data set, it would imply that households with a missing value on a specific variable are a random sample from all households. Another mechanism arises when missingness depends on the values of observed data but not on the values of the missing ones. This is a less restrictive assumption and implies possible differences between observations with complete and those with incomplete data. In terms of the data set, this would suggest that households with a missing value on a specific variable are a random sample from all households with the same values on the observed variables. Both missingness mechanisms, MCAR and MAR are, however, non-testable (Cameron and Trivedi, 2005). The third missingness mechanism is not missing at random (NMAR). This arises when missingness depends on the values of missing data. In terms of this data set this would imply that households with a missing value on a specific variable are a random sample from all households with a missing value on that specific variable. In this case, the missingness pattern is non-random and has to be modelled. This includes for instance the case of censoring, where the mechanism is NMAR but understood.

Some of the methods focus on ignorable mechanisms. Ignorability requires that the data set is MAR and that the parameters of the model and the parameters of the missing mechanism are distinct (Schafer, 1997). If ignorability is satisfied, there is no need to model the missing data or their parameters when making likelihood-based or Bayesian inferences about the model parameters. The missing data mechanism can be “safely ignored” as likelihood-based inferences about model

parameters do not depend on the missing data parameters (Schafer, 1997, p. 12). Allison (2002) argues that MAR is treated as the equivalent of ignorability under the assumption that ignorability is almost always satisfied.

In survey analysis, where missingness is usually a result of non-response or errors in data collection, the MCAR mechanism is a stronger assumption. Whenever the sampler has no control over missingness assuming the MAR mechanism is more realistic as data is collected on different variables for all observations, both observed and missing, that are predictive of missingness in a variable and the probability of missing. This is then used as an argument to support the MAR assumption. However, Schafer (1997) argues that, in such cases, deciding on the mechanism requires some guesswork and careful considerations specific to the actual problem. He also claims that under missing by design the data tend to be MAR. Missing by design arises when the questionnaire is divided into sections, which in groups of sections are randomly administered to the units of observation. This would seem to be equivalent to the case in this data set where data of some sections of some questionnaires have not been entered for some respondents. Little and Rubin (2002) and Sarkisian (2005) posit that, in general, the MAR mechanism is a weaker assumption than the MCAR mechanism. The MAR mechanism is also more frequently assumed than the MCAR mechanism and is the underlying assumption of most methods dealing with missing data (Sarkisian, 2005). Little and Rubin also claim that in some empirical settings the MAR assumption has provided more accurate predictions than the NMAR assumption. Yet, as previously noticed, the distinction between MAR, MCAR and NMAR is based on non-testable assumptions (Royston, 2005; Harel and Zhou, 2006).

The data set used in the empirical analysis stems from a stratified random sample. As explained in detail in Appendix 3.2, to ensure the representativeness of the data the sample was stratified by type of area, rural and urban, and region. Additionally, to ensure that respondents were randomly selected within the survey a specific pace of conducting the survey was followed. The design thus aimed to exclude possibilities of censoring. The major reason for missingness in this data set is identified to be non-response and incomplete data entry. The sampling

methodology and the reason for missingness may suggest that either the MAR or the MCAR missingness mechanism applies to this data set, although the missingness mechanism is not testable. Additionally, given the arguments in the previous paragraph in favour of the MAR assumption in survey analysis, the missingness mechanism is assumed to be MAR for the purposes of this analysis. As explained below, if the MAR assumption holds, the most appropriate method to deal with missingness is multiple imputation, which can be conducted using maximum likelihood (Little and Rubin, 2002). Therefore, in this analysis multiple imputation is used to deal with the missing data.

### 3.4.2 Missing-Data Methods

All methods for handling missing data assume, at least implicitly, that MAR holds (Schafer, 1997). These methods include two approaches, one, the traditional, which is not model-based and the other, the modern, which is (Cameron and Trivedi, 2005). Little and Rubin categorize these methods into four different procedures, which encompass sub-methods: 1) procedures based on completely recorded units, 2) imputation-based procedures and 3) model-based procedures. Some of these methods are only appropriate when the missingness mechanism is MCAR, while some offer unbiased results when the MAR mechanism is assumed. Their description is discussed along with their appropriateness given the missingness mechanism.

The **Model-based procedures** are based on maximum likelihood procedures to estimate the parameters of models with missing data. In this case, a model for observed data is defined and inferences about the missing values are based on the likelihood distribution under that model. The coefficient estimates and standard errors are model-specific. However, the sampling methodology explained above renders such methods inapplicable to the data set used in this analysis. Hence, such methods are out of the scope of this analysis and no further details on these are provided. The discussion below involves only the first two groups of methods.

**Procedures based on completely recorded units (Listwise Deletion)** This is a traditional method, which implies deleting incomplete cases and basing empirical

analysis on complete cases only. Although simple, this approach has its drawbacks. It ignores the “possible systematic differences between the complete and incomplete cases” leading to serious biases (Little and Rubin, 2002). This is similar to ignoring lack of randomness in the sample population of the complete cases leading to biased inferences about the whole population. Hence, it is only sensible if data is MCAR in which case sample representativeness is not harmed by the deletion of the missing cases. Estimated parameters will be unbiased. Even then, another drawback of the case deletion approach exists: its inefficiency. This is because it leads to loss of information inflating standard errors and reducing the level of statistical significance, that is, loss of precision. Therefore, it is only sensible to delete observations with missing data if they make a small proportion and the overall sample size remains large. Although there is no decision rule, case deletion is often used when less than five per cent of the data is missing in large samples (Acock, 2005; Allison, 2002, Sarkisian, 2005). For this analysis this technique is inappropriate because more than 30 per cent of the variables record data missingness rates of around 30 per cent. However, although the missingness mechanism cannot be tested if it can be assumed to be missing completely at random then the complete subsample will be a random subsample of the whole data set. Accordingly, this technique would provide statistically valid results. Therefore, listwise deletion will be deployed and the results will be compared to those from multiple imputation (which is elaborated below).

**Imputation-based procedures** One of the approaches commonly used to handle missing data is data imputation. Here, missing values are imputed and the completed data set is then analysed using standard methods. This approach comprises three different sub-methods: hot-deck imputation, mean imputation and regression imputation. The first two methods are traditional in nature. The first is a non-parametric technique, which replaces missing values by a randomly drawn value from recorded values. Mean imputation, which belongs to the deterministic imputation methods, uses the variable mean to replace missing values. Hot-deck is based on the MAR assumption, while mean imputation is appropriate only if the data is MCAR (Sarkisian, 2005). The drawback of the first method is that, although

the marginal distribution of the variable is preserved, the covariance and correlations between variables are distorted (Cameron and Trivedi, 2005). Both are considered to be better than deleting cases; although both lack any underpinning theoretical basis (Schafer, 1997, Acock, 2005). Moreover, in case of typical/systematic missingness of data, data imputation if analysed as complete data using any of these two methods produces underestimated standard errors and overestimated test statistics (Acock, 2005, Allison, 2002).

The third sub-method, single regression imputation may be either deterministic or stochastic. The deterministic version uses regression analysis on observed data and then predicts the missing values based on the equations. Similar to the hot deck and mean imputation, this method underestimates standard errors, as it provides values for the missing cases for which residuals are zero by construction. Cameron and Trivedi criticise it on the grounds that the generated missing values are drawn from a distribution with a different variance, that is, they are heteroscedastic. Hence, the variance cannot be estimated using the usual least-squares formula. The stochastic version tries to remedy for the underestimation of standard errors in the deterministic approach by adding uncertainty to the imputation of a variable creating different values for each imputed case. Randomness is created by using the regression residual from a randomly selected case from the set of completed cases. Yet, even this approach may underestimate or overestimate standard errors as the outcome will depend on the residuals actually selected by the process. Single imputation is considered inapplicable even if the MAR assumption holds when more than 10 per cent of the data is missing. Another drawback is that this method does not allow for variation between different possible sets of imputed values considering imputed cases as if they were complete. The above forms the essential rationale for using multiple imputation and the difference between these two methods. Multiple imputation is elaborated in detail in the following paragraphs as it is used in the analysis in the following chapters.

Multiple imputation (MI) is based on the assumption that data is MAR.<sup>15</sup> With the exception of MI, all other techniques belonging to this method generate only one imputation. However, as explained above single imputation does not adequately handle missing data uncertainty. Unlike single imputation, MI uses both the “within” variance calculated for each data set individually and the “between” variance of the multiple data sets that reflects the uncertainty in the imputations for obtaining the final model estimates. This makes MI estimates more efficient. In this method, imputed values are predicted using observed values from other variables. Each imputation of the missing values is a posterior predictive distribution of the missing values that corresponds to an independent draw of the parameters and missing values. These are substituted for the missing values creating a complete data set. This process is repeated several ( $m$ ) times generating a multiple number of imputed data sets, which reflect the uncertainty of the missing values. The number of imputations need not be too high as a relative efficiency of 97 per cent when 10 per cent of the data is missing is reached with only 3 imputations. Even if 30 per cent of the data is missing multiple imputation with three iterations is 94 per cent as efficient as if data were not missing, while 10 imputations would have the same efficiency when 50 per cent of the data were missing (Acock, 2005). The relative efficiency of MI is a supportive argument for using this technique when large proportions of the data are missing. The imputed data sets are analysed separately by standard statistical analysis as if they were complete. Uncertainty resulting from the missing data will be reflected by the variation in the results based on multiply imputed data. The  $m$  data inferences are averaged to obtain the final inference that properly reflects the uncertainty due to missing data. Stated differently, to derive the actual posterior distribution the complete data posterior predictive distributions are averaged. However, the major difficulty when utilising MI is considered the choice of the posterior predictive distribution of the missing values (van Buuren and Oudshorn, 1999).

In summary, the data set used in this analysis is a stratified random sample and has missing data due to non-response and incomplete data entry. Although it is

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<sup>15</sup> For other techniques belonging to this methods please see Schafer, 1997.



not possible to test, the missingness mechanism will first be assumed to be MCAR and list-wise will be deployed. However, given the MAR is a weaker assumption, imputation will be considered and results will be compared with those from List-Wise Deletion. The missingness rate of over 10 per cent in case of some of the variables suggests multiple imputation is to be preferred to applying single imputation and this technique will be deployed here for dealing with missing data in this analysis.

### **3.5 The clustering effect**

Most of the studies reviewed in chapter 2 are based on random sample data that merge aggregate data with micro observations and measure the effect of both aggregate and micro data on migration decisions. This is a common strategy in economic research. The statistical analyses used for estimation are based on the assumption of zero covariance between error terms. However, Moulton (1986), Cameron and Trivedi (2005) and (Wooldridge, 2003) caution that this approach may lead to misspecification bias as the random error terms in the regressions are likely to be correlated within groups. The reason is that the micro units, which share an observable characteristic, such as location, are likely to share also unobservable characteristics that induce a positive correlation between error terms within the micro units. Irrespective of how small the correlation is this causes a downward bias in the OLS standard errors leading to spurious findings of statistical significance of the aggregate variables of interest, that is, consistent but inefficient coefficient estimates. Cameron and Trivedi argue that the individual-varying regressors are also biased but the bias is smaller than for cluster-invariant regressors. Therefore, the need arises to obtain standard errors that control for clustering. However, none of the studies reviewed in chapter 2 report controlling for such clustering.

This analysis is based on a random sample stratified both by region and type of area. Similar to the analysis in Moulton (1986), the regional unemployment rate is controlled for which is constant for households within one region. Therefore, it is likely that the responses of households belonging to the same region are correlated because they may depend on some observable or unobservable factors affecting all

the households in the region. Therefore, measuring the effect of both micro variables and aggregate variables, and regional unemployment rate, RU, on micro units may lead to biased estimators. To avoid this type of misspecification bias, within-group correlations will be controlled for by calculating cluster-robust standard errors. This is done using the STATA command *vce* which is available also for nonlinear models. None of the migration studies reviewed in chapter 2 that combine community characteristics with household characteristics report controlling for clustering. So, this appears to be the first analysis to provide cluster-robust standard errors.

### **3.6 Results from list-wise deletion and multiple imputation**

Prior to the interpretation of results, it is important to refer back to the issue of sample selection bias and endogeneity in models of the migration decision discussed in section 2.4.1. For reasons given in that section, comparing with models of realised migration, models based on intentions have the advantage of not facing selection bias and endogeneity issues. In this analysis, the key focus is on modelling the households' plan of economic emigration, that is, emigration intentions rather than realised emigration. Therefore, given that this empirical analysis is based on intentions to emigrate it is not expected to face endogeneity issues.

In Table 3.2, the marginal effects of the probit estimation are reported in two main panels where the left panel gives the results under Listwise Deletion, including cluster-robust p-values, and the right panel those under Multiple Imputation. The last column provides the respective theoretical expectations of the impacts of the variables. The marginal effects for the empirical results follow the normal convention, that is, for continuous variables they are calculated at the mean values of the variables, while for dummy variables this is for a 0-1 change, keeping other variables at their mean values. However, in non-linear models, the marginal effects of the term and squared term cannot be interpreted separately as 'other things being equal' does not apply (Norton et al., 2004). Therefore, the marginal effect of the term and the squared term can only be interpreted as the weighted

sum of the marginal effects of the two interacted variables (Bartus, 2005). Consequently, in this chapter, the method provided by Bartus (2005) is deployed using the STATA command *margeff*. In the literature reviewed for the purposes of this thesis, none of the studies has considered this issue in their empirical analyses.

**Table 3.2 Probit estimation of the probability of emigration**

	List-wise deletion		Cluster-robust P> t	Multiple imputation		Expected sign
	Dy/dx	P>  t		Dy/dx	P>  t	
<b>Household Characteristics</b>						
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	-9.3E-04	0.01***	0.01***	-3E-04	0.06*	
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>	1.4E-04	0.63	0.08*	6E-04	0.39	
<i>TR</i>	-0.002	0.28	0.1*	-0.001	0.22	+/-
<i>TSU16</i>	0.001	0.44	0.42	0.001	0.49	+/-
<i>TSWA</i>	0.003	0.1*	0.05**	0.003	0.07*	+
<i>TSFWA</i>	-0.001	0.43	0.47	-0.002	0.12	+/-
<i>Edu</i>	-0.16	0.001***	0.001***	-0.14	0.001***	+/-
<i>Improved</i>	0.02	0.63	0.29	-0.02	0.51	-
<i>Worsened</i>	0.16	0.001***	0.001***	0.12	0.001***	+
<b>Psychic Income</b>						
<i>TS</i>	0.006	0.39	0.1*	0.01	0.13	+
<i>Network</i>	-0.03	0.61	0.56	-0.07	0.15	+/-
<i>TNuc</i>	-0.01	0.55	0.14	-0.03	0.1*	+
<b>Location-related characteristics</b>						
<i>RU</i>	0.001	0.55	0.92	0.003	0.33	+
<i>TA<sub>j</sub></i>	0.11	0.001***	0.001**	0.08	0.001***	+
Number of observations	929					
LR chi2(16)	98.12					
Prob>chi2	0.000					
Pseudo R2	0.09					
Log likelihood	-515.34					

The results between listwise deletion (LD), based on cluster robust p-values, and multiple imputation (MI) are similar, except in the following respects. The

weighted sum of the marginal effects of income per capita at home and its squared term has the same sign with both estimations, but is significant at the one per cent level in the listwise deletion model but only six per cent in the multiple imputation model. The weighted sum of the marginal effect of the level and the squared term of income per capita abroad and the marginal effect of remittances per capita (TR), are significant only under listwise deletion, but only at 10 per cent level of significance. The former has a positive sign with both estimations, while TR has a negative sign. The marginal effect of the attitudinal variable, which controls for whether the head of the household perceives the economic situation of the household to have improved compared to one year ago (Improved), has the expected negative sign under MI but is insignificant in both estimations. The estimate of the effect of total household size (TS), although positive and of similar magnitude in both estimations, is significant only under listwise deletion, but only at the 10 per cent level. Although negative and of similar magnitude with both estimations, the marginal effect on the number of nuclear families is significant only under Multiple Imputation, although only at the 10 per cent level of significance. In each case, differences in statistical significance appear due to the marginal effects being significant, although only at 10 per cent level under either method. Given this and the similarity between the two estimates, for brevity only the listwise deletion results will be interpreted.

Although not reported in the table above, results on the coefficient estimates of household income per capita and its square term provide support for the hypothesis of an inverse U-shaped relationship between household income per capita at home and household economic emigration plans, that is, the migration hump. This result is similar to the findings in other studies. Contrary to the a priori expectations, the empirical results suggest that there is no significant impact of household income per capita abroad and remittances on the emigration plan of KS-Albanian households for economic reasons.

The empirical findings support the expected positive impact of the total share of those of working age (TSWA) on economic emigration in line with the hypothesis that, given the high unemployment rate, households with a higher TSWA

are more likely to have members not used for home production and not likely to find market employment, increasing the probability of planning economic emigration. The marginal effect of the total share of those of working age is significant at five per cent level.

The effects of the other two household demographic variables, total share of those under the age of 16 (TSU16) and total share of females of working age (TSFWA), on migration intentions were a priori ambiguous. An ambiguous impact implies opposing effects at work, which may be of equal force and therefore cancel out each other. In such a context, the variables are considered to not be statistically well-defined and hence may be insignificant (Papapanagos and Sanfey, 1998). Empirical results indicate an insignificant impact for both variables.

The dummy variable showing that the household head has higher education has a negative and highly significant impact on the probability of planning economic emigration. This suggests that households with higher education benefit more from the wage and employment opportunity differentials in the Kosovan labour market encouraging them to decide in favour of remaining in Kosova. Also, given the widespread experience of emigration the highly skilled may be better informed about barriers to the transnational transferability of their skills and also University degrees which lowers the probability of them finding appropriate jobs, reducing their probability of planning emigration. At the sample mean, a household whose head has higher education on average has a 0.16 lower probability of planning economic emigration than a household whose head has less than higher education. Given that the overall probability of emigrating is 0.29, a difference of 0.16 points in the probability of emigration is large.

Relative household income, RY, has the expected positive sign for households whose head perceives that the household economic situation has worsened compared to one year ago. This suggests that a relative reduction in household wealth increases perceived risk; hence, risk-averse households are more likely to consider emigration as a strategy of reducing the pooled risk of household income, all else equal. The marginal effect of this variable is of the same magnitude

as that of education, that is, 0.16. Although the positive impact is in line with the theoretical expectations, it was not expected to be this large.

Except for total household size (TS), which is significant only at 10 per cent level, none of the variables controlling for the influence of psychic income on the emigration probability are significant under Listwise Deletion. Contrary to other studies, the empirical results do not suggest a significant influence even for networks. However, the a priori impact of this variable was ambiguous and thus the insignificance not unexpected. An ambiguous impact was expected only in van Dalen (2005b).

As expected, the location-related variable controlling for type of area (TA), has a highly significant positive impact on the household propensity to emigrate. Households living in rural areas, at the sample mean, have a 0.11 higher probability of planning emigration than households living in urban areas, all else equal. Again, given the overall probability of emigrating of 0.29 a difference in the probability of emigrating by type of area of 0.11 can be considered large. The regional unemployment rate (RU) however is insignificant.

To conclude, the results are largely, but not fully, in line with the theoretical expectations of the model. With respect to the support for the household perspective, the results are summarised focussing on their consistency with the hypothesised impacts of the variables and their level of significance. The results are consistent with the a priori expectations with respect to five variables whose impacts are statistically clearly defined: income per capita at home, remittances per capita, share of those of working age, the attitudinal variable controlling for whether the head perceives that household economic situation has worsened, and type of area. The a priori sign was not clearly defined with respect to four variables. The effect of education is negative and significant, while the effects of the other three variables, including share of those under the age of 16, share of females in those of working age and network, are insignificant. As argued above, the statistical insignificance may be the results of the conflicting effects cancelling each other out. Empirical findings are in line with the a priori effect of the two location-related variables, type of area (TA) and regional unemployment rate (RU). However, only

the marginal effect of TA is statistically significant. Inconsistencies with expectations are suggested only with respect to three variables: the number of nuclear families, the attitudinal variable controlling for whether the head perceives that the household economic situation has improved and per capita income of those abroad. However, the marginal effects of these variables are all insignificant. The summary shows that results with respect to the majority of variables, eleven out of fourteen, are either in support, or not at variance with, the household perspective. This suggests that the results are broadly consistent with the hypothesis of the applicability of the household approach in modelling migration behaviour among KS-Albanian households.

There can be no direct comparison of the results from the household view deployed in this analysis with those from studies reviewed in chapter 2 given differences in the conceptual frameworks. Unlike the models used in the studies reviewed, the model developed in this chapter is theory-based and therefore has different variables included. For example, although considered important in the theoretical approach in this chapter, none of the studies reviewed controls for the total number of nuclear families (TNuc) in the household or for the attitudinal variables that control for the perception of the head of the household about the economic situation of the household. Given the definition of the household there are also differences in the definition of apparently similar independent variables. For example, in the empirical analysis above the total share of those under the age of 16 (TSU16) is controlled for. A similar variable is introduced in Carletto et al. (2004) and Phuong et al. (2008). However, unlike in their studies TSU16 includes also household migrant members. Therefore, although the results are largely but not fully supportive of the household view here, the position of the other theoretical approaches cannot directly be compared on a variable basis.

Since the analysis is based on a nonlinear model, interpreting results using only marginal effects at the sample mean does not give a full picture of the relationship between explanatory variables and the dependent variable and the associated probabilities. Therefore in addition, some predictions are calculated at different specific values of the explanatory variables for illustration. Results using

this approach are shown in Table 3.3. The results above gave significant impacts for the following dummy variables: whether the head of the household has higher education (Edu), whether the head of the household perceives the household economic situation to have worsened compared to one year ago (Worsened), and whether the household lives in a rural area (TA). Hence, households will be divided into two categories following the values of these dummy variables. Category one includes households whose head has less than higher education (Edu=0), whose head perceives the household economic situation to have worsened compared to one year ago (Worsened=1) and that live in a rural area (TA=1). Category two includes households whose head has higher education (Edu=1), whose head perceives the household economic situation to have remained the same or have bettered compared to one year ago (Worsened=0) and who do not live in a rural area (TA=0). The interpretation that follows focuses on differences in the emigration probability between these two categories by allowing each of the dummy variables to vary separately. The comparison between category one and category two households is provided by allowing the continuous variables, for which the empirical results suggest a statistically significant impact at 5 per cent level or higher, to vary. These two variables are household income per capita earned at home, TYH, and the total share of those of working age (TSWA). Holding other variables at the mean, the emigration probability is 0.51, this probability is almost twice the overall probability in the sample and five times larger than that of a category two household. For a previously category one household, the probability would be almost half as large if the head were to acquire higher education, reduced by more than a half if the head were to perceive the household economic situation to not have improved compared to one year ago and decreased by 0.13 if the household were to live in an urban area. In all these three scenarios separately, the probability of emigrating of a category one household is approximately three times higher compared to a category two household, holding other variables at the sample mean.

As shown in Table 3.3, holding total income per capita at its minimum value and other variables at their mean, the probability of emigration is four times higher



for the category one household compared to a category two household. At the maximum value of income the probability of emigration for both categories of households is very low; hence, a very small difference in the probabilities of emigration is recorded. As income moves from its minimum to its maximum value, the emigration probability for a category one household decreases by 0.54, while for households of the other category the probability of emigration gets close to zero.

**Table 3.3 Interpretation of results at different specific values for the two categories of households**

Explanatory variable	Predicted probability of emigration		
	Category one	Category two	Difference (in absolute value)
Edu			
0	0.51	0.23	0.28
1	0.3	0.1	0.2
Difference (in absolute value)	0.21	0.17	
TA			
0	0.38	0.1	0.28
1	0.51	0.17	0.34
Difference (in absolute value)	0.13	0.07	
Worsened			
0	0.33	0.1	0.23
1	0.51	0.2	0.31
Difference (in absolute value)	0.18	0.1	
TYH			
Minimum	0.58	0.13	0.45
Maximum	0.04	0.001	0.039
Difference (in absolute value)	0.54	0.129	
TSWA			
Minimum	0.28	0.03	0.25
Maximum	0.59	0.14	0.45
Difference (in absolute value)	0.31	0.11	

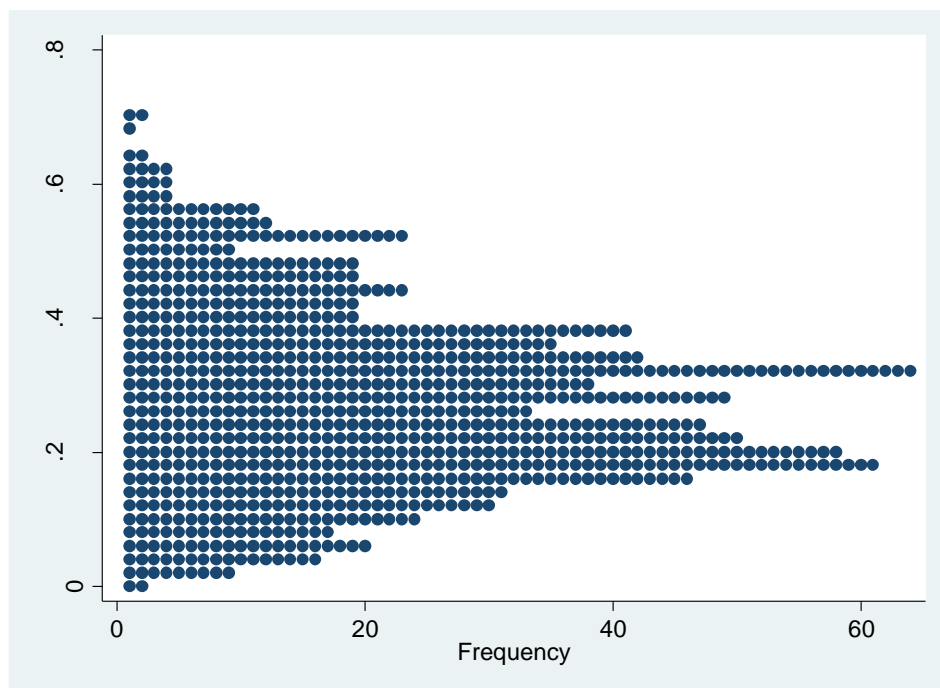
For a category one household, holding other variables at their mean, the probability of emigration is higher compared to a category two household at both extreme values of the share of those of working age (TFWA). However, as TSWA

moves from its minimum to its maximum value, the probability of emigrating becomes twice as large for a category one household, while almost five times as large for a category two household.

In sum, the above discussion shows that within each scenario a category one household has a higher probability of planning emigration compared to a category two household. Additionally, a higher income level or a lower share of those of working age implies a much lower probability of emigrating for both categories.

Figure 3.16 plots the predicted probabilities of sending at least one or one additional member abroad of individual observations. The predicted probabilities span from 0.01 to 0.71 with a mean of 0.29. According to the plot, for the majority of observations the predicted probabilities lie between 0.2 and 0.4.

**Figure 3.16 Predicted probabilities of individual observations**



### 3.7 Concluding remarks

Following the conclusion of the critical review in chapter 2, that no consistent conceptual framework for modelling the determinants of the decision to emigrate has yet emerged, in this chapter a model taking the household view has been outlined. Using a sample of 1,384 KS-Albanian households, this analysis

examines the determinants of the intentions to emigration based on this theory-informed household model of the decision to emigrate. As explained in section 3.1 and 3.2, this analysis is customised to reflect the socio-economic idiosyncrasies in Kosova during the period under investigation. The main findings suggest fairly broad support for the theoretical expectations of the household model. This holds with both methods deployed, listwise deletion and multiple imputation. Among the household income variables both household income per capita of those employed at home and of those employed abroad are found to be significant. However, for the latter results are in line with theoretical expectations only regarding the effect of the former variable. Remittances per capita have an impact on the emigration decision, but the estimate of its effect is insignificant. These findings seem to provide some support for the household approach. Among the household characteristics, introduced following the theoretical model, only the share of those of working age is statistically significant and has the expected positive sign. However, given that theoretically the effects of the other two variables controlling for household characteristics are not well defined, insignificant marginal effects are not unexpected. The large but not full support for the theoretical expectations of the model warrants further investigation given the arguments in favour of this approach elaborated in the theoretical framework.

For KS-Albanian households results suggest that the probability of future emigration reduces with household income. There is evidence of a nonlinear relationship between household income and economic emigration, referred to as the “migration hump” and found in most of the studies reviewed above, except Phuong et al. (2008).

Among the household demographic characteristics only the share of those of working age (TSWA) has an important impact on the emigration behaviour of KS-Albanian households. TSWA is introduced to capture the influence of labour supply surplus and has a positive impact on emigration plans. Although they used slightly different variables, the estimates by Carletto et al. (2004) and Phuong et al. (2008) indicate a similar effect. None of the studies reviewed introduces the share of females in those of working age. Except for household size which has the expected

positive impact on the migration decision, although significant only at 10 per cent, variables introduced to capture the effect of psychic income on economic emigration do not show any significant influence.

The findings suggest that Kosova is not facing a Brain Drain problem which is usually common for countries with high emigration flows. Yet, this finding has to be taken with caution, as a household's educational attainment has been proxied by the education level of the head of the household due to lack of data. Similar results are found by the studies that take the household view (section 2.3.2, chapter 2).

Results suggest that relative wealth in terms of habituation plays an important role in economic emigration plans. Households that perceive their relative wealth situation to have worsened compared to the previous year are found to have a higher emigration probability. Also, households living in rural areas and in regions with higher unemployment rates have a higher probability of planning economic emigration. Although Carletto et al. (2004) control for the effect of relative wealth through the index of relative deprivation, they also control for regional characteristics and find support in favour of their importance.

To summarise, the results are fairly in line with the theoretical expectations of our household model. KS-Albanian households are selective in their emigration behaviour. The emigration propensity is relatively high for households whose head has less than higher education, perceives the household economic situation to have worsened, live in rural areas, have large shares of their members of working age and/ or large shares of members under the age of 16. These findings suggest that ex ante emigration will remain relatively high as long as the lack of employment and high rates of poverty prevail, especially in rural areas.

## CHAPTER 4

### THE PROBABILITY OF RETURN CONDITIONAL ON THE DURATION OF MIGRATION

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#### 4.1 Introduction

The previous chapter focussed on the determinants of the probability of a household planning to send at least one additional member abroad for economic reasons. This was based on an economic model built for this purpose. The model deployed in this chapter is built on the same basis as that developed in the previous chapter. In this chapter, a model is developed to provide a theoretical framework for developing hypotheses on the duration of economic migration from the perspective of the household. So, following the arguments presented in chapter 3 here too it is assumed that the household is the appropriate unit. In this analysis, households are modelled as maximising utility from having part of their household stay for another period abroad conditional on the household budget constraint. Return migration plans are considered to be based on a household decision-making process where the household as a whole seeks to maximise its expected present value of utility, subject to its income constraint. The maximisation problem varies

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according to two choices facing the household: 1) have part or the entire migrant household remain in the host country for an additional period or 2) have part or the entire migrant household return. Similar to chapter 3, this analysis too concentrates only on the first stage of the decision-making process of the household jointly deciding on return and ignores the second stage of which member(s) of the household should return. Again, similar to chapter 3, this model has been customised to reflect the idiosyncrasies of the political and socio-economic conditions prevailing in Kosova.

In this chapter, a data set from the same survey as that introduced in the previous chapter is used but now concentrating on whether they have returned and the length of time that migrants have been abroad. The empirical investigation deploys the hazards proportional model to investigate the determinants of the duration of migration. Hence, in this analysis, in addition to investigating the appropriateness of the household view, the determinants of the probability to return given the duration of migration are examined.

One motivation for this chapter is that given that a large share of the Kosovan population is abroad, the characteristics of migrant households that return are important from the perspective of Kosova's future economic development. In this regard, it is worth investigating whether the more or the less educated are returning to find out whether Brain Gain is the case in Kosova. Another characteristic of returnees worth examining is their age composition. If the probability of return is higher among the poor and elderly this will increase the future burden on the currently weak welfare system in Kosova. Returnees also may transfer savings and know-how through business investments contributing to economic growth. The determinants are introduced in three categories. The first two categories follow the pattern of the previous chapter and represent the characteristics of households (including pecuniary income) and variables capturing the effect of psychic income. The third category contains the year of emigration.

The structure of this chapter is as follows. Section 4.2 provides a critical review of the models deployed in the literature to investigate the determinants of

the probability to return conditional on the duration of migration and a summary of their main empirical findings. The next section, constructs a theoretical framework for analysing the probability of return conditional on migration duration from the household perspective. This is used to specify an econometric model which investigates the determinants of the probability of return conditional on the migration duration. The empirical technique is elaborated in section 4.4, while the next section discusses the data set used. In section 4.6, the specification of variables and descriptives are provided. The empirical findings are summarised in section 4.7, while in the last section the conclusions are provided.

## **4.2 Literature review**

In section 2.4.2, a critical review of the theoretical approaches of papers considering migration as a reversible decision is provided. Although the reviewed studies all analyse return migration within a dynamic framework, they focus on different aspects and take different empirical approaches. Despite the focus of this chapter being on the determinants of migration duration, this current review of empirical techniques and findings relates to the papers reviewed in section 2.4.2. To avoid repetition only the explanatory variables included and the empirical results are critically reviewed below. As explained in section 2.4.2, all these studies take the individual approach. Variables considered as determinants of return migration, intentions to return, or the duration of stay include personal and human capital characteristics, the labour market integration of the individual, wealth characteristics and variables proxying psychic income.

**Wages** Usually, migration is modelled within a static framework as being determined primarily by wage differentials between the home and host countries. Studies focussing on return migration, however, argue that return occurs despite persisting wage differentials under certain conditions. Stark et al. (1997), Dustmann (2003) and Dustman and Weiss (2007) using theoretical models assume that wage differentials between the host and home country are positive and explain that utility is a decreasing function of wage differentials. As explained in section 2.4.2, the two opposing effects, the relative wage effect and the income effect, are

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assumed to have an ambiguous impact on the utility and hence on migration duration. Carrion-Flores (2006) gives a similar theoretical explanation for the relationship between wage differentials and migration duration. Empirically, this relationship is tested by Dustmann (2003), Carrion-Flores (2006) and by Sander (2007). Dustmann (2003), focussing on the migration duration of returnees only, uses average predicted wages. To do so, the author first estimates wage regressions for the whole sample and then computes predicted wages over the whole period spent abroad. These are then averaged for each individual. Carrion-Flores (2006) considering both returnees and non-returnees, uses expected wages in the year the migrants decided to emigrate calculated based on unemployment rates and mean wages in the U.S. The former study finds evidence of an inverse U-shaped relationship between average predicted wages and migration duration for migrants in Germany, while the latter finds that an increase in the expected wage leads to longer migration durations among Mexican immigrants in the US. Dustmann (2003) conducts a further analysis by regressing changes in intended migration duration on changes in wages in two subsequent periods and finds that an increase in wages negatively impacts on intended migration duration. Sander (2007) as a proxy for economic wellbeing, uses equivalence income instead of wages, measured by dividing pre-government household income by the square root of the number of household members. The results are insignificant. The author does not give a detailed definition of what is meant by pre-government income.

**Purchasing power parity** Theoretically, Dustmann (2003) and Dustman and Weiss (2007) argue that purchasing power parity should influence the decision on migration duration. Accordingly, a rise in the purchasing power differential, which means that there is a lower price of consumption for migrants at home than abroad, reduces the migration duration of migrants. However, there is no empirical evidence to support this argument.

**Psychic Income** Most of the studies consider the importance of migrants' consumption preferences. In their theoretical models, Stark et al. (1997), Dustmann (2003) and Dustmann and Weiss (2007) assume that, other things being equal,



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consumption at home is preferred to consumption abroad. Accordingly, both the total and marginal utility from consuming at home is higher than consuming in the host country. Consequently, an increase in migration duration increases the cost of forgone consumption at home; therefore the difference between marginal benefits and costs of staying another period in the host country decreases (and may become negative), despite persisting wage differentials. Different authors use different measures of psychic income in their empirical specifications. Waldorf (1995) analysing return intentions, argues that the impact of marital status depends on whether the spouse lives in the home or destination country. Where the latter holds, an intention to return may stem from the desire to reunite. Yet, family reunion may alternatively take place in the destination country, weakening the desire to return. Accordingly, the theoretical expectation of the impact of marital status on return is inconclusive. Empirical estimates in Waldorf (1995) suggest a positive impact of being married on return intentions. However, in the estimation the author does not control for the location of the spouse due to lack of data. Sander (2007) follows the same argument, but instead of marital status introduces two dummy variables controlling for the impact of the location of the spouse and children. She finds that the probability of return migration is higher if the spouse and children live in the home country, supporting the hypothesis of a stronger social attachment to the home country. Results in Carrion-Flores (2006) and Gundel and Peters (2008) also suggest a positive impact of this variable on the hazard of return, implying that migrants whose spouses remained in the home country have a shorter migration duration compared to those whose spouses are in the host country.

**Age** Sander (2007) argues that age at entry or years since migration capture the effect of migrants' integration in the host country, suggesting that a younger age at entry increases migration duration. As such, this variable is considered as a proxy for psychic income. The author introduces three dummy variables to capture the effect of different age cohorts (26 to 50 years, 51 to 65 years, older than 65, with those aged 16 to 25 being the benchmark category). In line with theoretical

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expectations, she finds a negative and significant impact for the last two dummies on the probability of return, with the dummy representing the age category 65 and over having a larger magnitude suggesting a stronger negative impact. The findings in Carrion-Flores (2006), who controls for age at entry, suggest that age has a negative impact on the duration of stay of Mexican migrants. This is consistent with the results in Gundel and Peters (2008), who deploy a slightly different specification, introducing dummy variables for different age cohorts. Using a longitudinal data set covering the period 1984-2005 of German immigrants older than 18 years of age and of different nationalities, they find a positive and statistically significant relationship between each age cohort and the hazard of return except aged 40-50, suggesting that older immigrants have shorter migration durations. Waldorf (1995) argues that the relationship between age and return intentions should be nonlinear due to the stronger effect of age as retirement age is reached. She finds empirical support for a U-shaped relationship explaining that the lowest probability of return intention is recorded by those in prime working age and it increases with age.

**Employment status, House ownership and Legal status** Other variables introduced to control for migrants' level of social and economic integration in the host country are employment status (Gundel and Peters, 2008), ownership of dwelling abroad, legal status (citizenship) and language fluency (Sander, 2007; Gundel and Peters, 2008). These factors are a priori each assumed to have a positive impact on migration duration (a negative impact on the probability of return) as they positively impact on the preference for the host country. Results in Gundel and Peters (2008) suggest that being employed and ownership of dwelling in Germany increase the duration of migrants' stay. Sander (2007) finds similar results, that is, these variables decrease the probability of return. These authors also suggest that legal status, citizenship of the host country and language fluency have the expected impact on migration duration and on the probability of return migration.

**Education** Differing results are found with respect to the impact of education. Dustmann and Weiss (2007) argue theoretically that migration may be an investment decision induced by an increased future return to their augmented human capital. So, despite persisting wage differentials, ignoring consumption preferences, some migrants return as they improve their skills while abroad for which they get a premium in the home country labour market. Migrants may be more likely to return if their wages in the home country become higher than their wages prior to emigration resulting from the positive impact of foreign experience on earnings at home. The authors extend the framework by introducing two different situations of transferability of work experience between the two countries, partial and super transferability. In case of partial transferability the individual is assumed to accumulate local human capital at a faster pace based on work experience. If partial transferability holds the authors argue that migration is permanent. However, under the assumption of super-transferability, the migrant acquires experience at a faster pace in one country but this experience is more valuable in the other country. So, the migrant faces a higher earnings potential in the case of return to the home country, despite a higher general level of wages in the host country, inducing return migration. Similar assumptions are used by Mayr and Peri (2008) in their theoretical model, which focuses on the impact of migration and return migration on home country human capital and wages. These authors assume that immigrants enhance their human capital through learning new skills and techniques and are paid a higher human capital premium upon return to the home country labour market. Consequently, they argue this benefit makes it more attractive for some highly skilled to emigrate and return than undergo permanent migration. However, Mayr and Peri (2008) do not consider barriers to international transferability of human capital. None of the authors account for the possibility of labour market premia in the host country and the impact of possible consumption preferences in favour of the host country, in particular in terms of socio-economic integration over time, which increase the cost of return migration.

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In their descriptive analysis, Dustmann and Weiss (2007) analyse changes in the share of migrants within three cohorts, those that were in the UK one, five and 10 years after arrival by type of occupation and other personal characteristics. They show that older immigrants and more educated immigrants leave earlier. Furthermore, they find that the percentage of the highly skilled among the immigrants decreases significantly after 10 years of arrival compared to those after one year of arrival. The percentage of the intermediate category of skills increases slightly, while that of the low-skilled remains relatively stable. According to them, these results may be compatible with the theoretical expectation of the highly skilled being more prone to return as they improve their skills while abroad. They provide theoretical support for this argument through their model. Another explanation for the decrease in the percentage of the highly skilled is given by the increase in the percentage of own account workers (self-employed that do not employ other workers). However, as Dustmann and Weiss (2007) point out, one of the limitations of their analysis is that in the absence of panel data, average, rather than individual, characteristics of immigrants had to be compared. Therefore, their results have to be taken with caution. Carrion-Flores takes a different approach introducing dummy variables to control for the impact of five different labour market occupations on return migrants. Results from the data set reporting the return from their last migration suggest that unskilled workers have a lower hazard of return, while those employed in the agricultural sector, manufacturing, and working as a professional or self-employed are estimated to have a shorter stay abroad. The negative impact on migration duration is highest for professionals. When deploying the data set reporting a return from their first migration, she finds that each occupation category has a lower hazard of return, except for those involved in the agricultural sector. Yet, the author does not refer to any benchmark category, which would enable comparisons of hazard rates between the different occupations.

This approach of comparing percentages of immigrants by different human capital characteristics of Dustmann and Weiss (2007) is followed by Mayr and Peri

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(2008). However, they use U.S. Census and data from the 2005 American Community Survey of immigrants who entered the U.S. during 1975-1979. They focus also on cohorts that emigrated while young, that is, during their prime working years, and who may return while still of working age. These are of special interest, as they may enhance their human capital and transfer it to their home country after return. They find support for a neutral selection of return migrants, or a moderately positive selection in terms of human capital. However, the Eastern European cohorts aged 18-22 and 23-27 recorded decreases in the percentage of those remaining with some college education of around 15 per cent, suggesting that return migration is more likely among the highly educated in these two age cohorts. The authors however argue that due to measurement errors results from this study should be treated cautiously.

The findings in Carrion-Flores (2006) and Gundel and Peters (2008), who deploy the Cox proportional hazards model, support the argument that the better educated have a higher hazard of returning. The former author introduces dummies to proxy different education levels and provides evidence that migrants with higher education levels have a shorter duration of stay than the less educated. The latter study uses a dummy variable denoting the highly skilled, those having vocational and higher education (level 5 and 6 as defined by ISCED 1997-Classification). Their results suggest that these groups have shorter migration durations than less educated migrants. They also find that positive-selection regarding education is more pronounced among women compared to men. Positive-selection is also empirically supported also by Commander (2004). However, Sander (2007) finds no significant impact of years of education on the probability of return migration. Focusing on the wage effect of return migration, de Coulon and Piracha (2005) use both the Roy theoretical model of self-selection and the semi-parametric approach of DiNardo et al. (1996) and find support for the negative selection of return migrants compared to non-migrants using a data set of Albanians. Negative selection here implies that return-migrants have lower than average skills in the home country.

**Remittances** Remittances are hypothesised as capturing both the effect of family ties with those remaining at home and the effect of capital accumulated in the host country either for consumption purposes or business investment after return (Sander, 2007; Gundel and Peters, 2008). In either case, the a priori impact is expected to be positive on the probability to return. Results offer support for the expected sign (Gundel and Peters, 2008). Yet, in the subsample with only female migrants the impact is insignificant. Sander (2007), however, produces the reverse signs of the effect of gender on remittances, which however are insignificant. According to the author the insignificance of this variable is probably due to the possible correlation between this variable and “spouse abroad”. Although this explanation is not further elaborated by the author, it may imply that those who have their spouses in the home country are both more likely to send remittances and more likely to return. Therefore, the impact of remittances on return probability may not be direct but may rather operate through their correlation with having spouse in the home country.

**Migration Costs** Carrion-Flores (2006) introduces three variables to capture the impact of costs on return migration. A dummy variable controls for the type of area in the city of origin, whether urban or not, as the author assumes that migrants from urban areas have more travel options than those from rural areas. Transportation costs are proxied by the distance in miles between the origin state in Mexico and the destination in the U.S. and another cost variable controls for the average number of times having been apprehended in the year they crossed the US border. The first two variables are found to have a negative impact on return migration, while the impact of the third is insignificant.

In sum, no clear picture emerges as regards the importance of most of the variables discussed above. This may be due to the studies deploying different approaches to modelling migration given that they focus on different aspects, which in turn leads to differences in model specifications and the definition of variables. Another reason for this may be that there are country differences in terms of importance of independent variables. Although different models of return

migration have been elaborated above, this chapter will consider the decision of return migration only in terms of the duration of stay. In the specification the choice of explanatory variables will be based on the theoretical approach developed in the next section whenever the data set allows.

### **4.3 Theoretical Model**

The model in chapter 3 and the one to be developed here both take the household approach and model household decisions within the expected utility maximisation framework. Accordingly, the three assumptions on which the analysis in chapter 3 is based hold in this analysis too. The conceptual framework only focuses on the first stage of the decision-making process of whether to have part or the entire migrant household remain in the host country for an additional period or to have part or the entire migrant household return. Thus, it ignores the second stage of what members of the migrant household should return. These two stages of the decision-making process are assumed to be independent. Following the arguments presented in chapter 3, this analysis too is customised to reflect the socio-economic idiosyncrasies prevailing in Kosovo during the period of investigation.

The household maximises the expected present value of utility from:

$$\max E_{t=1}^{\infty} (1+i)^{-t} [U_i(c_i)] \quad (4.1)^1$$

subject to the income constraint:

$$\sum_{t=1}^{\infty} (1+i)^{-t} c_i \leq \sum_{t=1}^{\infty} (1+i)^{-t} y_i \quad (4.2)^2$$

In what follows, given the similarity between the two models and to avoid repetition, some details of this model which are identical to those of the previous model will not be discussed. However, there are two major differences between the two models. The former models households' plans for emigration for

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<sup>1</sup> This equation is identical to Equation 3.3, used in chapter 3.

<sup>2</sup> This equation is identical to Equation 3.4, used in chapter 3.

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economic reasons, while the model in this chapter assumes that part of the household is already abroad and, whatever the reasons for first emigration, examines households' decisions to have part of the household stay for another period abroad or return. Accordingly, the household as a decision-making unit tries to maximise utility from consumption, including in its choices the costs and benefits of having part of the household remain for an additional period abroad. Unlike in chapter 3, the main objective of this analysis is the maximisation of the total expected present value of household utility from current and future consumption of those remaining at home and those abroad, irrespective of the reason for emigration, given the duration of the stay abroad. The household as the decision-making unit analyses benefits and costs of alternatives on all household members prior to making its decision. So, it only chooses to have members stay abroad for another period if the resulting benefits to the household outweigh the costs, that is, if total expected utility is higher than if that part of the household returned to the home country.

Following the above, the household faces two alternatives: 1) decide to have part of the household stay for another period in the host country, or 2) decide to end the migration spell of part of the household. Hence, the utility function is as follows<sup>3</sup>:

$$\sum_{t=1}^{\infty} (1+i)^{-t} U_i(c_i, \tau) = \sum_{t=1}^{\infty} (1+i)^{-t} \sum_{j=1}^n U_j(c_j) + \sum_{t=1}^{\infty} (1+i)^{-t} \sum_{k=1}^n U_k(c_k)(\tau) \quad (4.3)$$

where  $U_i(c_j)$  and  $U_i(c_k)$  denote the expected household utility from consumption  $c_j$  at home and from consumption  $c_k$  abroad, and  $\tau$  represents the duration of migration. Under alternative one, the second RHS term is positive whereas under alternative two, upon return it becomes zero.

Similar to the previous model, disposable income is treated as the sum of after tax wage and psychic income adjusted for migration costs:

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<sup>3</sup> The household may also send another member abroad as replacement of the current migrants. In this analysis this possibility is ignored.



$$Y_i \equiv py_i + psy_i - mm_i \quad (4.4)$$

where all terms are as defined in chapter 3. The table below presents two scenarios showing the changes in migration costs and psychic income by the two different household migration plans. The household may or may not plan to have members remain for another period abroad which results in two scenarios. Migration costs introduced in this model are somewhat different from those introduced in chapter 3. This difference will be considered later in this section. The possibility of choosing between the two alternatives results in psychic income and migration costs taking different values in the above identity (Table 4.1).

**Table 4.1 Migration costs and psychic income by different scenarios of household return migration plans**

Scenario	Household plans to have members remain abroad for another period (yes/ no)	Migration costs, $mm_i^1$	Psychic income, $psy_i$
1	Yes	>0	<u>Remains the same or decreases</u>
2	No	0	<u>Remains the same or increases</u>

<sup>1</sup> For the moment, the one-off cost of returning to the home country is ignored.

The three terms comprising household disposable income are defined in detail in the previous chapter. Any differences in the definition of other explanatory variables between the two chapters will be dealt with explicitly. The components of the other two terms, psychic income and migration costs, are expected to differ from that within the framework of chapter 3. Therefore, these two parts of disposable income are modelled in detail in the following.

### Psychic Income

The household approach implies that changes in psychic income result from its effect on all household members, including those remaining at home and those abroad. Psychic income is modelled as follows:

$$psy_i = q(S_i, Network_i, Nuc_i) \quad (4.5)$$

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where  $S$  is household size,  $Network$  is the number of household members already abroad that do not constitute a nuclear family, and  $Nuc$  is the number of nuclear families abroad.<sup>4</sup> In this analysis psychic income is again assumed to be an increasing function of household size,  $S$ , as the larger the household the lower the loss from social interactions among members abroad. This relationship is similar to that introduced in chapter 3, except that the possibility of sending further members abroad is ignored and only the effects of having part of the household stay abroad for another period are considered. The relationship between psychic income and the number of household members already abroad is assumed to be negative as the household has to sacrifice social interactions with those abroad, reducing household utility. The loss from social interactions is assumed to increase at a higher rate if more than one member is abroad is planning to stay for another period, conditional on household size. Given the extended KS-Albanian households, as the number approaches the size of a whole nuclear family or greater, the reduction in psychic income increases at a lower rate, implying a non-linear relationship between this variable and the emigration propensity.

Disutility from having to stay for another period abroad is also perceived by household members abroad, as they have to sacrifice social interactions with their family left behind, and this adds to the total household disutility. However, this effect may be partially offset if there are a large number of members abroad ( $Network$ ) and/or they comprise nuclear families ( $Nuc$ ). So, again, there are interactions between household size ( $S$ ),  $Network$  and  $Nuc$ . For the purpose of this analysis migrants are assumed to already be well integrated in the host country. Therefore, disutility from having to start a new life in a new country is considered to be equal to zero. However, socio-economic integration may improve over the migration cycle (Dustmann and Weiss, 2007) reducing the migrants' disutility from consumption in the host country. This reduces marginal disutility from having to stay another period abroad and in turn the negative impact on psychic income. Furthermore, some level of uncertainty exists *ex ante* with regard to the possibility

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<sup>4</sup> The household may plan to send other members abroad which would impact on psychic income. For simplicity, this possibility is ignored in this analysis.

of socio-economic re-integration in the home country after return. This uncertainty is even stronger when migrants have children who are educated abroad. This again reduces psychic income as households are considered risk averse.

### **Migration costs**

Emigration costs are modelled by the following cost function:

$$mm_i = p(crm_i, Rrm_i) \quad (4.6)$$

where  $crm$  and  $Rrm$  denote the continuous relocation costs of the part of the household living abroad and the one-off relocation costs of return migration respectively. The two types of costs are modelled by the functions presented below.

$$crm_i = q(Network_i, Nuc_i) \quad (4.7)$$

$$Rrm_i = r(Network_i) \quad (4.8)$$

where the continuous relocation costs of the part of the household living abroad ( $crm$ ) depends on the household size abroad ( $Network$ ) and number of nuclear families abroad ( $Nuc$ ), while the one-off relocation costs of return migration ( $Rrm$ ) is a function of  $Network$ . Thus in this chapter return-migration costs are added, while emigration costs are ignored. Changes in migration costs by the two alternative migration plans of households are given in Table 4.1. In case of return,  $crm$  is equal to zero, while the one-off relocation cost is positive as the household has to cover the cost of returning to the home country. Relocation cost is increasing in the number of household members abroad,  $Network$ . In the opposite scenario,  $crm$  is positive as the household has to forgo the benefits from economies of scale of living together due to having to run two separate households. Yet, following the argument about economies of scale in the previous chapter  $Network$  and  $Nuc$  have a reducing impact on the continuous relocation costs. Therefore,  $crm$  is a non-linear increasing function of  $Network$  and  $Nuc$ . The one-off relocation costs are equal to zero under this scenario.

## **4.4 Model specification**

### **Survival Analysis**

#### **Rationale for using the survival analysis techniques**

The aim of this chapter is to investigate the determinants of the probability to return conditional on migration duration from the perspective of the household. As such, the focus is on the probability of return of migrant households, prior to or in 2007 as opposed to not having returned by 2007 (the year when the survey was conducted), conditional on certain explanatory variables. The dependent variable is the time spent abroad. An issue in survival data is that the dependent variable is characterised by right-censoring. Those observations, which have returned to the home country, are considered as having 'failed', while others which continue their migration spell after the year of the survey are considered as right censored, as they may return in the future. Although this is usually considered a problem in linear regressions, it can be handled by deploying censored normal-regressions using STATA. Possible techniques within this framework are also binary analysis methods, such as the logistic regression or probit. This has the advantage that it does not impose any assumption on the distribution of failure time. However, this focuses only on the probability of return and ignores the different migration durations of the observations leading to the inefficient use of the data set (Cleves et al., 2002).

Given the above, other techniques have to be considered to investigate the determinants of migration spells. One such technique is survival analysis, which does not assume normality and hence overcomes issues which render binary regression models problematic in analysing survival data. Also, it makes efficient use of the data set in that it considers both the probability of return and the migration duration. This technique was first introduced in medical and biological science. It is now used also in economics and it focuses on analysing the time to the occurrence of an event (Cleves et al., 2002). Such techniques allow the investigation

of the determinants of the time to return migration, that is, migration duration. In terms of the model, this event is defined as a failure in time.

### **The hazard function**

The hazard function is a survival analysis technique which applies to survival data. The hazard rate measures the rate at which risk is accumulated. In the literature, the preference is to refer to the survival function  $S(t)$  or the hazard function  $h(t)$ , rather than the probability density function  $f(t)$  or the cumulative distribution function  $F(t)$ . All forms, though describe the same probability. The hazard function  $h(t)$  gives the probability that return migration occurs in a given interval, conditional upon the subject having survived to the beginning of that interval, divided by the width of the interval. More briefly, this can be expressed as the likelihood of return conditional on migration duration. There is a one-to-one relationship between the probability of survival past a certain time and the amount of risk that has been accumulated up to that time.

The hazard rate can take values from 0, where there is no risk of return, to infinity, where it is certain that return will occur. Accordingly, the cumulative hazard function measures the total amount of risk that has been accumulated up to time  $t$ . It gives the relationship between accumulated risk and the probability of survival. There is a one-to-one relationship between the probability of survival past a certain time and the amount of risk that has been accumulated up to that time.

Depending on the assumptions they make, such techniques may be non-parametric, parametric or semi-parametric. Non-parametric techniques do not make any assumptions at all, but do not appropriately handle censoring and other issues related to survival data (Cleves et al., 2002). According to Cleves et al. (2002), if the semi-parametric model, such as Cox model, has no covariates, the produced estimates will be identical to those that would be produced using non-parametric models. However, when the analysis contains qualitative explanatory variables, as is the case in this analysis, semi-parametric and parametric analysis provide more efficient tests and comparisons for groups determined by the explanatory variables than non-parametric analysis. If this does not hold, it implies that the underlying

assumptions of the parametric and/or semi-parametric models are incorrect. Given these arguments, non-parametric techniques will not be considered for the analysis at hand. The difference between parametric and semi-parametric techniques is that the former models have corresponding hazard functions, while in the latter models there is no need to define the hazard function. Semi-parametric techniques make no assumptions about the distribution of time-to-failure, but make assumptions about how each observation's probability of failure is determined through its observed characteristics. Such techniques are combinations of separate binary-outcome analyses at each of the failure times. So, particular intervals in which no failures occur are uninformative in semi-parametric models, but informative in the parametric models. The assumption about the time-to-failure distribution in parametric models may not be appropriate (Cleves et al., 2002, Han and Hausman, 1990). So, when no reasonable assumptions can be made about the shape of the hazard, not having to assume a specific probability distribution of the hazard rate is considered to be the major advantage of semi-parametric models. The next section introduces the Cox proportional hazard model, considered the most popular semi-parametric model (Cleves et al., 2002).

### **Cox's Proportional Hazard Model**

Being a semi-parametric model, the Cox proportional hazards model takes the form of Equation (4.9) where the dependent variable is the instantaneous rate of return to the home country of part of the household at time  $t$ , conditional on duration of migration:

$$h_i(t) = h_0(t) \exp(x_i' \beta_x) \quad (4.9)$$

where  $h_i(t)$  is the hazard of return migration of household  $i$  at time  $t$  conditional on having survived up to time  $t$ , that is in this case conditional on having remained in the host country up to time  $t$ , and  $h_0(t)$  is the baseline hazard rate.  $x_j$  is a vector of explanatory variables, consisting of pecuniary income, a set of variables proxying psychic income, and a set of variables representing migration costs, while  $\beta_x$  is a column vector of regression coefficients.

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In this model, the hazard rate (rather than survival time) is a function of the independent variables (covariates) and an unknown and arbitrary baseline hazard function of time (Cox, 1972). The model does not have an intercept as this is subsumed into the baseline hazard (Cleves et al., 2002). It is considered the most general model because it is not based on any assumptions concerning the nature or shape of the underlying survival distribution over time. So, the baseline hazard is not estimated and the main focus is in estimating the regression parameters (Cox, 1972). As argued above, this is an advantage of this model, especially in situations when no appropriate assumptions can be made about the shape of the hazard (Cleves et al., 2002). Incorrect assumptions result in loss of efficiency and hence misleading results about the coefficients on the covariates. The Cox model allows concentration on the effects of the regression covariates which are of interest for their potential implications for policy.

This model is based on the proportionality assumption. According to this assumption, the effect of the covariates is proportional over the entire baseline hazard, implying that covariates multiplicatively shift the baseline hazard function (Cleves et al., 2002 and Carrion-Flores, 2006). Hence, whatever the shape of the baseline hazard function, it is the same for all individuals and the hazard rate of an individual varies only with variation in the covariates. In other words, given two individuals with particular values for the covariates, which do not change over time, the ratio of the estimated hazards over time will be constant. Therefore, this assumption is considered the primary concern when deploying Cox proportional hazards model (Box and Jones, 2004). Whether the assumption holds can be tested by standard tests, which are residual-based tests. These are sensitive to misspecification of the Cox model as omitted covariates, omitted interactions and nonlinear covariate functional forms may affect results of the test (Keele, 2010). The author replicates the work of Chiozza and Goemans (2004) and tests for nonlinearity in continuous covariates using the Grambsch and Therneau (1994) test, and finds support for it. After correcting for the functional form for continuous covariates, the author finds that the non-proportionality diagnostic tests no longer

lead to the rejection of the proportionality assumption. Consequently, the author suggests conducting specification tests prior to non-proportionality tests.

As introduced at the beginning of this section, being a survival analysis technique, the Cox model handles right censoring an issue characterising the data set used in this analysis. The model makes use of information on all migrant households, both those that have returned and those that have not yet returned to the home country and their migration durations when calculating the hazard rate.

Following the above, the theoretical framework developed in the previous section is placed into the following form of empirical investigation (all the terms are defined in section 4.3):

$$h_i(t|py, psy, mm) = h_0(t) \exp(\beta_1 py + \beta_1 psy + \beta_1 mm) \quad (4.10)$$

Although the theoretical framework is concerned with the decision on migration duration based on economic factors, given that the timing of migration was partly influenced by political factors as explained in section 1.2, it is important to reflect this. Accordingly, a dummy variable that controls for whether the household first emigrated during the war years of 1998/1999 is included in the model.

## **4.5 The survey and data**

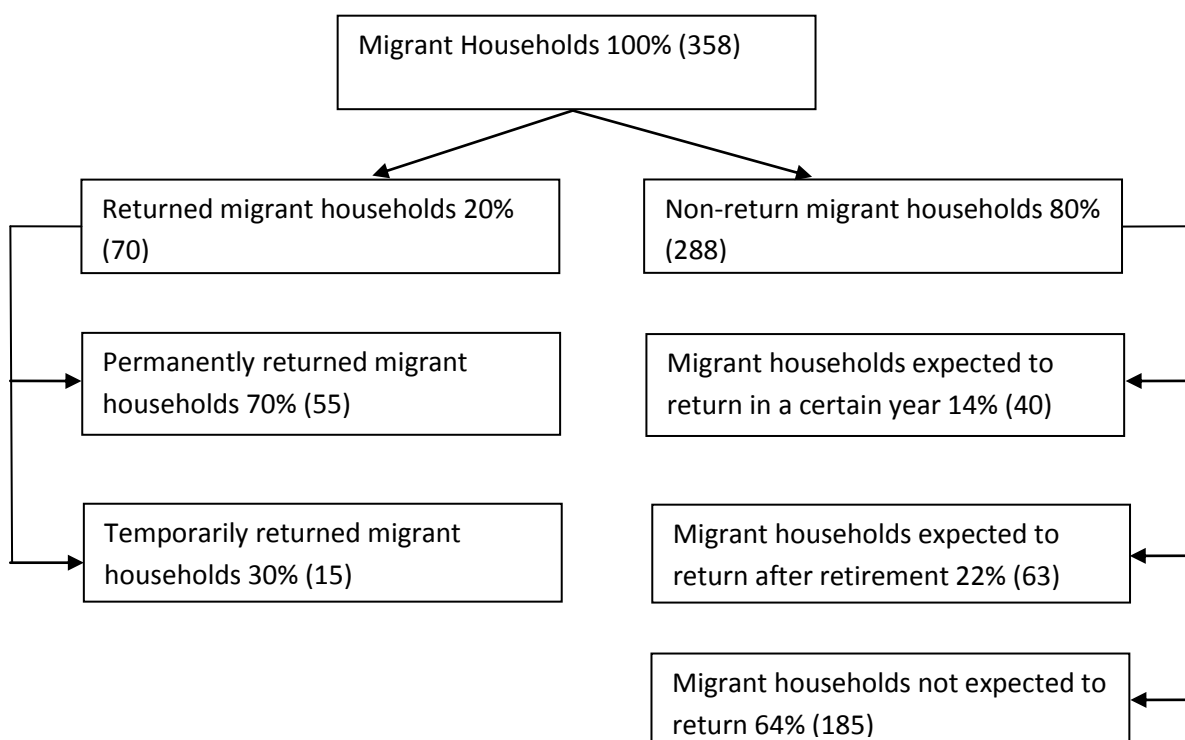
For this analysis data is used from the same survey as in chapter 3. However, variables are created using a different section of the data set which contains data only on those who have migration experience, including both those who are still abroad and those who have returned. In what follows, migrant household refers only to that part of the household that is living or has lived abroad. This it has to be admitted is to some extent problematic given the stress on the household level in the theoretical frameworks in both chapters.

The questions cover demographic, social, economic and legal characteristics of the migrant households. In addition to questions related to their education level and institution, detailed information is provided on their employment status and



wages before, during and after migration. Another set of questions relates to business ownership at home and abroad and to their investment plans. The survey also covers migrant households' return plans.

**Figure 4.1 Percentage of migrant households by return/non-return categories**



In the questionnaire, return migrant households are asked whether they have returned permanently or temporarily. The term “temporarily return” is not further specified. So, this could include returns for short holidays or with the purpose of settling down and re-migrating in case of failure, or temporary return for any other reason. Given that the survey is conducted in July, it could be that these migrants are only on temporary summer visits to the home country. Given the inability to identify the reason for temporary return, for the purpose of the empirical analysis this study considers a temporary return as a non-return. Another reason for treating temporarily returned households as non-return households is that around 57 per cent of them own a private house in the host country, indicating continuing ties with the host country. As shown in the figure above, only a small proportion of households have returned, out of these the majority have returned

permanently. Around two thirds of the non-return migrant households plan to return in the future.

### **The definition and descriptives on the dependent variable**

The dependent variable is the instantaneous rate of return conditional on the current duration of migration. For the purposes of the empirical analysis, for returnees, the migration spell is calculated as the difference between the year of initial emigration and permanent return. For those who have not returned or have returned only temporarily this is calculated as the differences between the year of the initial emigration and the year of the survey. As shown in Table 4.2, the difference between the longest and the shortest time spent abroad by migrant households in the sample is very high, 44.5 years. The average and mode of migration duration are similar and relatively low, around one-fourth of the longest time span.

**Table 4.2 Migration duration of migrant households**

Migration duration	Years
Shortest migration duration, years	0.5
Longest migration duration, years	45
Average migration duration, years	11.2
Mode of migration duration, years	9

The descriptives by variable are presented along with the variable specification in the following section. These consider only the percentage of permanently returned migrant households.

## **4.6 Variable specification**

Unlike the studies elaborated in the literature review, and similar to the analysis presented in chapter 3, this analysis takes the household approach. The choice of independent variables for the empirical investigation is based on the theoretical framework developed in section 4.3. So, in this section the empirical definition of the variables is considered. Unlike in chapter 3, given the focus on

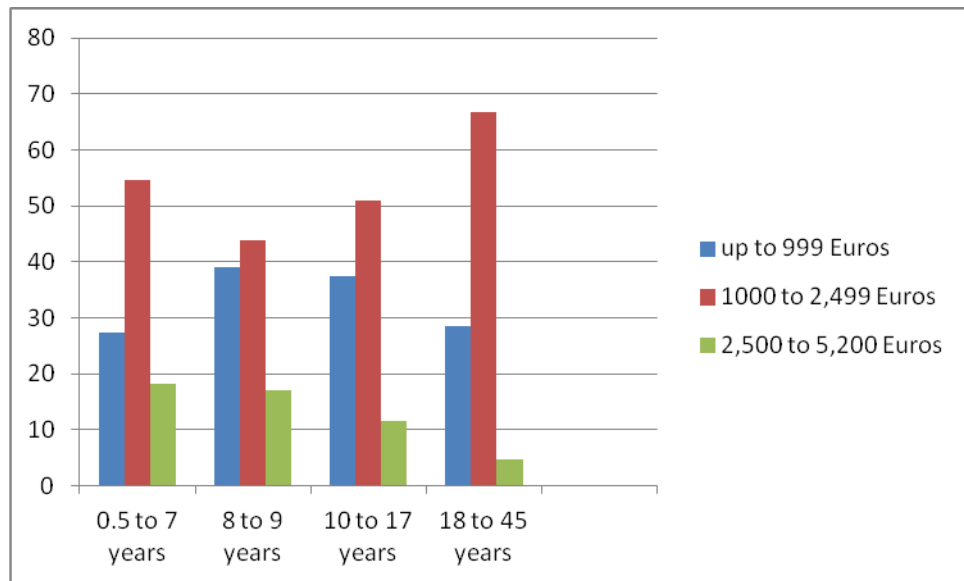
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migration duration the dependent variable in this empirical analysis is the instantaneous hazard of return. This is modelled as being determined by three categories of explanatory variables (Table A4.1) where the first two, pecuniary income and psychic income follow the pattern in chapter 3. The third category is the dummy for the war period discussed above.

##### **Pecuniary Income**

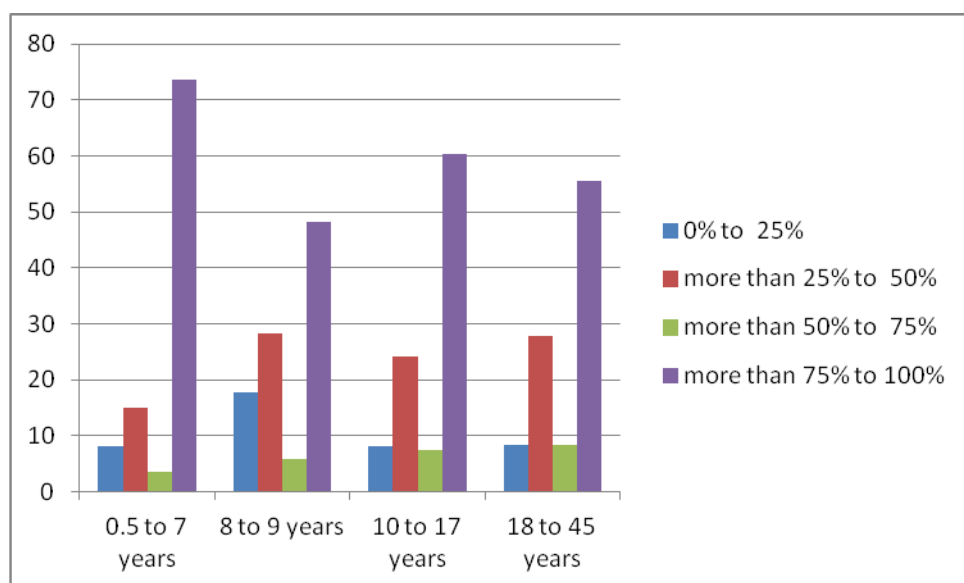
As discussed in section 3.3.3, due to lack of data the impact of pecuniary income will be proxied by current average gross monthly income per capita. **Household income per capita abroad (YA)** Following the literature review, as return is costly and given the household budget constraint, migrant households with a lower level of household income per capita are expected to need more time to accumulate capital to use in case of return in the future. This leads to positive relationship between income per capita and migration duration all else equal. However, due to the diminishing marginal utility from wealth after a certain level of household income per capita is reached this variable is assumed to have the opposite effect on the hazard to return, all else equal. Consequently, the relationship between household income and duration of stay is expected to be non-linear. Average monthly household income per capita abroad and its squared term abroad are introduced to capture this effect. Figure 4.2 shows that the share of households belonging to the highest per capita income interval decreases as migration duration increases.

**Figure 4.2 Percentage of household income per capita abroad category by each migration duration category**



Following the strategy used in chapter 3 to adjust household pecuniary income to better control for the impact of other aspects of wealth of migrant households, household demographic characteristics are introduced. Other possible effects captured by these variables are discussed along with their definition.

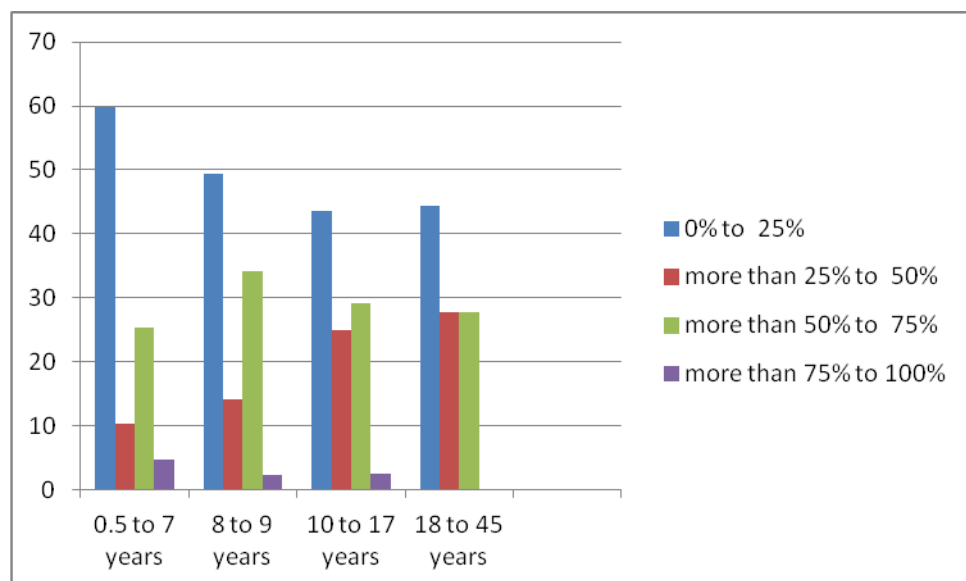
**Figure 4.3 Percentage of share of those of working age employed abroad category by each migration duration category**



**Share of those of working age who are in employment (SWAE)** Given the lower likelihood of employment in the home country, having a higher share of those in working age who are in employment in the host country is expected to have a positive impact on migration duration. This variable is introduced as a continuous variable. As shown in Figure 4.3, the shortest migration duration has the highest percentage of SWAE, though there is no clear pattern for the other categories of duration.

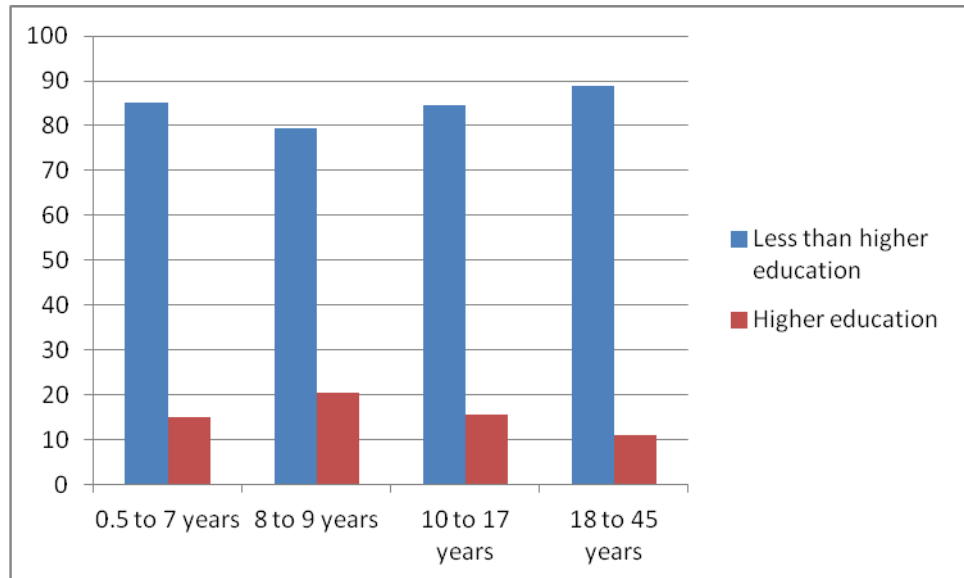
**Share of females (SF)** This research controls for the impact of the share of females within a household. Following the argument in chapter 3 that females in KS-Albanian households would be affected more than males by perceived undesirable social customs in host countries, migrant households with a higher share of females are expected to have a higher preference for consumption in the home country. Therefore, having a higher share of females is hypothesised as having a positive impact on the hazard to return. As shown in the figure below, the percentage of households with only 0-25% of females declines as duration increases. In the longest migration duration interval there are no households with a share of females between 75 and 100 per cent that return.

**Figure 4.4 Percentage of share of females category by each migration duration category**



**Household educational attainment (Education)** In this analysis, due to lack of data only the educational attainment of the senior member of the migrants' household is considered. Following the explanation in section 3.3.3, better educated households may have lower transaction costs given their higher probability of having more information on employment opportunities in host countries and better knowledge of foreign languages, increasing the probability of socio-economic integration. This, in turn, reduces their hazard to return. Yet, due to possible low interregional mobility of their skills they may have a lower probability of finding appropriate employment abroad (Eggert and Krieger, 2007). According to Borjas and Bratsberg (1996), host countries are a type of magnet for the less educated. Therefore, the probability of being successful in the host country labour market may be lower for the better educated, decreasing the probability of their "acceptable/ appropriate" socio-economic integration. Consequently, if this possibility is not considered (or not appreciated fully) prior to emigration this may lead to an increased probability of emigration. Furthermore, especially after the recovery of the economy of Kosova after the 1999 war, the better educated may face relatively higher employment probabilities and higher wage differentials at home. The results in chapter 3 suggest that households whose head has higher education have a lower probability to emigrate may serve as support for this argument. Also, the better educated may have a higher probability of gaining international knowledge/ know-how, which they can transfer to the home country and maybe get a premium in the home country labour market higher to that in the host country. The latter arguments may increase the utility from consumption at home increasing the hazard to return, all else equal. Consequently, the a priori sign of this variable is ambiguous. Figure 4.5 below shows no pattern of education by migration duration.

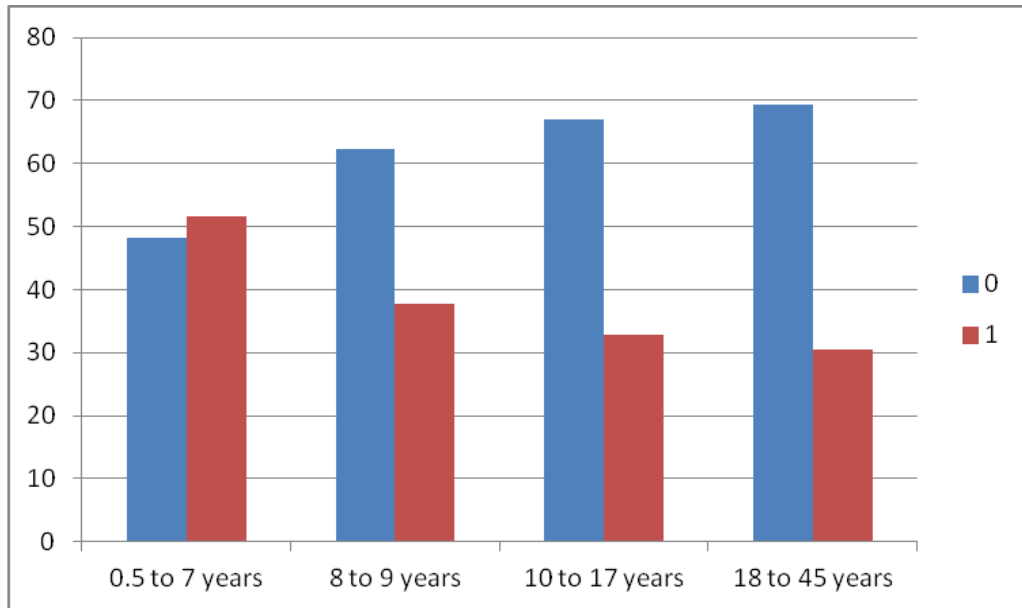
**Figure 4.5 Percentage of Education category by each migration duration category**



### Psychic Income

**Individual** This variable is modelled as having a similar impact to that of networks introduced in chapter 3. It positively impacts on migrants' destination-specific utility. In addition to the effect of networking, this variable is considered to capture also the effect of family ties within the migrants' household. Being a complete nuclear family implies a larger pool of social interactions and hence increased psychic income in the host country, all else equal. Also, it may capture the nonlinear positive effect of continuous migration costs derived from economies of scale (section 4.3). Due to lack of other data, to capture this effect a dummy variable is introduced taking the value of one if the migrant household consists of only one member, zero otherwise. Therefore, it is expected to have a positive impact on the hazard to return, all else equal. Figure 4.6 shows a decreasing proportion of one-member households as migration duration increases.

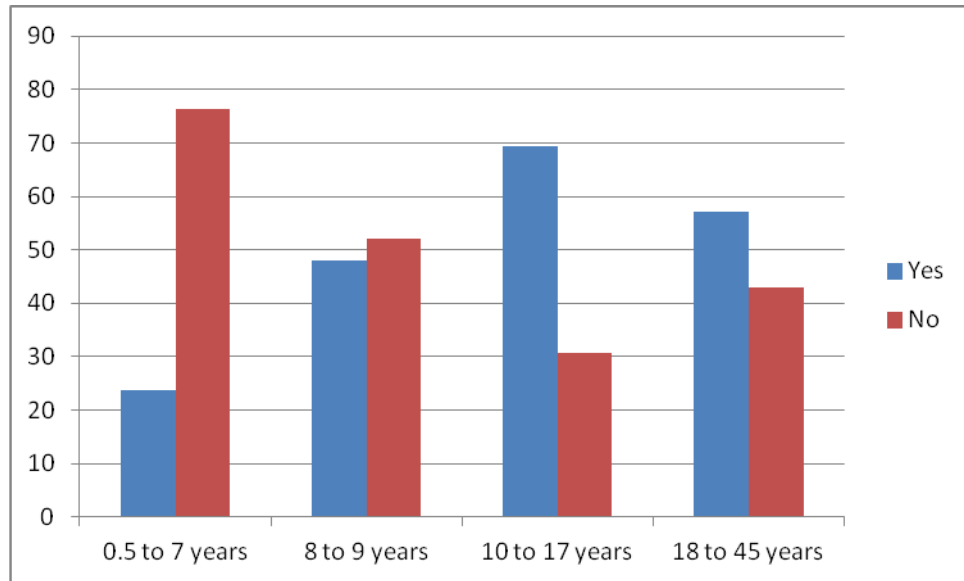
**Figure 4.6 Percentage of nuclear families category by each migration duration category**



**Legal status (Citizenship)** As suggested in the literature, having the citizenship of the host country implies a specific investment and hence captures the effect of economic and social integration in the host country. This, in turn, is expected to have a positive impact on the migrant households' destination-specific utility. Therefore, having the citizenship of the host country is hypothesised as having a negative impact on the hazard to return, all else equal. The effect of legal status is captured by a dummy variable taking the value of one if the household has the citizenship of the host country and zero otherwise. Figure 4.7 shows, excepting for the highest migration category there is an increased percentage with citizenship abroad as migration duration increases.

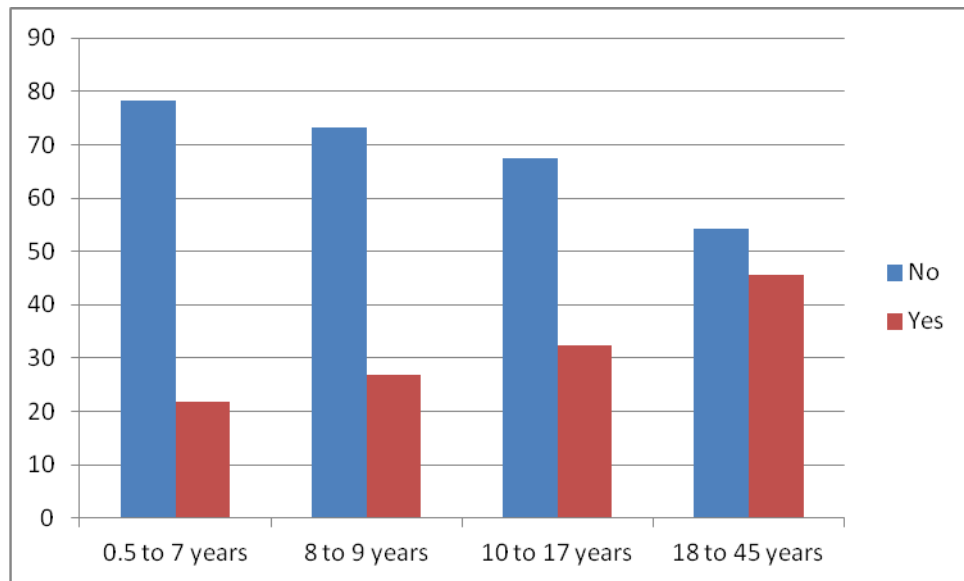


**Figure 4.7 Percentage of citizenship abroad by each migration duration category**



**Education institution (EducationInstitution)** This variable is constructed as a dummy variable taking the value one if any member of the migrant household has or is attaining education abroad at the time of the survey. It is expected to capture the effect of the preference for consumption in the host country resulting from the level of socio-economic integration in the host country of those attaining or having attained education abroad. As such, it is hypothesised to have a negative impact on the hazard to return. As migration duration increases the percentage with education abroad increases (Figure 4.8).

**Figure 4.8 Percentage of education institution abroad category by each migration duration category**



## Political situation

**Year Dummy (Year 1998/99)** In the theoretical framework, it has been argued that the decisions on migration duration of migrants' households having emigrated during the 1998/1999 war in Kosova may be influenced by political rather than economic factors. Such households are considered to have a higher hazard of returning to Kosova immediately after the war than those migrants' household who emigrated prior to or after the war. To capture the possible influence of political factors on migration duration a dummy variable is introduced which takes the value of one if emigration took place in 1998 or 1999, zero otherwise, hypothesised as having a positive impact on the hazard to return.

## 4.7 Empirical analysis

### 4.7.1 Some issues regarding the dependent variable

Given that this analysis is based on a sample size of around 173 migrants' households (observations) of which 36 are return migrants' households (failures), prior to conducting the diagnostic tests for the Cox model, the importance of sample size and baseline risk in Cox models is discussed. The maximum partial

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likelihood method is used to fit the Cox model. This method has large sample properties. There is a study which specifically investigates the bias of ML estimators in small samples in the context of unemployment analysis (Schoonbroodt, 2004). However, this does not directly use the Cox model. This study compares Maximum Likelihood (ML) and the Method of Moments (MOM) with respect to small sample bias running a number of simulations by allowing sample size to increase. The author argues that the ML estimator of the variable of interest is considerably upward biased for samples smaller than 50 observations. Additionally, he argues that the sample must consist of at least 220 (450) observations in order for the bias of the ML estimator to be smaller than 10 (5) per cent. Accordingly, given that this analysis is based on a sample size of around 200 migrants' households, one may expect a bias of 10 per cent.

The number of failures in the sample is also of high importance regarding biasness. In Cox models where the number of 'failures' (in this analysis the number of observations that have returned) is less than 5, and sometimes less than 10 the sample is considered to be small and the MLEs can be biased estimators of the true population. Additionally, in this case the large sample properties may not apply. However, this does not apply to this empirical investigation as the number of failures is 30.

In practice, studies deploying the Cox model for survival analysis use different sample sizes and there is a large number that conduct the analysis on small samples and with a low number of failures. In the field of medical research, sample size and the number of censored observations vary. Altman et al. (1995) provide a review of survival analyses published in cancer journals. They show that in 17 studies the sample size was 30 or less observations, while three papers had a maximum of 15 or less observations. There are other studies that consider just a small number of observations and failures. Krall, Utoff and Harley (1975) use a sample size of 65 observations with 17 failures. Prentice (1973) use a sample size of 137 observations and 8 explanatory variables. The sample size in Muers et al. (1996) is larger: 272 observations with 47 failures. In the migration literature, studies that

deploy the Cox model usually utilise large samples. These stem from different migration projects undertaken at the national level (Carrion-Flores, 2006; Gundel and Peters, 2008).

Following medical research, this section will deploy the Cox model to analyse the probability of return conditional on migration duration of the households with a relatively small number of observations. Given all the above, the results provided in the following section have to be treated with caution, in particular those of the second sample, due to the possible bias resulting from small sample size and low number of failures in the sample.

### 4.7.2 Diagnostics

There are several diagnostics that check for model specification and outliers in the Cox Model (Cleves et al. 2002). Generally, these tests and other investigations check for model specification verifying whether the model has been adequately parameterised and that a good fit has been chosen for the  $x\beta_x$ . This research will conduct two tests of the proportional-hazards assumption: 1) the link test and 2) the test based on Schoenfeld residuals. To determine the proper functional form of covariates the martingale residual is examined. This analysis will also test the goodness of fit and outliers and influential points as suggested by Cleves et al. (2002). In the following, the tests are introduced in separate sections.

a. Link test of the proportional-hazards assumption

**Table 4.3 Results from the link test of the proportional-hazards assumption**

T	Coefficient	Standard Error	P>z
B	-0.072	0.31	0.81
$\beta^2$	0.05	0.04	0.15

Under the assumption of the proportional hazards, it tests whether the coefficient on the squared linear predictor is insignificant, that is,  $\beta^2=0$ . The results show that this hypothesis of proportional hazards cannot be rejected ( $p=0.15$ ).

b. Test of the proportional-hazards based on the Schoenfeld residuals

This test of the proportional-hazards assumption is based on the analysis of residuals where Schoenfeld and scaled Schoenfeld residuals are saved. A smooth function of time is then fitted to these residuals and the relationship is checked for significance.

**Table 4.4 Results from the test based on Schoenfeld residuals of the proportional-hazards assumption**

Variables	rho	chi2	Df	Prob>chi2
<i>Y</i>	-0.13	0.65	1	0.42
<i>YSQ</i>	0.13	0.60	1	0.44
<i>SWAE</i>	0.15	0.86	1	0.36
<i>SF</i>	-0.14	0.54	1	0.46
<i>Education</i>	0.09	0.23	1	0.63
<i>EduInstitution</i>	-0.11	0.39	1	0.53
<i>Individual</i>	0.05	0.07	1	0.79
<i>Citizenship</i>	0.03	0.02	1	0.88
<i>Year1998/1999<sub>i</sub></i>	0.20	1.46	1	0.22
Global Test				
Global test		5.59	9	0.78

Results from the global test suggest that there is no evidence of non-proportional hazards overall ( $p=0.78$ ), that is, the proportional hazards assumption is not violated by this model specification. Also, there is no evidence of non-proportional hazards for any of the variables separately.

c. Functional form

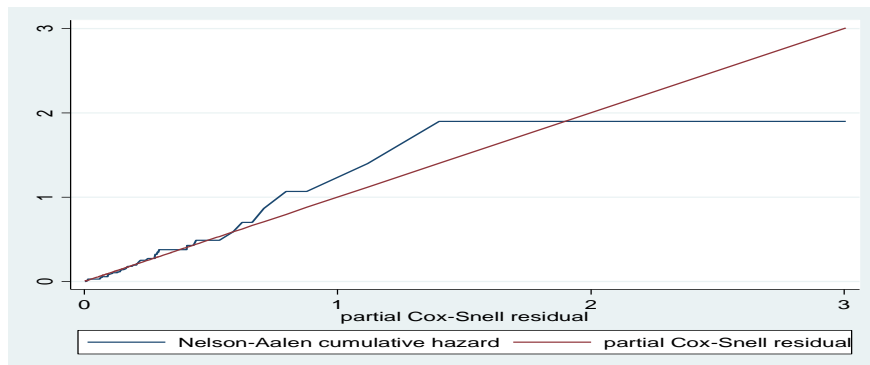
To explore the appropriate functional form of individual covariates the martingale residuals can be used (Cleves et al., 2002). In doing so, the martingale residuals from the null model are saved and individual covariates are plotted against them. This procedure is conducted on the three continuous variables, *Y*, *SWAE* and *SF*. The plots show an approximately linear smooth function, implying

that no transformation of variables is necessary (see Figure A4.2.1, A4.2.2 and A4.2.3).

d. Goodness of fit

To check for the overall fit of the model, Cleves et al. (2002) suggest using Cox-Snell residuals. To conduct the influence or leverage analysis efficient score residuals are generated and saved for each covariate included in the Cox model. The Nelson-Aalen cumulative hazard function is plotted against the Cox-Snell residuals and compared with the 45° line (the reference line). An overall good fit of the Cox model implies that the true cumulative hazard function conditional on the covariates has an exponential distribution with a hazard rate of 1 for all  $t$ . So, the cumulative hazard of the Cox-Snell residuals should be a straight 45° line.

**Figure 4.9 Cumulative hazard of the Cox Snell residuals**



As shown in Figure 4.9, the overall fit is better at smaller values of the Cox-Snell residuals. The cumulative hazard of the Cox-Snell residuals is closer to the 45° reference line. However, Cleves et al. (2002) suggest that variability about the reference line is expected, especially in the right-hand tail of the plot. The reason for this is that the sample is reduced by prior failures and censoring. Given this argument, the model fits the data relatively well.

Predictive power of the model

The predictive power of the Cox model will also be evaluated based on the Harrell's C concordance statistic. This statistic measures the concordance of predictions with observed failure order. It can take values between zero and one. A

value of 0.5 implies no predictive power. As shown in Table 4.5, the predictive power of the model is relatively good as Harrell's C statistic is 0.73 which is greater than reference statistic of 0.5.

**Table 4.5 Results from the test on the predictive power of the model**

Test	Value
Harrell's C	0.73

### **4.7.3 Interpretation of empirical findings**

Similar to OLS, the estimated coefficients and corresponding t-statistics provide information regarding the impact and statistical significance of the partial effects of covariates. However, to get the ratio of the hazard for a one-unit change in the corresponding covariate, the exponential of the estimated coefficients are taken to give the hazard ratios. These are statistically significant if they are significantly different from one and the direction of the impact is determined based on whether the exponentiated coefficient is lower or higher than one. The former case implies a negative, while the latter a positive impact (Cleves et al., 2002). In what follows, results are interpreted in terms of hazard ratios (Table 4.6).

As presented in Table 4.6, the results provide support for the inverse U-shaped relationship between migrant household average monthly income per capita and migration duration. Among the household demographic characteristics only the share of females within the migrant household is statistically significant. As expected, having a higher share of females in the migrant household increases the hazard to return. The impact of the senior member of the migrants' households having higher education has an expected ambiguous sign. Empirically, it has no significant impact, that is, the estimates provide no support for either hypothesis. This would suggest that there is no support for either a Brain Gain or Brain Drain in terms of return migrants to Kosova.

**Table 4.6 The estimated determinants of migration duration**

Variable	Hazard Ratio	P>   t	Expected sign
<b>Household Characteristics</b>			
<i>YA</i>	1.004	0.03**	Greater than 1
<i>YASQ</i>	0.99	0.07*	Less than 1
<i>SWAE</i>	0.98	0.49	Less than 1
<i>SF</i>	1.03	0.05**	Greater than 1
<i>Education</i>	0.16	0.27	Ambiguous
<b>Psychic Income</b>			
<i>Individual</i>	0.55	0.59	Less than 1
<i>Citizenship</i>	0.71	0.73	Less than 1
<i>EduInstitution</i>	6.46	0.09*	Less than 1
<b>Political situation</b>			
<i>Year1998/99</i>	6.76	0.01***	Greater than 1
<b>Summary Statistics</b>			
Number of observations	173		
Number of failures	30		
Time at risk	1951		
LR chi2(10)	19.46		
Prob>chi2	0.0345		
Log likelihood	-120.28		

Of the variables capturing the effect of psychic income, the only statistically significant variable (and then only at 9% level) is the dummy variable *EduInstitution*. This variable, which controls for the influence of socio-economic integration in the host country due to the educational attendance and/or attainment of migrant household members in the host country, has a positive impact on the hazard to return. Such migrant households have a six times higher hazard of return compared to households that do not have any members educated or attaining education in the host country. This result is in contradiction with the hypothesis that migrant households having members educated abroad have a higher level of socio-economic integration, which implies that such households have a higher preference for consumption in the host country. This may suggest that there is some Brain Gain from returnees who have been educated abroad.

As argued in the theoretical framework, migrant households that have emigrated during the war belong to a pool of migrants where the initial timing, at least, may be considered as forced. As such they are a priori expected to have a



higher hazard to return compared to migrant cohorts who have emigrated either prior to or after the war. Results suggest a strong statistically significant difference (at the 1% level) in household behaviour between the two groups. Migrant households that have emigrated during the war have a seven times higher hazard to return compared to the reference group, all else equal.

Although the household approach employed in this chapter is more limited compared to that deployed in chapter 3, the results again provide broad but not complete support for the theoretical expectations of the model. The results are in line with the theoretical expectations for six variables for which the a priori sign is statistically clearly defined: household per capita income abroad, share of those of working age employed, share of females, individual, citizenship and the year dummy. Out of these, however, only three are statistically significant. There is one variable which has an a priori not clearly defined effect, education. Empirical findings give an insignificant negative impact. The statistical insignificance may result from opposing effects cancelling each other out. The results are inconsistent with the theoretical expectations only regarding the variable that controls for whether migrant household members are or have attained education abroad, although this is only statistically significant at 9 per cent. So, the results indicate fairly broad support for the hypothesis of the applicability of the household perspective in modelling return migration among KS-Albanian migrant households.

## **4.8 Concluding Remarks**

In this chapter, the probability of return conditional on the duration of migration is modelled, taking a household approach, as in chapter 3. The theoretical framework is based on the assumption that households when making the decision of having part of their household stay for another period abroad weigh the benefits and costs involved, given the assumptions identified in chapter 3. From this an empirical model is derived to investigate the determinants of the probability to return conditional on the duration of migration. For this purpose the Cox proportional hazards model is deployed using a data set of 406 KS-Albanian migrants' households. The empirical analysis is conducted only for variables defined

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for the migrant part of the household rather than the whole household at home and abroad. This definition of the household represents a more limited household approach than that adopted in chapter 3. The reason for using this is that including household members at home in the household definition would considerably reduce the sample size due to missing data on the side of the non-migrant or the migrant part of the household.

A range of diagnostic tests and other procedures are carried out. The diagnostic tests suggest a good specification of the model overall, implying that the proportional-hazards assumption is not violated either overall or by covariates independently, a fundamental consideration with the Cox model. Additionally, tests on the functional form of individual covariates did not provide evidence that covariates were not in their appropriate functional form. The results are broadly but not fully in line with the theoretical expectations of the model. The findings offer support for the hypothesised non-linear relationship between average monthly household income per capita and the hazard to return. Contrary to results of this research Carrion-Flores (2006) finds the impact (using expected wages to control for the income effect) to be significantly negative.

Unlike Carrion-Flores (2006) and Gundel and Peters (2008), higher levels of education are not found to have a statistically significant effect on return. From the viewpoint of policy, there is no support for either a Brain Drain or Brain Gain from return migration from this variable. However, there is some, but limited, support for a Brain Gain arising from return being more likely if the household has members educated or attaining education in the host country. The estimates do indicate that having a higher share of females within the migrant household increases the hazard to return. This provides support for the hypothesis that in KS-Albanian migrant households females may be more affected than males by perceived negative social customs in the host country. None of the variables capturing the impact of psychic income are significant. So, there is no evidence to support the hypothesis put forward in this chapter on the variables classed as influencing psychic income. Although the analysis does not allow to directly analysing the impact on poverty of

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return migration, the effect of income in the model did not suggest that it is the poor that were disproportionately returning. Due to data limitations it was impossible to investigate the effect of age, savings and business investments.

Migrant households that have emigrated during the war have a much higher hazard of return compared to the reference group, supporting the importance of the influence of the war on the decision on migration duration in Kosova. The statistically significant effect of the income variable and this strong effect of the dummy variable capturing the influence of political events suggest that the decision on migration duration of KS-Albanian migrant households is influenced by both economic and non-economic factors.

## CHAPTER 5

### THE PROPENSITY TO EMIGRATE – A COMPARISON OVER TIME BETWEEN TWO KOSOVAN DATA SETS

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#### **5.1 Introduction**

The aim of this chapter is to analyse the stability over time of migration intentions as modelled in chapter 3. For this purpose, this chapter replicates the analyses in that chapter by estimating the model of the propensity to emigrate using a 2008 data set. Both the 2007 and the 2008 data set is based on the same sampling framework (Appendix 3.4). Although the time difference between the two samples is very short, only one year, an important political change occurred during this period. The independence of Kosova was declared in February 2008 just before the second survey was conducted, thus the 2007 sample is from the period before the Declaration of the Independence, while the 2008 sample is from the period after. After the 1999 war Kosova worked towards resolving its political and legal status. In 2007 there were negotiations between Kosova and Serbia under the auspices of the USA, European Union and Russian Federation. However, the parties

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were far away from reaching consensus on Kosova's final political status, with Kosovans preferring supervised independence and accepting the Ahtisaari proposal, both of which rejected by Serbia (Caruso, 2008). In December 2007, these negotiations were considered a failure and continuation pointless by the European and US representatives. The UN Security Council though continued to push for consensus regarding Kosovo's final status, despite the failure of negotiations. Consequently, although the declaration of independence was expected by KS-Albanians, there was uncertainty regarding the timing of the declaration. Hence, the actual proclamation of the Declaration of Independence can be considered as a shock in the context of this analysis. Some differences between the two years are anticipated in households' attitudes towards the future economic situation resulting from the resolving of the political status of Kosova. Given the small elapse of time between the investigations, the fact that the model in chapter 3 controls for households' perceptions on their economic situation (which are expected to be affected by the political change) and that the actual performance of the Kosova economy changed only slightly during this period, the migration relationship is anticipated to have remained stable.

The model in chapter 3 deploys an expected utility maximisation framework to model household decision-making behaviour regarding the migration decision. In chapter 3, the household is modelled as maximising utility from current and future consumption, including in its choices the possibility of a) sending at least one or one additional member abroad, or b) not sending any or any further members abroad. This is conditional on the household income constraint. The household as the decision-making unit is assumed only to choose to send members abroad if the resulting positive effects offset the negative effects.

In that model, households are considered to be forward-looking and to discount future utility. Given this assumption, a question that asks the household's current view of its economic situation compared to one year ago is included. The answer to this question may be considered to be a forward-looking opinion (of the near future). The dummy variable controlling for whether the household head perceived the household economic situation to have worsened compared to the

previous year was significant in the estimations presented in chapter 3. The political change considered above is likely to have influenced households' perceptions of their future economic situation.

In the literature reviewed in chapter 2 and to the best of my knowledge, the stability over time of the decision to emigrate has not previously been considered for any country. Therefore, the analysis presented in this chapter is the first to examine the stability over time of this relationship, a consideration of importance if policy recommendations are to be drawn. Although admittedly a period of some political change in Kosova, the time between the data collection was very short and if the structural relationships are not found to be stable this raises the question of whether such instability in the determinants of emigration behaviour are also a feature in other countries. The analysis starts with a simple comparison of the level of significance and direction of impact by variable between the two models. However, given that this comparative analysis does not compare whether the difference in the impacts by variable is significant or provide a test of the statistical significance of the overall differential between the two models, use is made of the Blinder-Oaxaca decomposition technique (Blinder, 1973; Oaxaca, 1973).

The rest of this chapter is structured as follows: section 5.2 examines the argument that there is an a priori case that the model in chapter 3 may be appropriate in examining the stability over time of the propensity to emigrate, given the change in the political situation during the period 2007-2008. Section 5.3 provides a summary of the sampling technique and of descriptives of migration characteristics of the households for the two data sets. The empirical analysis of time stability is elaborated in section 5.4. The following section further investigates the time stability by respecifying the model. Section 5.5 deploys the BO decomposition technique to investigate the stability over time of the model structure and the last section concludes.

## **5.2 The Context of Comparison**

As elaborated in chapter 1, emigration from Kosova started in the late 1960s and consisted of three main emigration waves. Emigration was motivated to a large

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extent by economic factors in all three waves. However, in the last two waves it was political change in Kosova that indirectly induced economic emigration.

According to the analysis in chapter 3, the propensity to emigrate is higher among households that perceive the economic situation of the household to have worsened compared to a year previous. This variable is significant throughout all model specifications. The statistical significance of this variable provides support for the view that Kosovan households are forward looking, that is, the perception of the economic situation of the household has an important impact on Kosovan households' migration decisions.

Recently Kosova has undergone an important political change; it declared as an independent state. Given the importance of the perceptions on the economic situation in chapter 3, one would expect the Declaration of Independence to have affected households' perceptions on their economic situation. The argument in favour of this includes the fact that important investment projects, attractiveness to FDI, World Bank Support Programmes etc. were conditioned by the resolution of Kosova's final political status. Consequently, the population are likely to have perceived that independence would mean the start of a new and more prosperous economic phase. The descriptives of the economic perceptions variables, reported in section 5.4.1, support this view.

Prior to discussing the macroeconomic indicators presented in the table below, it is important to again raise issues relating to the data used. As noted by the World Bank staff itself, given the lack of a recent census of population the sample frames are considered unrepresentative and hence the data rendered inaccurate. Given this unreliability and inaccuracy inherent in data stemming from samples or indicators estimated based on the inaccurate population data (section 1.2, and sections 1.3.1 and 1.3.2), comparisons over time of the indicators have to be treated with caution, especially unemployment and poverty figures. Another reason for non-comparability of poverty data is differences in the survey methodology used by the World Bank staff over time (section 1.3.2).

As briefly discussed in chapter 1 and shown in Table 5.1, despite the political change, the actual economic performance during the period of investigation changed slightly. The economy expanded in real terms at 5.4 per cent in 2008 from the 3.9 per cent level in 2007, mainly based on increased public investments. This amounted to €500 million, which is approximately three times the level in 2007 (IMF, 2008). The GDP deflator increased from 3.3 per cent to 5.4 per cent in 2008. This increase was in part the result of increases in international food prices. The trade deficit was still immense and increased by €300 million in 2008, probably reflecting the increase in imports induced by the additional investment in public infrastructure. The unemployment rate remained rather unchanged. According to the IMF's medium-term macroeconomic projections, real economic growth will continue at its five per cent level throughout the period 2008-2011 (IMF, 2008). If the public infrastructure investments prove to contribute to cost reduction and hence enhanced competitiveness for businesses, this will stimulate import substitution and increased exports. Improvements of the economic performance projected by IMF (2008) are supported by a Riinvest study with 500 small and medium enterprises conducted in 2008. Results from this study suggest that 59 per cent of the businesses expect better business conditions in the future.



**Table 5.1. Main macroeconomic indicators in Kosova during 2005 – 2008**

Macroeconomic Indicators	2005	2006	2007	2008
<b>Population</b> (in thousands)*	1,767	1,777	1,785	1,795
<b>GDP</b> (in mil. €)	2,977	3,099	3,425	3,739
<b>Real GDP growth</b> (in per cent)*	3.8	3.9	3.9	5.4
<b>GDP per capita</b> (in €)	1,482	1,519	1,611	1,847
<b>GDP Deflator</b> (in per cent)*	-0.8	-1.1	5.2	7
<b>CPI</b> (in per cent)*	-1.4	0.6	4.4	9.4
<b>Trade balance</b> (in mil. €)	-1,053	-1,134	-1,129	-1,588
<b>Current account/GDP</b> (in per cent)	-7.4	-6.7	-8.3	-15.2
<b>Remittances/GDP</b> (in per cent)	14.0	15.1	15.1	14.3
<b>Foreign assistance/GDP</b> (in per cent)	12.3	10.3	8.7	8.8
<b>Unemployment rate</b> (in per cent)*	41.4	44.9	46.3	47.5

Sources: CBK, 2005, 2006, 2007, 2008; Data labelled by “\*” are from the World Databank 2011

Given the arguments above, although there have been some changes in the actual economic situation, these have not been of an order where we might expect changes in underlying relationships (that is, variable changes have not been at a level where extrapolation would a priori appear problematic), particularly given our model includes households’ economic perceptions. So, this estimation explores if this later period indicates whether the model used in chapter 3 shows stability, or whether there are structural changes in the relationship over this period.

### 5.3 Sampling Technique

In chapter 3, the analysis is based on a survey conducted by the Riinvest Institute in July 2007 comprising of a sample of 1,384 Kosovar households. The sample used in this chapter consists of a smaller sample of 400 Kosovar households stemming from a survey conducted in December 2008. This second survey was conducted as part of the research project *“The Impact of Remittances on*

***Educational Attainment in the Home Country - A Comparative Analysis of Kosova and Bosnia***“, funded by the Austrian Science and Research Liaison Offices Ljubljana/Slovenia and Sofia/Bulgaria (ASOs). To ensure the compatibility of the data sets for the comparative analyses in this chapter with that used in chapter 3, the questionnaire used in the 2008 survey was designed in a manner that includes identical questions to enable the same variables to be used as in the model in chapter 3. Ensuring compatibility between the data sets was possible since I was part of the team designing the questionnaires both for the 2007 and 2008 surveys. The same sampling technique is used for the second Kosovan survey as for the Riinvest survey in July 2007; the reason for this is that there has been no recent census of population in Kosova. For details on the survey methodology please refer to Appendix 3.4.

Thus, the second survey provides comparable information with the survey used in chapter 3. It provides demographic information both about the head of the household and other household members and information on the socio-economic status of the household. The key question is again households' plan to send at least one or one additional member abroad for economic reasons. A section of the survey is dedicated to household members living abroad. This provides information on household members living abroad, including socio-economic and demographic information.

In the following sections, descriptives and empirical analyses will be provided for the model on the propensity to emigrate using the 2008 data set. The estimates will be compared with those from chapter 3.

## **5.4 Emigration propensity**

### **5.4.1 Descriptive analysis - comparison between the Kosova 2007 and Kosova 2008 data set using simple descriptive analysis**

Similar to chapter 3, the descriptive analysis provides results for both the case when variables are created considering the household as including migrant-members (Table 5.2, Columns 1 and 2) and when it consists only of members living in Kosova (Table 5.2, Columns 3 and 4). As discussed in section 5.3, the two data sets stem from two surveys which were conducted in different years, 2007 (henceforth the first sample) and 2008 (henceforth the second sample). As discussed above, both surveys were based on the same sampling framework and as such were stratified by region and type of area using the same weights. Therefore, the descriptive analysis starts with the results from these two location-related characteristics, to consider if the ex-post survey results match the ex ante design, given that non-response could have led to differences. As shown in Table 5.2, the distribution of households by region is similar between the two samples. There is a small difference with respect to Peja and Ferizaj. The largest difference was in terms of type of area as the proportion of households is higher in rural areas in the 2007 sample; the opposite holds for the 2008 sample. The reason for this is that there were more non-responses in the rural areas in 2008 (for more details on methodology see Appendix 3.4). Overall, the absence of any large differences in these variables suggests that the aim of replication of the sampling method was broadly achieved.

**Table 5.2 Simple comparative descriptives of location related characteristics, percentages (numbers) – Kosova 2007 and Kosova 2008**

Characteristics of households	Kosova 2007	Kosova 2008
<b>Region</b>		
Prishtine	26.8 (361)	25.57 (89)
Mitrovica	13.21 (178)	13.22 (46)
Peje	14.03 (189)	12.93 (45)
Gjakove	6.09 (82)	6.03 (21)
Prizren	21.46 (289)	20.4 (71)
Gjilan	9.43 (127)	10.06 (35)
Ferizaj	8.98 (121)	11.78 (41)
<b>Type of area</b>		
Rural	51.45 (693)	45.69 (159)
Urban	48.55 (654)	54.31 (189)

Given the difference in CPI between the two time periods (Table 5.1), the income and remittance data for 2008 are deflated in order to give the increase/decrease in real terms. For this purpose, the 2008 data are adjusted for the rise in the consumer price index. This index is calculated by dividing the average CPI for 2008 by the average CPI for July 2006 – July 2007.<sup>1</sup> As shown in the table 5.3, in the first sample the percentage of households planning the emigration of a household member is similar to that in the second data set, 30 per cent and 28 per cent respectively. The percentage of the households that have members abroad is also similar in the two data sets; 30 per cent in each data set. A similar percentage is estimated by the World Bank (2007c): it claims that approximately 25 per cent of the households had members abroad in 2005.

The two samples are dissimilar with respect to average income per capita of those employed at home and income per capita of those employed abroad. They are higher by a factor of approximately 1.5 in 2008. But they are similar regarding average remittances per capita. However, the samples are broadly similar regarding the distribution of these variables, except for income per capita of those abroad by interval. Some changes may be expected if households fall marginally on different

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<sup>1</sup> In both years, the question on income focuses on the average monthly income in the previous year. In 2007, the survey was conducted in July, while it was conducted in December in 2008. Therefore, for 2007 the average for the period July 2006 – July 2007 was used, while for 2008 the annual average for the year (SOK, 2008a).

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sides of the discrete boundaries. For income per capita of those employed at home the proportions jointly in the second and third categories were approximately the same, but there are larger differences when comparing the first and last categories. The percentage of households earning more than 250 Euros per capita is higher in the 2008 data set but differences may be expected to arise with different samples, particularly in small sub-groups such as these. .

The percentage of households earning income abroad is almost twice as large in the 2008 data set and the distribution between different categories of income abroad is dissimilar. In the first data set, the percentage of remittance-receiving households is smaller, 17 per cent compared to 25 per cent respectively. However, while in the first data set only around half of the households that have emigrant networks receive remittances, in the 2008 data set almost all migrant-households receive remittances. These differences may be simply because it is a different random sample, but there were changes in Kosova that may have affected remittances in the period between the samples. After the Declaration of Independence in 2008, migrant members may consider that the number of potentially profitable investment opportunities in their country of origin has increased and the risk of investment losses has decreased. Hence, they may remit more for investment purposes. Non-responsiveness is less likely to be the reason, since in both samples the rate of non-response on this variable is small. The percentage of remittance-recipients is similarly distributed among the different categories of remittances per capita in the two data sets.

The two samples are fairly similar in the household demographic characteristics: Share of those under the age of 16, Share of those of working age and Share of females in those of working age. However, in the model excluding household migrant members the two data sets are different with regard to the mean value of the share of females in those of working age (Table 5.2, Columns 1 and 2). The joint proportions in the third and fourth categories are similar, but in the first category the difference is large. This is odd given that the ratio of females to males in the working age population is approximately 1 to 1. Additionally, the other demographic characteristics are similar between the two years and no large

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demographic changes are possible within one year. However, this difference may just be the result of random sampling.

The distribution of households by education level is similar in both data sets with around a quarter of households where the head has higher education. In 2008, the category “Other” was not an option. However, only 0.9 per cent of the households in 2007 belong to this category. The distribution by whether the household head perceives the economic situation to have improved, remained the same or worsened, has changed. In the 2008 data set, the percentage of households whose head perceives the economic situation of the household to have improved compared to one year ago is larger than in the 2007 data set. This change in perception may have been influenced by the Declaration of Independence in 2008 through its impact on households’ optimism about future income and employment probabilities. However, as mentioned in Section 5.2, the two years were fairly similar in terms of macroeconomic fundamentals. The average household size is similar in both samples at around seven, as is the distribution by household size. The distribution by number of nuclear families within the household is also quite similar at all levels except at the very top, where there are more families with large number of nuclear families in the 2007 sample. All of these households have more than one nuclear family living abroad.

In summary, the two data sets stem from two surveys conducted in Kosova in different years based on the same sampling framework. Given that they are based on random samples and there are some economic changes over time, some differences between the two are expected. However, they are largely similar and they support the view that the desired sampling framework was achieved and that there have not been large changes in the variables that would lead to dangers in extrapolating from model estimates. These data sets therefore provide a sound basis for investigating the stability over time of our economic model of households’ emigration behaviour.

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**Table 5.3 Simple comparative descriptive statistics, percentages (numbers) – Kosova 2007 and Kosova 2008**

Characteristics of migrants' households	Household including migrant-members	Household including migrant-members	Household excluding migrant-members	Household excluding migrant-members
	Kosova 2007	Kosova 2008 <sup>2</sup>	Kosova 2007	Kosova 2008
Emigration plan, %				
Yes			29.75 (341)	27.87 (97)
Household income per capita of those employed at home (in €), %				
Average (in €)	65	110	71	116
1 to 24	25.95 (307)	15.76 (55)	22.99 (272)	13.47 (47)
25 to 49	31.87 (377)	29.51 (103)	30.68 (363)	25.79 (90)
50 to 99	27.30 (323)	27.51 (96)	28.49 (337)	31.52 (110)
100 to 249	11.75 (139)	12.89 (45)	14.79 (175)	14.61 (51)
250 to 499	1.86 (22)	3.44 (12)	2.20 (26)	3.72 (13)
500 and more	1.27 (15)	10.89 (38)	0.85 (10)	10.89 (38)
Household income per capita earned abroad (in €), %				
Average (in €)	283	211	1251	872
0	82.27 (1,030)	64.76 (226)	82.27 (1,030)	64.76 (226)
0 to 249	9.55 (119)	10.60 (37)	0.8 (10)	2.58 (9)
250 to 499	5.3 (66)	2.29 (8)	2.48 (31)	3.65 (11)
500 and more	2.81 (35)	22.35 (78)	14.46 (181)	29.51 (103)
Remittances (Yes/No), %				
Remittances recipient			16.23 (228)	24.07 (84)
Remittances non-recipient			79.79 (1,121)	73.07 (255)
Remittances no-response			3.99 (56)	2.87 (10)
Remittances per capita (in €), %				
0	83.16 (1,141)	72.49 (253)	83.06 (1,141)	72.49 (253)
More than 0 to 49	14.05 (188)	19.48 (68)	11.88 (163)	21.20 (74)
50 to 149	2.47 (33)	4.30 (15)	4.45 (61)	2.87 (10)
150 to 249	0.3 (4)	0.57 (2)	0.29 (4)	0.57 (2)
250 to 499	0 (0)	0.29 (1)	0.15 (2)	2.87 (10)
500 and more	0 (0)	2.87 (10)	0.07 (1)	0 (0)
Monthly average household remittances (in €)				
Average monthly household remittances			261	240.72
Minimum			10	13.27
Maximum			2500	1327.43
Median			25	88.49
Share of those under the age of 16, %				
Average, %	22	24	22	24
0% to 25%	55.14 (735)	57.47 (200)	54.64 (736)	56.32 (196)
more than 25% to less than 50%	30.61 (408)	22.7 (79)	28.58 (385)	22.41 (78)
more than 50% to less than 75%	14.03 (187)	18.39 (64)	16.56 (223)	19.83 (69)
more than 75% to 100%	0.23 (3)	1.44 (5)	0.22 (3)	1.44 (5)
Characteristics of migrants' households	Household including	Household including	Household excluding	Household excluding

<sup>2</sup> As introduced in the beginning of this section, whenever applicable the 2008 data are adjusted for inflation.

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	migrant- members	migrant- members	migrant- members	migrant- members
	Kosova 2007	Kosova 2008 <sup>3</sup>	Kosova 2007	Kosova 2008
<b>Share of those of working age, %</b>				
Average, %	73	76	73	76
0% to 25%	0.22 (3)	0.29 (1)	0.89 (12)	0.57 (2)
more than 25% to less than 50%	11.66 (156)	11.49 (40)	13.46 (182)	11.49 (40)
more than 50% to less than 75%	37.07 (496)	30.17 (105)	35.65 (482)	28.45 (99)
more than 75% to 100%	51.05 (683)	58.05 (202)	50 (676)	59.48 (207)
<b>Share of females in those of working age, %</b>				
Average, %	34	34	35	47
0% to 25%	23.9 (310)	30.67 (96)	23.09 (311)	7.12 (24)
more than 25% to less than 50%	54.05 (701)	45.69 (143)	52.26 (704)	32.34 (109)
more than 50% to less than 75%	20.74 (269)	19.81 (62)	22.87 (308)	53.12 (179)
more than 75% to 100%	1.331 (17)	3.83 (12)	1.78(24)	7.42 (25)
<b>Education, %</b>				
Yes			22.84 (306)	26.3 (91)
<b>Education Level</b>				
Less than primary			7.68 (103)	2.69 (9)
Primary			23.92 (321)	20 (67)
Secondary			44.71 (169)	50.15 (168)
Higher education			22.8 (306)	27.16 (91)
Other			0.9 (12)	n.a.
<b>Perception of the household head of the economic situation of the household compared to one year ago</b>				
Improved			17.97 (236)	27.11 (93)
Remained the same			53.47 (702)	44.19 (155)
Worsened			28.56 (375)	27.7 (95)
<b>Psychic Income</b>				
<b>Household size, %</b>				
Average household size	6.93	7.27	6.17	6.27
1 to 5	47.31 (633)	39.83 (139)	46.431 (638)	49.14 (171)
6 to 10	45.52 (609)	42.41 (148)	44.98 (618)	41.95 (146)
11 to 15	5.83 (78)	12.89 (45)	5.68 (78)	6.9 (24)
16 and over	1.35 (18)	4.87 (17)	2.91 (40)	2.01 (7)
<b>Network, %</b>				
Yes			29.88 (401)	30.65 (103)
<b>Number of nuclear families, %</b>				
Average number of nuclear families	1.9	1.7	1.6	1.5
1	51.89 (699)	60.99 (197)	58.95 (794)	66.38 (231)
2	25.32 (341)	21.98 (71)	28.66 (386)	22.7 (79)
3	10.32 (139)	10.53 (34)	8.69 (117)	7.47 (26)
4	6.24 (84)	4.33 (14)	2.6 (35)	2.59 (9)
5	3.64 (49)	1.24 (4)	0.45 (6)	0.86 (5)
6 or more	2.60 (35)	0.93 (3)	0.66 (9)	0 (0)

<sup>3</sup> As introduced in the beginning of this section, whenever applicable the 2008 data are adjusted for inflation.



## **5.4.2. Comparison of the empirical results between the Kosova 2007 and Kosova 2008 data set**

### **Model 1a including household migrant members (Table 5.4)**

This section replicates the empirical analysis of chapter 3 using the 2008 sample and a comparison is then made of these results with those using the 2007 sample. As in chapter 3, the model will take the household view where the household is defined as including migrant members. The focus of this chapter is to analyse the possible differences in emigration behaviour in terms of the stability of the relationships over a short period of time. The estimations from this model will be compared for the two samples taken 18 months apart. For each model two alternatives are deployed with regard to the definition of remittances. They are introduced separately first as a continuous variable (Model 1a). Due to possible inaccurate responses for the total amount of monthly remittances (if households were concerned at revealing the true size of remittances received), the variable is also introduced as a dummy variable taking values 1 for remittance-recipients, zero otherwise (Model 1b, Table A5.2.1).<sup>4</sup> For consistency with chapter 3, the results from List-wise Deletion (LD) are interpreted (Table 5.3), while the results from Multiple Imputation (MI) are referred to only if the results suggest the opposite to those under Listwise deletion (Table A5.1.1 and A5.1.2).

The empirical results suggest that there are some differences in terms of emigration behaviour between the two years. However, prior to the discussion of the empirical results, it is important to note that if the two data sets stem from two random draws from the same population some differences in the values of the variables are expected and hence in coefficient estimates. However, as shown in the previous section (Table 5.2), the differences in the descriptive statistics are relatively small and occur only between the per capita income variables. The marginal effects for the empirical results in Table 5.4 are calculated at the mean values of the variables. There are some difficulties in comparing the results, given

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<sup>4</sup> Non-response was not an issue as all households that have declared receiving remittances have also reported their amount.

the use of the probit model. Given there are some differences in the mean values between the samples, it needs to be remembered that the usual marginal effects of the variables between the two samples are not fully comparable, as they are based on different values for the independent variables, since they are at the means of the respective samples (although the differences here, as we have considered, are small for most variables). Also the second sample size was considerably smaller than the first, which may have some affect on the significance of the variables, although at over 250 the size of the later sample was not that small. Having noted these difficulties, the discussion of differences will focus on the direction of the effect and level of significance of the marginal effects. Variables that are insignificant in both models will not be considered in the comparison. The comparison takes the results from the Kosova 2007 sample as the benchmark whenever not explicitly emphasised.

Prior to discussing the results in terms similarities/differences in the sign and significance of the variables between the two years, the results using the data set 2008 are interpreted with respect to their support for the theoretical expectations of the household perspective (Table 5.4). The 2008 results are similar to those from 2007 in terms of support for the household view. Variables which a priori have an expected ambiguous sign, will not be considered in this discussion as their effect is statistically not well defined and therefore give an insignificant marginal effect. So, only variables which have a clearly defined expected effect are considered. The 2008 results suggest support for the migration hump regarding household income per capita abroad, while the 2007 results indicate support for the migration hump in terms of household income per capita at home (to avoid confusion, the coefficients of the levels and the squared terms of these variables are not reported). The results from the 2008 model indicate a positive and significant marginal effect for rural areas (TA), which is in line with expectations, while the results from the 2007 model are in line with the expectations on the regional unemployment rate (RU). Other differences in terms of support for the household perspective include the marginal effects of total share of those of working age (TSWA) and total number of nuclear families (TNUC). Only the 2008 results provide support for the positive effect of

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TNUC, while the marginal effect of TSWA is positive and significant only in 2007, in line with its a priori effect. When introducing remittances as a dummy variable results are similar. This discussion shows that the 2008 results are similar to the 2007 results in that they both largely but not fully support the theoretical expectations of the model developed in chapter 3, although there are some differences in the individual variable estimated coefficients.

There are several differences in terms of statistical significance and sign of independent variables between the two years. For reasons explained in chapter 3, the weighted sum of the marginal effect of the level and the squared term of the two interacted variables is calculated. The weighted sum of the marginal effect of the level and the squared term of household per capita income at home is different between the two years. It is negative and highly significant in 2007, while positive but insignificant in 2008. There are differences in the estimates of the effects of total remittances per capita (TR) and total share of those of working age (TSWA). The marginal effect of TR is negative and significant only at the 10 per cent level of significance in 2007, while it is positive and insignificant in 2008. The estimate of the effect of TSWA is positive in both years, but significant only in 2007. There is also a difference in the estimates of the effect of education between the two years. Theoretically, the impact of education is ambiguous. In both years, the marginal effect of education has a negative impact supporting the view that the better educated may benefit more from higher employment probabilities and the wage differentials at home, however this is significant only in 2007.

The results from the two estimations are dissimilar with respect to the marginal effects of the variables controlling for psychic income. The estimate of the effect of network is negative in both years, but significant only in 2008, while the marginal effect of number of nuclear families (TNUC) is positive and significant only at the 10 per cent level in 2008, while negative and insignificant in 2007.

There are differences also regarding the marginal effects of the variables controlling for location-related characteristics. The marginal effect of the variable controlling for the regional unemployment rate (RU) has the expected positive

impact in both samples, but is significant only in 2008 (and the marginal effect is estimated to be considerably higher). There is also a large difference between the estimates with regard to the variable controlling rural areas (TA). It has the expected positive sign in 2008, but it is significant only in 2007. The opposite holds under multiple imputation (MI), where there are similarities in the marginal effects of TA between the two years, with the sign of the estimate being positive and significant in both years. However, the marginal effect of RU is positive but insignificant in both years under MI.

The results suggest similarities with regard to the weighted sum of the marginal effects of the level and the squared term of income per capita earned abroad and the marginal effect of total household size (TS). In both cases, the estimates are positive and significant in both years; but they are highly significant in 2008, while only significant at a 10 per cent level in 2007. Under MI the estimates of the effects of both variables are similar, but insignificant, in both years. There is some similarity between the two years in the marginal effect of the attitudinal variable controlling for whether the head of the household perceives the economic situation of the household to have worsened compared to one year ago (Worsened). It is highly significant and, as expected, it has a positive impact on the probability of planning the emigration of a household member in both years. This would suggest that this variable is a proxy for forward-looking expectations. However, the estimated marginal effect in 2008 is approximately twice as large as in 2007. In the following subsection, the marginal effect of Worsened will be calculated using the 2008 sample estimates, with other variables set at the mean values of the respective variables from the 2007 sample to enable a direct comparison of the marginal effects of this important variable.

**Table 5.4 Emigration propensity – Model 1a including household migrant members**

Variable	Kosova 2007		Kosova 2008	
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
Household Characteristics				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	-9.3E-04	0.01***	3.27E-05	0.70
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>	1.4E-04	0.08*	1.6E-03	0.001***
<i>TR</i>	-0.002	0.10*	0.001	0.78
<i>TSU16</i>	0.001	0.42	-0.002	0.66
<i>TSWA</i>	0.003	0.05**	0.002	0.67
<i>TSFWA</i>	-0.001	0.47	-2.6 E-03	0.15
<i>Edu</i>	-0.16	0.001***	-0.03	0.68
<i>Improved</i>	0.02	0.29	-0.03	0.69
<i>Worsened</i>	0.16	0.001***	0.31	0.001***
Psychic Income				
<i>TS</i>	0.006	0.1*	0.009	0.001***
<i>Network</i>	-0.03	0.56	-0.19	0.04**
<i>TNuc</i>	-0.01	0.14	0.03	0.10*
Location-related characteristics				
<i>RU</i>	0.001	0.92	0.01	0.002***
<i>TA</i>	0.11	0.001**	0.10	0.23
Number of observations	929		255	
LR chi2(16)	98.12		46.12	
Prob>chi2	0		0.0001	
Pseudo R2	0.09		0.18	
Log likelihood	-515.34		-120.81	

When introducing remittances as a dummy variable, broadly the same differences/ similarities are found between the results from the two estimations as in Model 1a (Table A5.2.1). However, in the estimates of the model with remittances as a dummy (Model 1b), there is one additional similarity and one additional difference. The marginal effect of the dummy variable on remittances (TR) is positive and significant in both years, while the weighted sum of the marginal effects of the level and the squared term of income per capita earned abroad is positive in both years, but significant only 2008. The MI results give the same differences and similarities as in Model 1a. Again, the variable ‘Worsened’ is

positive and highly significant in both time periods under both methods of estimation.

***Using proxies that explicitly relate to forward expectations (Table 5.5)***

In chapter 3 and in section 5.2 above, it is argued that attitudinal variables are useful for inclusion in the model and that these may be a proxy for forward-looking expectations. Yet, the question on which these variables are based is the current perception of the situation compared to one year ago. Although it is argued that in a period of structural change, modelling rational expectations is difficult, it has to be acknowledged that these variables may not be a good proxy of forward-looking expectations. In the 2008 survey only another question was added in the survey as to whether the household head expected the economic situation of the household to improve, remain the same or worsen in the future. This is included in the regression through three dummy variables (*Future\_Improved*, *Future\_Same* and *Future\_Worsened*) with the middle option used as the benchmark. The model with the new attitudinal variables is estimated for 2008 and results are shown in the table below. Given the robustness of this variable throughout model specifications and estimation techniques, MI is not employed in running the regressions with this additional variable for 2008 and in the further investigation of the impact of this variable below.

The results indicate that the two model specifications are similar. The marginal effects of all variables that are significant in both specifications have the same sign and a similar magnitude. The marginal effect of *Future\_Improved* is negative and significant. The marginal effect of *Future\_Worsened* has the expected positive impact but is significant only at the seven per cent level. Unlike in the previous specification, this one suggests that it is rather optimism that has a significant (negative) impact on the plan to emigrate. The results are similar when remittances are introduced as dummy variable (Table A5.2.2). Although the results in this section do suggest that the explicitly forward-looking expectations variables are a measure that differs to some degree from the current-based variables, the similarity in the results in respect to the other variables does continue to support the conclusion in the previous section that the inclusion of a variable measuring

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expectations is important to the stability of the model between the two time periods.

**Table 5.5 A comparison of the emigration propensity with current and forward-looking expectations for 2008**

	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
Household Characteristics				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	0.3E-05	0.70	1.1E-04	0.38
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>	1.4E-03	0.001***	1.5E-03	0.001***
<i>TR</i>	1.0 E-03	0.78	1.1E-03	0.72
<i>TSU16</i>	-2.2 E-03	0.66	-2.2E-03	0.68
<i>TSWA</i>	1.9 E-03	0.67	1.0E-03	0.84
<i>TFWA</i>	-2.6 E-03	0.15	-2.9E-03	0.12
<i>Edu</i>	-0.02	0.68	-3.5E-03	0.95
<b>Improved</b>	<b>-0.03</b>	<b>0.69</b>		
<b>Worsened</b>	<b>0.31</b>	<b>0.001***</b>		
<b>Future_Improve</b>			<b>-0.15</b>	<b>0.003***</b>
<b>Future_Worsen</b>			<b>0.15</b>	<b>0.07*</b>
Psychic Income				
<i>TS</i>	8.6 E-03	0.001***	9.9E-03	0.01***
<i>Network</i>	-0.19	0.04**	-0.15	0.04**
<i>TNuc</i>	0.03	0.1*	0.01	0.46
Location-related characteristics				
<i>RU</i>	0.01	0.002***	9.3E-03	0.07*
<i>TA</i>	0.09	0.23	0.08	0.38
Number of observations	255		255	
LR chi2(16)	46.12		35.59	
Prob>chi2	0.0001		0.003	
Pseudo R2	0.18		0.12	
Log likelihood	-120.81		-130.08	

**Further investigation of the marginal effect of Worsened using the 2008 model based on the 2007 sample mean values of the variables (TABLE 5.6)**

In the empirical estimation, the attitudinal variables Improved and Worsened are introduced to account for background changes in perceived

economic conditions. Thus, these variables are important to examine in terms of their role in the model estimation in the different periods. In Table 5.3, the marginal effect of the second estimation indicates an effect twice the size of the first, but these are not strictly comparable and it is checked if correcting for this makes a difference. Given that in a probit model marginal effects vary given the values of all the variables, the marginal effects are compared in the two estimations of these variables at the same variable values. As shown in Table 5.5, deploying Model 1a, estimating the marginal effects of the variables for 2008 at the sample mean values of the respective variables in 2007 gives estimate of the marginal effects for Worsened of 0.31 to two decimal places which is highly significant. The marginal effect of Worsened is twice as large in the 2008 Model as in the 2007 Model (and to two decimal places does not differ from the marginal effects estimated in Table 5.4 in Model 1a). The marginal effect is very close in Model 1b (Table A5.2.1). The change in the marginal effect of Worsened in Table 5.5 suggests that there has been a change in the underlying structure between the two years, that is, the relationship with this variable has not remained stable over time.

This and the other differences reported above suggest that the economic model may not be robust. This analysis, however, does not investigate whether the difference in the coefficients is statistically significant. Moreover, this analysis does not provide a test of the statistical significance of the difference in coefficients by individual variable coefficients. To overcome these limitations the Blinder-Oaxaca decomposition technique is deployed in section 5.5.



**Table 5.6 Emigration propensity – the marginal effect of Worsened<sup>5</sup>**

Variable	Kosova 2007 using mean values of 2007 sample		Kosova 2008 using mean values of 2007 sample	
Definition of remittances	Model 1a)		Model 1a)	
	Marginal effects	Cluster-robust P>   t	Marginal effects	Cluster-robust P>   t
Household Characteristics				
<i>Improved</i>	0.02	0.61	-0.04	0.64
<i>Worsened</i>	0.16	0.001***	0.31	0.001***

### 5.4.3. Further investigation of the emigration propensity

#### Model 2a excluding household migrant members (Table 5.7)

The results in the previous section gave some differences in the sign and significance of individual variables between the two time periods. However, the original results in chapter 3 provide support, though not in full, for the household approach. This section provides estimates of a variant on this model to further investigate households' migration behaviour and considers whether the lack of full support in chapter 3 and the changes found over time are the result of a particular specification. The difference between the model specification in chapter 3 and this one lies in the definition of the household. In the new specification, the household will be defined as in the studies taking the household view reviewed in chapter 2, that is, as consisting of only members living in Kosova (henceforth, the model excluding household migrant members or Model 2). Although still supporting the argument in this thesis of the appropriateness of the household approach given family ties in Kosova, this is worthy of investigation as an alternative as household members living abroad may find it difficult to take part in decision making for practical reasons, such as physical distance. Another reason may be that with time

<sup>5</sup> These results hold also for Model 1b and model specifications to be introduced in the next section.

the household at home may consider those abroad as not being equal partners in decision making, given that they do not experience the situation of the household at critical times when decisions have to be made. They are informed from household members at home. Therefore, it is arguably important to investigate whether excluding migrant-members of the household from the household as a whole in the model is a better approximation of the household view. This has implications for the definition of other variables that are calculated based on household size too. For example, the variable share of those under the age of 16 (SU16) is defined as the number of those under the age of 16 living in Kosova divided by the number of household members living in Kosova. The income abroad variable is based only on the migrant-household and is divided by the number of migrant-members only (see Table A3.1.2 for variable definitions). Following the detailed discussion in chapter 2, this new specification will bring the model specification closer to those used by studies in the literature deploying to the household approach. Below, in separate sections the comparison will focus on two issues. The results within samples are compared between the model excluding household migrant members and the original model where the household is defined as including migrant-members first focussing on whether the new specification provides more support for the theoretical expectations of the model developed in chapter 3. Next, results are compared between the two years focussing on changes in signs and significance given the new specification.

***Comparison of estimation results by model specification focussing on the support for the household perspective for 2007 and 2008 separately***

Where the household is defined as consisting only of the members living in Kosova (Model 2a), results from the 2007 data set are similar in sign and level of significance when compared to the results estimated using the same data but including migrant members in the definition of the household (Model 1a). Ignoring variables that are significant only at the 10 per cent level, the only difference is that the variable controlling for the number of nuclear families is negative and insignificant in the original specification (Model 1a), but it is in line with the expected sign of this variable in the new specification (Model 2a), that is, it is

positive and significant. This suggests that both model specifications provide broad but not complete support for the household perspective. Using the 2008 data set, the two specifications also give similar results indicating that the two specifications provide similar support for the household perspective. Given the discussion in section 5.4.2, for both years both specifications are broadly, but not completely, in line with the household perspective.

Introducing remittances as a dummy variable, comparing this estimation model (Model 2b reported in Table A5.2.4) with the similar model where the household includes migrant members (Model 1b reported in Table A5.2.1) there are slight changes but the results are similar for 2007. Using the 2008 data set, results are similar for the two model specifications. A detailed discussion of differences/similarities between the two specifications for the two years is given below Table A5.2.4 (Appendix 5.2).

From the comparison of the empirical results between the two models, it can be concluded that the results of the original model are similar to those of the model excluding household migrant members for both years. The two model specifications, Model 1 and Model 2 perform similarly; both are largely but not fully in line with the theoretical expectations of the household view. This holds also when remittances are introduced as a dummy variable.

***Comparison of the empirical results between the two years using the model excluding household migrant members***

Comparison of the results between the two years from this model specification gives differences in signs and significance (Table 5.7). Similar to the original specification, Model 1a, the weighted sum of the marginal effects of household income per capita at home and its squared term is negative in both years, but is significant only in 2007. The marginal effect of the share of those of working age (SWA) has the expected positive effect in 2007, but is negative in 2008. It is significant only in 2007. The results from this estimation are also dissimilar regarding the marginal effect of education (Edu); it is negative in both years, but significant only in 2007. There are differences in the estimates of the effect of

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household size and network. In the case of the former, the marginal effect is negative and insignificant in 2007, while positive and significant in 2008. The marginal effect of network is negative in both years, but significant only in 2008.

Similar to the results using the original model 1a, the results do suggest differences in the estimates of the marginal effects of the location-related variables. The estimate of the effect of the regional unemployment rate (RU) is, as expected, positive in both years, but significant only in 2008. The marginal effect of type of area (TA) it is positive in both years, which is not in line with expectations, but significant only in 2007.

Again, as found in the comparison under the original Model 1a, the results indicate similarities between the two years regarding the marginal effects of three variables. The weighted sum of the marginal effects of the household income per capita abroad and its squared term is negative and significant in both years, but significant only at the 10 per cent level in 2007. The marginal effect of the attitudinal variable controlling for the effect of whether the household head perceives the economic situation of the household to have worsened is similar between the two years, it is positive and significant. There is a similarity in the estimate of the effect of number of nuclear families; it is positive and significant in both years, which is in line with theoretical expectations. As in the earlier comparison, there are slightly more differences in the version with remittances as a dummy variable (Table A5.2.4).

**Table 5.7 Emigration propensity – Model 2a excluding migrant members from the household**

Variable	Kosova 2007		Kosova 2008	
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
Household Characteristics				
<i>Weighted sum of the marginal effects of YH and YH_SQ</i>	-8.0E-04	0.001***	-1.9E-05	0.89
<i>Weighted sum of the marginal effects of YA and YA_SQ</i>	7.7E-04	0.06*	4.7E-04	0.001***
<i>R</i>	-0.002	0.04**	0.6E-05	0.84
<i>SU16</i>	0.002	0.1*	-0.005	0.60
<i>SWA</i>	0.004	0.001*	-0.002	0.81
<i>SFWA</i>	-0.002	0.23	-0.002	0.22
<i>Edu</i>	-0.16	0.001***	-0.009	0.89
<i>Improved</i>	0.01	0.63	-0.04	0.63
<i>Worsened</i>	0.16	0.01***	0.32	0.001***
Psychic Income				
<i>S</i>	-0.004	0.6	0.015	0.01*
<i>Network</i>	-0.06	0.29	-0.26	0.001***
<i>Nuc</i>	0.03	0.02***	0.04	0.05**
Location-related characteristics				
<i>RU</i>	0.001	0.88	0.012	0.001***
<i>TA</i>	0.1	0.001***	0.09	0.29
Number of observations	929		255	
LR chi2(16)	104.78		51.67	
Prob>chi2	0		0	
Pseudo R2	0.09		0.17	
Log likelihood	-514.16		-122.05	

To sum up, the respecification does not provide an improvement in terms of the theoretical expectations of the household model. Similar to the original specification, the results largely but not fully support the household perspective for both years. For 2007, out of nine variables where the effect is clear a priori five are statistically significant and in line with the theoretical expectations. Regarding variables for which the a priori effect is ambiguous, results suggest a significant marginal effect for three variables, while insignificant for two variables. As argued in chapter 3, the lack of statistical significance may be the results of the effect not being well defined statistically. The marginal effect of only one variable is significant but not in line with theoretical expectations, while five variables are insignificant.

For 2008, four out of nine variables which have a clear expected effect are significant and in line with their hypothesised effects. Only one out of five variables where the expected effect is ambiguous is significant.

Regarding the analysis of whether the signs and significance of the variables stable over time the results are similar to those from Model 1a. The two years are different in terms of both level of significance and sign with respect to four variables (five variables in Model 2b) out of a total of 14 variables. Differences with respect to level of significance only between the two years are found for four variables (five variables in Model 2b). Model 2a they are similar regarding the marginal effect of number of nuclear families. Again, results are similar with respect to the marginal effect of Worsened, in that it has the expected sign and is significant. However, calculating the marginal effects of this variable using the sample mean values of the variables in 2007 (as in section 5.4.2) gives a marginal effect twice as large in 2008 compared to 2007 (Model 2a and Model 2b). According to these results the re-specification is not an improvement to the model. Consequently, irrespective of the definition of the household the results suggest that there are differences between the two models in the two years.

Given that this analysis of the signs and significance follows the same approach as in section 5.4.2, for reasons explained in that section, this analysis has the same limitations and therefore results have to be taken with caution in terms of considering the stability of the model. In the next section, the Blinder-Oaxaca decomposition technique is provided to overcome these limitations.

## **5.5. The extended Blinder-Oaxaca decomposition for non-linear models**

As argued in the introduction, the aim of this paper is to investigate the stability over time of migration behaviour. Given the limitations of the approach followed in the sections 5.4.2 and 5.4.3, in this section the Blinder-Oaxaca decomposition (henceforth, BO decomposition) is applied (Blinder, 1973; Oaxaca, 1973). The advantage of the BO technique is that it provides a test of the statistical significance of the overall differential between the two model structures and of the

difference in the coefficient estimates. Additionally, it provides the same analysis also by individual variable coefficients. The BO technique was developed to decompose the gender wage differential in the context of linear regression models. The technique takes either the male wage structure to be the non-discriminatory benchmark (Equation 1.1) or the female wage structure (Equation 1.2). The original decomposition formula is as follows:

- Male-weighted decomposition measures the difference if females were paid the same rates as males

$$\bar{Y}_M - \bar{Y}_F = \sum \hat{\beta}_j^M (\bar{X}_j^M - \bar{X}_j^F) + \sum \bar{X}_j^F (\hat{\beta}_j^M - \hat{\beta}_j^F) \quad (5.1)$$

- Female-weighted decomposition measures the difference if males were paid the same rates as females

$$\bar{Y}_M - \bar{Y}_F = \sum \hat{\beta}_j^F (\bar{X}_j^M - \bar{X}_j^F) + \sum \bar{X}_j^M (\hat{\beta}_j^M - \hat{\beta}_j^F) \quad (5.2)$$

where  $\bar{Y}$  is the mean value of the dependent variable,  $\bar{X}$  is the mean value of the explanatory variable,  $\hat{\beta}$  is the vector of estimated coefficients of the respective explanatory variables and the subscripts M and F indicate males and females, respectively.

The BO technique decomposes the differential into a part that is explained by differences in observed productivity characteristics (first term on the LHS of equation 1.1 and 1.2), the endowments/characteristics effect, and a residual part that cannot be accounted for by observable characteristics (second term on the LHS of equation 1.1 or 1.2), the coefficients effect. The residual part is attributable to differences in the estimated coefficients and is frequently used as a measure of discrimination. However, the residual part subsumes also the influence of model misspecification, either in terms of not explicitly controlling for determinants in the model or imprecise measurement of the explanatory variables. This technique is mainly applied to labour market discrimination. However, it can be applied to decompose group differentials in any outcome variables. Park and Lohr (2010) used it to decompose differences in the use of crop disease and nematode management

strategies by gender, while Gang et al. (2010) deployed it to decompose differences in the jump in attitudes towards foreigners displayed by Europeans.

The literature discusses several limitations of the BO technique. According to Masters (1974), Bloch and Smith (1977), Daymont and Andrisani (1984) and Cotton (1988) the principal concern is statistical in nature and relates to the discrimination effect. The BO technique interprets the residual part not accounted for by productivity-related characteristics as the gender discrimination effect. The critics question whether the residual is an appropriate measure of the discrimination effect or simply a result largely of model misspecification. They argue that for the residual to be an exact measure of discrimination the model must be correctly specified. Otherwise, the discrimination effect will represent the influence of missing variables and/or incorrect functional form and therefore bias the discrimination effect. So far, no solution to this problem has been found, but results from this technique need to be interpreted with caution (Cotton, 1988 and Masters, 1974). The coefficients effect may capture differences in model structure and/or model misspecification. In terms of policy recommendations based on this analysis either of these is problematic.

There are another two criticisms related to the discrimination effect. The first criticism concerns what Oaxaca (1973) calls the “index number problem”. Butler (1982) argues that the technique confounds demand-side sources of discrimination with supply-side sources. Due to past supply-side differences in skill-acquiring opportunities, differences in the demand-elasticities by gender are expected. Hence, the coefficient estimates of the two genders would be different and basing discrimination on this difference may over- or under-estimate the discrimination effect. Cotton (1988) further develops this critique disagreeing on Butler’s assumption about these model structures prevailing under no discrimination. Cotton (1988) argues that both wage structures are functions of discrimination and it would be incorrect to consider the wage structure of either gender to prevail in the absence of discrimination. Instead the author suggests specifying a non-discriminatory wage structure assuming that in the absence of discrimination the two wage structures would be identical.



For this he uses a hypothetical vector of coefficients,  $\beta^*$ , expected to prevail in the absence of discrimination:

$$\bar{Y}_M - \bar{Y}_F = \sum \beta^* (\bar{X}_M - \bar{X}_F) + \sum \bar{X}_M (\hat{\beta}_M - \beta^*) + \sum \bar{X}_F (\beta^* - \hat{\beta}_F) \quad (5.3)$$

The first RHS term represents the difference in average productivity characteristics in the absence of discrimination. The second and third RHS components represent the discrimination effect, where the former captures the amount by which male productivity characteristics are overvalued, the advantage effect, while the latter captures the amount by which female productivity characteristics are undervalued, the disadvantage effect.

For the hypothetical term,  $\beta^*$ , the author suggests using the weighted average of the wage structures of the two genders where the relative sample size of the majority group serves as the weight,  $\Omega$ :

$$\beta^* = \Omega \hat{\beta}_M + (I - \Omega) \hat{\beta}_F, \quad (5.4)$$

where  $\beta^*$  is defined as a weighted average of the coefficient vectors  $\beta_M$  and  $\beta_F$ ,  $\Omega$  is a weighting matrix and  $I$  is an identity matrix.

This author recognises, though, the operational weakness of estimating the non-discriminatory wage structure based on strong assumptions given that it is not observable in reality.

Following this criticism, different assumptions about the form of  $\Omega$  were suggested in the literature. The principal BO decomposition (Blinder, 1973 and Oaxaca, 1973) assumes  $\Omega$  to be a null-matrix or equal to  $I$ . Reimers (1983) suggests using  $\Omega=0.5I$ . Neumark (1988) and Oaxaca and Ransom (1994) suggest estimating the pooled model to derive the counterfactual coefficient vector  $\beta^*$ . The second criticism regarding the discrimination effect is that the sum of the discrimination and the endowments effect does not necessarily equal the total wage differential (Master, 1974). Hence, even in the absence of discrimination and if females had the same values of the independents the total effect would be greater (lower) than the individual effects since females with above (below) average values for the independents may face (lower) discrimination.

These two criticisms do not fully apply to this analysis given that only focused on whether the model structure has not changed over time, that is, whether it has change in the period after the Declaration of Independence compared to the period before. Given this, in terms of the “index number problem” this analysis will follow the approach of the principal BO decomposition by assuming  $\Omega$  to be a null-matrix or equal to I. Given the focus of this analysis, the year 2007 is a more natural reference category. The second issue does not apply and therefore is not further developed.

There is yet another critique on the applicability of this technique. Fairlie (2005), Bauer and Sinning (2008), Sinning et al. (2008) and Zhao and Shyr (2009) question its validity when applied to categorical dependent variables. They argue that the standard BO technique cannot be applied in this case since there is a difference between the parameter estimates of linear models and the marginal effects of the latent outcome variable. In this regard, Bauer and Sinning (2008) have developed an extension of the BO decomposition for non-linear models. Sinning et al. (2008), use that approach and explain how to apply the BO decomposition to models with categorical dependent variables using the STATA command `nldecompose`. The `nldecompose` command performs only the overall decomposition. After the decomposition, the STATA command `bootstrap` calculates the standard errors of the decomposition components. This command does not provide a detailed analysis of the statistical significance of the difference between individual variable coefficients, but this is further pursued in section 5.5.2.

### **5.5.1. Investigation of the overall time stability using the extended Blinder-Oaxaca decomposition for non-linear models**

In this section, the extended BO technique for nonlinear models is deployed to decompose the characteristics effect from the coefficients effect. The former effect measures how observable characteristics across the two years influence migration behaviour, while the latter measures the relative strength of a characteristic on the migration decision across the two years. Within the context of

this research the discrimination/coefficients effect measures the difference in the probability to send one or one additional member abroad for economic reasons between the two years, 2007 and 2008 resulting from the differing model structures, rather than because of changes to the variable values. As explained above, for this decomposition analysis, the suggestion in the principal BO decomposition is deployed where results are reported using either year as a reference.

**Table 5.8 Blinder-Oaxaca decomposition - analysis of overall stability over time of the emigration propensity between 2007 and 2008**

	Model 1a)		Model 2a)	
	Coefficient	P> t	Coefficient	P> t
<b>Using 2008 as the standard (Omega=1)</b>				
Characteristics effect	-0.06	0.35	-0.01	0.81
Coefficients effect	-0.03	0.67	-0.02	0.70
<b>Using 2007 as the standard (Omega=0)</b>				
<b>Characteristics effect</b>	<b>-0.04</b>	<b>0.01***</b>	<b>-0.02</b>	<b>0.17</b>
<b>Coefficients effect</b>	<b>0.01</b>	<b>0.74</b>	<b>-0.01</b>	<b>0.73</b>
Number of observations for group A	255		255	
Number of observations for group B	929		929	
Bootstrap replications	50		50	

The results of the decomposition applied to model specifications 1a) and 2b) are summarised in Table 5.8. As discussed above, for this analysis the focus is on the use of the data set 2007 as the reference. These results are presented in the second panel of Table 5.8. The results when using 2008 as the reference group are reported in the first panel for comparison and are similar. The coefficients effect is insignificant in both model specifications as indeed is the case when remittances are included as a dummy variable in these two specifications (Appendix 5.3, Table 5.3.1 and Table 5.3.2). These results provide support for the hypothesis that the migration decision is stable over the time.

## 5.5.2. The detailed extended Blinder-Oaxaca-Fairlie decomposition for non-linear models

The focus of this sub-section is on testing whether the individual characteristics have remained stable over time. Hence, attention will be placed on the statistical significance of the characteristics effect by the explanatory variables (Table 5.9). The calculation of the contribution of changes in the values of individual variables to the explained group differences in the probability of households' planning the emigration of one or one additional member abroad for economic reasons is based on the STATA command *fairlie* (Fairlie, 2005). For brevity, only the results that take the year 2007 as the reference category are presented in the table below.

**Table 5.9 Blinder-Oaxaca-Fairlie decomposition - detailed analysis of stability over time of the emigration propensity between 2007 and 2008**

	Model 1a)		Model 2a)	
	Coefficient	P> t	Coefficient	P> t
Household Characteristics				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>				
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>				
<i>TR</i>	-1.3E-04	0.89	-3.1E-05	0.99
<i>RDV</i>				
<i>TSU16</i>	5.1E-04	0.91	-0.002	0.71
<i>TSWA</i>	0.001	0.71	-1.5E-05	0.99
<i>TSFWA</i>	-0.006	0.61	-4.3E-04	0.68
<i>Edu</i>	4.2E-04	0.74	3.6E-4	0.76
<i>Improved</i>	2.1E-04	0.95	1.0E-05	0.99
<i>Worsened</i>	-0.005	0.003***	-0.005	0.003***
Psychic Income				
<i>TS</i>	8.4E-05	0.93	0.002	0.39
<i>Network</i>	-0.004	0.17	-0.002	0.55
<i>TNuc</i>	-0.001	0.73	-0.001	0.95
Location-related characteristics				
<i>RU</i>	7.05E-04	0.58	-9.8E-04	0.53
<i>TA</i>	-0.003	0.02***	-0.002	0.03***
Number of observations	1170		1170	

The results indicate that in both model specifications there are only two variables for which the characteristics effect did not remain stable over the period under investigation, the attitudinal variable *Worsened*, supporting the view that Kosovan independence can be treated as a shock, and rural (TA).

## 5.5 Concluding remarks

This chapter replicates the empirical analysis in chapter 3 using a data set stemming from a survey conducted in 2008, to examine the stability over a short period of time of the model of the propensity to emigrate. It investigates whether the economic model that includes perceptions of the economic climate as deployed in chapter 3 can be used to model the same relationship after the Declaration of Independence in Kosova. It was argued that the Declaration of Independence may have altered households' economic expectations. So, this analysis serves as a robustness check of the household model investigating whether the model structure as specified in chapter 3 has remained stable over the time period under investigation. This analysis also investigates whether the effect of the political change on the economic perceptions can be captured by the attitudinal variable explained in chapter 3. The samples are two different random draws from two different years using the same sampling frame. Some differences between these samples are expected because of randomness. There may also be structural differences in the models of probability of emigration given the political (and other unidentified) changes. The descriptives suggest that the two samples are fairly similar.

In both years the support for the household perspective is similar. The simple comparison between the results using the 2008 data set and those in chapter 3 indicates that there are differences with respect to the majority of the variables in terms of level of significance and/ or direction. This holds also when introducing remittances as a dummy variable. Further investigation focussing on the attitudinal variable, *Worsened*, estimating the marginal effect in the 2008 model with the variables set at the sample mean values of the 2007 sample, further suggests changes during the period under investigation. However, it is noted that

comparison between signs and significance was not the same as considering significant differences between coefficients.

Due to the differences in estimated signs and significance over time and the fairly broad, but not complete, support for the household view in chapter 3 and section 5.4.2, the model is respecified to check whether these results are due to model specification. In particular, the model is respecified by redefining the household as consisting only of members living in Kosova (Models 2a and Model 2b). However, the support for the household perspective is similar between this specification and the original specification in both years. Comparing the results between the two years with the new specification also gave similar results. The analysis based on a simple comparison of results between the two years has several limitations. It does not test for the statistical significance of the overall differential between the two model structures or for the statistical significance of differences in the coefficients either jointly or individually. To avoid these limitations, the extended BO decomposition technique for nonlinear models is deployed. The results from the BO technique indicate that household migration behaviour is stable over the time period under examination. The overall relationship has not altered, maybe because the Declaration of Independence was not followed by significant economic changes given the short time period between the two surveys, and therefore the economic model in chapter 3 can be used to model the relationship in 2008. Additionally, it may suggest that the attitudinal variable is a good proxy for economic perceptions. A detailed analysis is conducted which tests the statistical significance of differences in the characteristics effects by individual variables. The results from this detailed analysis suggest that only the characteristics effects of two variables have not remained stable, that on the attitudinal variable controlling for whether the head of the household perceives the economic situation of the household to have worsened compared to one year ago and the variable controlling for type of area.

The model developed in chapter 3 is the first, to our knowledge, to control for the effect of the attitudinal variable controlling for the perception of the head of the household about the economic situation of the household. In this chapter, in

both years, throughout model specifications the attitudinal variable controlling for whether the head of the household perceives the economic situation to have worsened is positive and statistically significant and the change in this characteristic was significant between the two periods. This suggests that controlling for expectations may be important when modelling the decision to emigrate.

To my knowledge migration decisions in a country or countries has not yet been examined by any other author in terms of its stability over time. These results, however, suggest the need to investigate the stability over time of these relationships in other countries. Drawing recommendations based on only one-off analysis of these relationships may be misleading and lead to inappropriate policy changes.

## CHAPTER 6

### THE PROPENSITY TO EMIGRATE – A COMPARISON BETWEEN KOSOVA AND ALBANIA

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#### 6.1 Introduction

In this chapter the aim is to further investigate the applicability of the model developed in chapter 3. This is done by investigating the transferability of the model of the propensity to emigrate using the Albanian LSMS 2008 (Living Standards Measurement Survey). The estimates for Albania are then compared to the results from using the Kosova 2008 data set.

The empirical results presented in chapters 3 and 5 are broadly but not fully, in line with the household view raising the need for further investigation given the arguments favouring this approach in chapter 1. The analysis in chapter 5 through checking the robustness of the results of the household model tests the hypothesis of stability over time of the structural relationship modelled in chapter 3. Given these findings, deploying the same model to a data set for another country in this chapter provides a further examination of the robustness of the results of this model and its transferability. The choice of Albania is because the two countries have several similarities in terms of socio-economic and demographic characteristics and the nature of the household which may make a household



model especially relevant. Given the similarities in ethnic tradition and mentality, this study aims to empirically investigate whether household and other cultural characteristics can explain similarities or differences in migration behaviour, controlling for the society-wide similarities and/or differences. In particular, it will be argued that the extended household is the dominant socio-economic unit in each of these countries. So far, no study has focused on a comparison of similarities or differences in migration behaviour between these two countries, which provides a further motivation for the analysis presented in this chapter.

The rest of this chapter is structured as follows: section 6.2 develops the argument that there is an a priori case that the model in chapter 3 may be appropriate in examining the propensity to emigrate in Albania. Section 6.3 explains the sampling methodology of the Albanian LSMS 2008 and compares it with that of the Kosovan household survey. The next section provides a comparison of the descriptives for the two samples. This is followed by the comparison of estimation results for the two models in separate sub-sections and concluding remarks are provided in section 6.5.

## **6.2 The Choice of Comparator Country**

### **6.2.1 Socio-economic and demographic background: a comparison**

The focus in this chapter is on the appropriateness of the household approach, developed in chapter 3, in modelling economic emigration plans in Albania. To better understand the potential push factors an analysis of the similarities and/or differences in the demographic and socio-economic background, as well as the history and pattern of migration and remittances of the two countries is now presented.

Although the total population is higher in Albania (Table 6.1), there are similarities with respect to social and demographic characteristics between the populations of the two countries. In both countries the majority of the population is of the same ethnicity, approximately 95 percent of the population is Albanian. Given this the two countries share common ethnic traditions and culture. In particular,

both are still characterised by extended households where married males usually live with and care for their parents. So, the extended household is considered an important social unit which internalises the costs and benefits of all household members in its decision-making. The average Kosovan household size was estimated at 6.3 in 2007 (World Bank, 2007c); a similar figure is reported in the latest census data, 5.9 (SOK, 2011). In Albania, average household size is smaller, 4.2 according to the 2001 census of population. Over half the populations in the two countries live in rural areas, just above 60 per cent in Kosova and slightly less than 60 per cent in Albania (INSTAT, 2011 and SOK, 2011). In rural areas household size was higher in both countries, around 7 in Kosova and 4.5 in Albania. It is difficult to find any study on family structures in Albania, but support in this regard is found in the Albanian LSMS 2008 through descriptives on number of nuclear families. The descriptives show that the share of households consisting of two nuclear families is around 23 per cent. A similar figure is found for Kosova 2008. This social characteristic supports the argument that the household approach in modelling migration-related decision making may be appropriate. These two countries are largely similar with respect to their demographic characteristics and the populations in both countries are considered to be amongst the youngest in Europe. Over 54 per cent of the population in Kosova and over 45 per cent of that in Albania are less than 25 years old, while around two-thirds of the population is of working age.

In addition to their demographic characteristics, Kosova and Albania are to some extent similar in terms of their economic and political situation. Both countries underwent political change in the early 1990s. Albania, being isolated from international markets throughout its communist regime, opened up after its collapse and started the transition process in the early 1990s. At this time, as explained in chapter 1, Kosova moved into isolation for political reasons. For Kosova this was the time of the first phase of isolation and economic rundown, while Albania switched to a market economy and gradually integrated into the global market and developed a politically more stable environment.

**Table 6.1 Main macroeconomic indicators in Kosova and Albania during 2001 – 2010**

Macroeconomic Indicators	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>KOSOVA</b>									
Population (in thousands)*	1,737	1,748	1,757	1,767	1,777	1,785	1,795	1,805	
GDP (in mil. €)	1,715	1,735	1,789	2,977	3,099	3,425	3,739	3,912	4,289
Real GDP growth (%)*	2.1	3.2	3.3	3.8	3.9	3.9	5.4	2.9	4.0
GDP per capita (in €)	1,182	1,164	1,161	1,482	1,519	1,611	1,847	1,848	1,996
GDP Deflator*	1.8	-1.7	-3.8	-0.8	-1.1	5.2	7	-3.4	
CPI (annual average; %)*	3.6	-1.1	-1.1	-1.4	0.6	4.4	9.4	-2.4	3.5
Unemployment rate (%)*	55.0	49.7	39.7	41.4	44.9	46.3	47.5	45.4	
Poverty rate (%)*		37.7	43.7	34.8	45.0			34.0	
<b>ALBANIA</b>									
Population (in thousands)*	3,076	3,087	3,099	3,111	3,122	3,132	3,143	3,155	3,195
GDP (in mil. €) <sup>2</sup>	4,442	5,167	5,943	6,647	7,123	7,905	8,798	8,343	
Real GDP growth (in %)*	4.2	5.7	5.7	5.7	5.4	5.9	7.5	3.3	3.1
GDP per capita (BoA) (in mil. €)	1,520	1,622	1,880	2,088	2,274	2,476	2,787	2,728	
GDP Deflator*	3.3	3.4	6	3.5	2	3.2	3.3	2.3	
CPI (%; annual average)*	7.8	0.5	2.3	2.4	2.4	2.9	3.4	2.3	
Unemployment rate (%)*	15	14.4	14.1	13.8	13.2	13.5	13	13.8	
Poverty rate (%)*	25.4			18.5			12.4		

Sources for Kosova: CBK, 2004, 2005, 2006, 2007, 2008, 2009, 2010; \* World Databank, 2011

Sources for A: <sup>2</sup> Own calculations based on data from the BoA (2011) based on average end of year exchange rate data; \*World Databank (2011a and 2011b)

In the early 1990s both countries faced economic collapse characterised by severe falls in output. Output halved in Albania during 1989-1992 (Bartlett, 2009) with a similar decline reported for Kosova. According to Rutkowski (2006), the decline in output in European transition economies was the result of profound institutional and structural changes combined with economic transition. In Kosova, the decline was primarily due to disinvestment, in particular deindustrialisation (for details see section 1.3). In planned economies, unemployment was theoretically

non-existent, as full employment was achieved through labour hoarding in planned economies (Rutkowski, 2006). Upon introducing market principles to the allocation of labour, the drop in output was followed by adjustment mainly in employment. In Albania, in the first phase of transition the employment rate followed the same trend as output: it declined from 75 per cent of the working age population in 1989 to just above 55 per cent in 1993. The unemployment rate reached 30 per cent in 1993. During the second phase of transition in Albania, although output recovered, the employment rate decreased slightly stabilising at 50 per cent, implying that productivity increased. Throughout the 1990s the Kosovan economy continuously contracted (section 1.3).

Towards the end of the 1990s, for a relatively short time period both countries experienced political instability. In 1997, Albania descended into anarchy, similar to civil war in nature, during the pyramid schemes collapse, while Kosova experienced the 1998/99 War. The rise and fall of the pyramid savings schemes in Albania were mainly the result of the inadequacy of the formal financial system and the inadequacy of the legal framework, in particular law enforcement (Jarvis, 1999). The government fell, part of the country remained outside central government control, property was damaged and 2,000 people were killed in riots. According to Jarvis (1999) this civil disorder had significant damaging economic consequences. In 1997, GDP growth was -10.8 per cent, inflation was 40 per cent and imports decreased by 25 per cent mainly due to the reduced aggregate demand (and supply) resulting from the loss in savings and property, disruptions in trade and smuggling. By implementing adjustment policies the government managed to support economic recovery. In the next year, the economy grew by 9 per cent and inflation was brought back to 21 per cent.

Recent macroeconomic performance has been solid and improving in both countries, but Albania has out-performed Kosova with respect to all the key macroeconomic indicators (Table 6.1). Per capita GDP has doubled in both countries during this period. However, the per capita GDP ratio between Albania and Kosova, a measure of convergence in living standards, has on average been 1.5. Average GDP growth was higher by a factor of 1.4 in Albania during the period under

investigation. The labour market performance has been better in Albania. The unemployment rate in Albania stabilised at approximately 14 per cent during the 2000s. In Kosova, however, it is estimated to be three times higher. GDP growth is essential in improving living standards and alleviating poverty. The poverty incidence in Albania declined continuously reaching 12.5 per cent in 2008, while in Kosova the rate for 2008 was 34 per cent. For reasons explained in section 1.3.2, the poverty rate has remained the same in Kosova.

**Table 6.2 Migration pull factors – GDP per capita for Kosova, Albania, EU27 and EU candidate countries**

GDP per capita (in €)	2010
Kosova <sup>1</sup>	1,848
Albania <sup>2</sup>	2,728
<b>Other countries</b>	
Average EU27 (in €) <sup>3</sup>	24,400
Croatia (in €) <sup>3</sup>	10,400
Turkey (in €) <sup>3</sup>	7,600
FYR of Macedonia (in €) <sup>3</sup>	3,300 <sup>1</sup>

Source: <sup>1</sup> CBK (2010); <sup>2</sup> BoA (2011); <sup>3</sup> EUROSTAT (2011).

Despite the relatively better macroeconomic performance of Albania, based on macroeconomic indicators both countries have been classified as middle income countries according to World Bank (2011e). However, for both countries a lot remains to be done to catch up with the preferred host countries in order to neutralise the impact of push/pull factors of emigration. As shown in the table above, GDP per capita is substantially lower than the EU27 average of 24,400 Euro in 2010. Also, the GDP per capita of Albania and Kosova are much lower than those of the EU candidate countries (Table 6.2).

<sup>1</sup> Due to lack of data, this figure for FYR of Macedonia is for 2009.

**Table 6.3 Migration pull factors – selected economic indicators for Kosova and Albania and the four major host countries for 2009**

	GDP per capita (in €)	Unemployment rate (%)	Average annual wage (in €)
<b>Kosova</b>	1,848	45.4	3,600
<b>Albania</b>	2,728	13.8	2,640 <sup>2</sup>
<b>Preferred host countries</b>			
<b>Germany</b>	29,000	7.8	65,661
<b>Switzerland</b>	35,800	3.0	107,651
<b>Italy</b>	25,400	7.8	52,855
<b>Greece</b>	20,500	9.5	43,754

Source: GDP per capita: CBK (2010) for Kosova, BoA (2011) for Albania, EUROSTAT (2011) for the preferred host countries; Unemployment rate: World Databank (2011a and 2011b) for Kosova and Albania, EUROSTAT (2011) for the preferred host countries; Average annual wage: World Bank (2010) for Kosova and Albania, OECD (2011) for the preferred host countries.

Given that historically, Albanian-migrants (henceforth AL-migrants) mainly emigrate to Italy and Greece, while Kosovan-migrants (henceforth KS-migrants) emigrate to Germany and Switzerland, the macroeconomic comparison will be confined to these four host countries. As shown in Table 6.1 and Table 6.3, GDP per capita is considerably lower than that of the preferred host countries. Although much higher in Kosova, the unemployment rates in both countries are higher than those in the preferred countries (Table 6.3). For reasons given in section 1.3.1, a comparison by wage levels is difficult. Hence, average annual net wages will be used. On a monthly basis, this makes an average of around 5,600 Euro over the four countries which is almost 20 times the average monthly wage prevailing in Kosova and Albania. Putting the comparison of the macroeconomic performance of Kosova and Albania in the context of EU countries suggests that inhabitants of both countries face a relatively poor economic situation relative to the preferred host countries.

As argued above, the two countries have common ethnic traditions and culture and are fairly similar in terms of demographic structure. Also, in both countries the household as a social unit seems to be an important decision making

<sup>2</sup>The figure for the average annual net wage in Albania is for 2008.

unit, which suggests that the household approach to modelling is worthy of investigation. Both countries have experienced political situations involving socio-economic damages and civilian losses, but these were of a larger scale in Kosova. They have different transition paths and are at different development stages. Yet, although better in Albania, the economic situation in the two countries relative to the preferred host countries is poor. This makes the two countries be similar with respect to the push and pull factors of emigration.

### **6.2.2 Migration and Remittances Patterns: a Comparison**

Albania was not part of the guest worker programmes in the 1960s, since it was, at that time, a communist country with a closed economy. During this period emigration was considered as high treason (Vullnetari, 2007). It was even punished by the death sentence (INSTAT, 2010). In the 1940s some managed to escape the regime, but emigration was minimal during the period 1945-1989. The first wave of emigration started after the fall of communism in 1990 which coincides with the second emigration wave of Kosova. Similar to Kosova, although with a different political outcome, Albania experienced political instability and social unrest followed by economic downturn. Emigration at this time was largely prompted by the economic situation and the low living standards, indirectly affected by the political change (INSTAT, 2010). In 1993, when the economic situation started to improve, the emigration flow declined but was still sizeable (Vullnetari, 2007). The next emigration wave from Albania was induced by the collapse of the pyramid savings schemes in late 1996 and early 1997 in which a large proportion of the population lost their savings (Jarvis, 1999). Again, the reasons for emigration were predominantly economic. Disregarding the first wave of emigration in Kosova, both countries have experienced two waves of emigration with large outflows where underlying economic factors were important, although political factors also affected the timing in the case of Kosova (section 1.2).

There are similarities between the two countries with respect to other migration characteristics. Although lower in Kosova, both countries have a large share of the population currently living abroad, 25 per cent in Kosova and 45 per

cent in Albania. One in four households in Kosova and one in three households in Albania have at least one migrant abroad (World Bank, 2011d and World Bank, 2007a).

Another similarity is the age trend. The average migrant age has been increasing. One explanation for this phenomenon is that migrants are being followed by their parents or other older family members. The share of females in the migrant population is also similar, 35 per cent in Kosova and 40 per cent in Albania.

In both countries there are sizeable numbers of illegal migrants, except for the first emigration wave in Kosova (for details see section 1.2). In contrast to Kosova where emigrants predominantly leave with their nuclear families (in 70 per cent of the migrant households), in Albania migrants are more likely to emigrate alone. This can be found by a careful inspection of Albanian LSMS 2008 focussing on the number of household members currently living abroad. Descriptives show that 60 per cent of migrant households in Albania have just one member currently abroad while 32 per cent have two members.<sup>3</sup> To check whether households that have two members abroad consist of whole nuclear families the respective ages of the migrant members were analysed and compared to the rest of the household. This inspection shows that these are usually two of the adult children of the household, but not the whole households. The different migrant household structure of Kosovans may have been influenced by the pecuniary and non-pecuniary costs of emigration as explained in section 1.2. In Albania, however, one possibility may be that both pecuniary and non-pecuniary migration costs are lower, the former due to its proximity to the host countries. Even in case of illegal emigration this may imply lower emigration costs and a higher probability of successful emigration. Additionally, Albanian migrants may have had lower non-pecuniary costs as upon return they would not face the same political uncertainty of re-migration as Kosovans (for details see section 1.2). This combined with the possible lower pecuniary costs of emigration may have influenced the decision of

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<sup>3</sup> Analysis of this phenomenon within households that have return migrants shows that in 84 per cent of the AL-households migrants have been abroad alone, that is, without any other household member.



Albanians to emigrate alone rather than with their nuclear families. Albanian migrants usually leave families behind and temporary emigration is more common in Albania than in Kosova. This migrant household structure in Albania and the possibility of family ties being more likely to weaken among KS-migrants, given that they emigrate with their nuclear families and they are usually long-term migrants (section 5.4.3), may be suggestive of the specification of the household including migrant members being more applicable in modelling Albanian migration behaviour. So, a priori it is expected that the first model specification in which the household consists of both members at home and abroad will be more appropriate in the case of Albania.

In section 1.2, the reasons for emigration of Kosovans are summarised dating back to 2006 based on several studies. However, since similar studies on Albania for such a period are not available, the comparison here will be based only on the IOM (2009) results. That study is the only research using the same methodology in providing a comparison of emigration propensity and emigration reasons among Western Balkan countries. According to this study, the two countries are similar in terms of migration propensity and reasons for migration. In Kosova, around 29 per cent of the respondents planned to emigrate within six months or in the more distant future. Although lower, the Albanian response rate of 19 per cent of the respondents declaring that they were planning to emigrate is substantial. This study asked for the reasons for emigration only from those who planned to emigrate within the next six months. The majority of those planning to emigrate within six months, 55 per cent in Albania and 46 per cent in Kosova, declared that they planned to do so to take up employment in the foreign countries.

As argued in section 1.4, remittances are a crucial component of the GDP in Kosova. In recent years, remittances as a share of GDP in both countries have been around 11 per cent (Table 6.4). Comparison by year of remittances as a share of GDP shows that they are similar in both countries, except for the year 2006. However, in levels, remittances are stable in Kosova, while in Albania after 2007 they start to decline. Remittances are considered to play an important role in both countries as a source of external income as they are higher than exports and thus

help ameliorate the large trade deficit resulting mainly from consumption being disproportionately covered by imported goods due to the countries' limited production capacities (World Bank, 2006b).

**Table 6.4 Remittances and remittances as a share of GDP during 2005 – 2010**

Country/ Year	2005	2006	2007	2008	2009	2010
<b>KOSOVA</b>						
<b>Remittances</b> (in €)	418	467	515	535	506	510
<b>Remittances/GDP</b> (in %)	14.0	15.1	15.1	14.3	12.9	11.9
FDI (% of GDP)	3.6	9.5	12.9	9.8	7.9	
Current account deficit (% of GDP)	-13.4	-14	-12.5	-16	-17	
<b>ALBANIA</b>						
<b>Remittances</b> (in €)	1,024	936	951	833	781	n/a
<b>Remittances</b> (% of GDP) <sup>1</sup>	15.4	14.9	13.6	11.5	10.9	
FDI (% of GDP)	3.1	3.6	6.1	7.5	8.1	
<b>Current account deficit</b> (% of GDP)*	-6.8	-7.3	-10.6	-15.4	-15.6	

Source for Kosova: CBK, 2004, 2005, 2006, 2007, 2008, 2009, 2010; Data labelled by "\*" are from the World Databank, 2011

Source for Albania: World Databank (2011a and 2011b)

Note: <sup>1</sup> Data on remittances in Albania are based on own calculations using Central European Bank Annual Exchange Rate Data

In addition to being an important source of financing at the macroeconomic level, remittances are an important source of income at the household level. In both countries, remittances account for around 40 per cent of the household income of recipient households. The expenditure pattern in Albania resembles that in Kosova. According to IOM (2008), the primary use of remittances is to cover expenditure on food and clothes and other daily needs, construction, upgrading and refurbishing homes, and investment in real estate. However, the study does not report any supporting figures. According to IOM (2008), around 80 per cent of remittances were transferred through informal channels. Uruci and Gedeshi (2003), however, argue that in Albania around 60 per cent of remittances are sent using informal channels, while 40 per cent using formal channels. This is similar to the structure of transfer channels in Kosova as reported in UNDP (2010) and CBK (2011). As shown in section 1.4, around 20 per cent of Kosovan households received remittances in

2005/06 and in 2009. The share is higher in Albania, where around every third household received remittances both in 2002 and 2005 (World Bank, 2007a).

In summary, in both countries migration and remittances are sizeable. They are broadly similar with respect to migration and remittance patterns. They are similar with respect to the propensity to emigrate and the reasons for emigrating. These similarities warrant further investigation as to whether the same model of the propensity to emigrate is applicable to Albanian migration.

### **6.3 Data and Descriptive Analysis**

As introduced in section 6.1, the empirical analysis in chapter 5 is replicated below using the Albanian LSMS (Living Standards Measurement Survey) of 2008. This data set stems from the living standards measurement survey conducted in 2008 by INSTAT with the technical assistance of the World Bank. The sample is random with a stratified two stage cluster sampling design. At the first stage, a sample of 450 primary sampling units (PSU) representing the census enumeration areas (EA) were selected. These are stratified by geographic area: coastal area, central area, mountain area. Within these the PSUs are stratified by type of area, urban, other urban and rural. Tirana is considered as a separate stratum and within Tirana stratification is by type of area, urban and other urban. The second stratification allows the identification of prefectures. At the second stage, by means of systematic sampling within each PSU 12 household units (HU) were randomly selected. Out of these, eight HUs formed the base sample, while four HUs served as available substitutes in case of non-response. In total this makes 3,600 households which are the unit of observation.

The empirical analysis presented in chapter 3 and later in chapter 5 uses these two strata, region and type of area, as explanatory variables. The former is introduced as the regional unemployment rate, while the latter is a dummy variable controlling for whether the household lives in a rural area. It is important that the two data sets are comparable in terms of these two strata. The Albanian sampling by geographic area, as explained above, produces a more aggregated geographic stratification than that of the Kosovan data set. A similar level of stratification

implies just four geographic areas in the Kosovan case. Therefore, for comparability reasons, the counterparts to the Kosovan regional strata were considered the 12 Albanian prefectures, which are identifiable based on sample design information. This enables controlling for regional unemployment rates in the empirical analysis for Albania and hence comparability with the empirical analysis for Kosova. For comparability with the Kosovan data set, the stratification of the Albanian data set by type of area is amalgamated into two categories, rural and urban. This implies that urban and other urban in the Albanian data set are pooled into one category, urban. Similar to the Kosovan data set, the household is the unit of observation.

For this survey, four different instruments were used. One of them, most appropriate for comparability with the Kosovan sample, is the household questionnaire. In this survey instrument, similar to the Kosovan, the respondent, or the principal respondent, is the head of the household. Unlike in the Kosovan household questionnaire, the Albanian survey does not provide the option of non-response. Nevertheless, as will be briefly discussed in the descriptive analysis, this data set does have missing data. This may be either due to respondents refusing to provide answers or due to clerical errors in data entry.

Similar to the Kosovan survey, the Albanian LSMS 2008 provides information on both the household and household members. It has a different and much wider structure, though it covers all the information provided in the Kosovan data set. The module covering general questions on the household head and household members, and those on labour supply, education and subjective poverty provide information on the socio-economic status of the household and household members separately. The attitudinal question as to whether the household head expects the household economic conditions to improve, remain the same or worsen is identical to that asked in the Kosovan questionnaire. Migration issues are covered in two separate modules. One focuses on current and historical migration of the household head and the other one contains similar information on the children of the household. These two modules provide also information related to migration networks and remittances.

The question of interest in the Albanian 2008 survey is similar to that in the Kosova 2008 survey, but it is specified in time. It asks “are you planning to migrate *within the next year?*” However, the Albanian LSMS does not provide a question on the reason for planned emigration. It only asks about whether they have taken any action. The question is “have you taken any of the following steps to prepare you for the planned (emigration)?” followed by the following options: a) contacted family members/relatives abroad, b) contacted family members/relatives in Albania, c) contacted friends/acquaintances abroad, d) searched information through the internet, radio, TV, or books, e) already arranged work in the country of destination, f) saved money for migration-related expenses, g) taken loans for migration-related expenses, h) sold any assets for migration-related expenses, i) was promised by family members/relatives/friends abroad or in Albania for help regarding expenses, j) applied for a visa, k) applied for USA visa lottery, and l) other. The focus with respect to this question is not whether the plan to emigrate is for economic reasons but rather on whether the potential migrants have the resources to emigrate. Given that around 60 per cent of Albanians planning to emigrate do so to find employment abroad (IOM, 2009), and given that it is impossible to filter out only those that plan to emigrate for economic reasons, not just find employment, but also to get higher wages, it was decided to consider all those that plan to emigrate as doing so for economic reasons. This shortcoming may cause some problems in comparison of the empirical results. Therefore, the results of the country comparison have to be taken with a little caution.

### **Descriptive analysis**

As shown in Table 6.5, nearly one third of the Kosovan households plan to emigrate for economic reasons, while over half of the Albanian households report plans to emigrate. In the Albanian data set, the non-response rate is around 70 per cent of the total sample households. Additionally, as argued above, no distinction by reasons for emigration was possible for Albania. This, too, may have increased the relative share of those planning emigration. The share of households reporting to have networks abroad is larger by 10 percentage points in Albania compared to Kosova.

The descriptives reveal that the two samples are fairly similar with respect to demographic characteristics, including share of those under the age of 16 (TSU16 and SU16), share of those of working age (TSWA and SWA) and share of females in those of working age (TSFWA and SFWA). However, there is a difference between the two samples in the share of females in those of working age (SFWA) when migrants are not included in the household. In Kosova, the mean value of this variable is 47 per cent, while it is 31 per cent in Albania. This is odd given that in both countries, the share of the population of working age is similar, two thirds of the total population, and in both countries the ratio of females to males in the working age population is approximately 1 to 1 (INSTAT, 2011 and SOK, 2008c). Additionally, as argued in section 6.2.2, unlike Kosovan-households (henceforth KS-households), Albanian-households (henceforth AL-households) emigrate usually individually, leaving the rest of the nuclear family behind. This suggests that the mean value of SFWA should be higher in AL-households. A similar issue is raised in section 5.4.1 between the 2008 and the 2007 data sets. There it is argued that this may be due to random sampling. The same explanation may apply here.

In both countries the average number of nuclear families within a household is considerably higher than one, although in Kosova this is higher than in Albania (1.7 compared to 1.3), In terms of distribution they are similar where in both samples two-thirds of the households have one nuclear family only. Given the explanation in 6.2.2 about the majority of Albanian migrants emigrating without their nuclear families, TNUC and NUC are identical for Albania. KS-households are reported to have larger households than AL-households. Household size is 7.3 (6.3) and 4.6 (4) when migrants are included (not included) in Kosova and Albania respectively.

The responses to the two attitudinal variables, the one controlling for the effect of the perception of the household head of the economic situation of the household compared to one year ago, and the one controlling for the same effect but compared to one year from now, are broadly similar. The Albanian data set provides two alternatives to calculating monthly household income per capita. It includes the answer of the head of the household to the monthly average income of

the household as a whole. Additionally, it provides information on income of each household member from at least three different sources, including business income. Comparing average monthly household income per capita between the two alternatives shows that they are very similar, but the first alternative has less missing values. Therefore, for the purpose of this research the variable calculated based on the first alternative is used. The distribution by per capita income by income interval is fairly similar. The majority report earning between 50-99 Euros, while some 20 per cent report earning 25-50 Euros and another 20 per cent earn 100-249 Euros. However, the monthly average household income per capita is higher among KS-households. This is odd given that as shown in Tables 6.2 and 6.3 the employment rate in Albania is almost three times higher, while the average wages in 2009 are very similar between the two countries, 250 Euros in Kosova and 220 Euros in Albania (World Bank, 2010).<sup>4</sup> This implies a higher probability of wage employment incidence within the households and if salaried worker, on average, a similar salary, and hence higher household income among AL-households. As almost all households report their income, the results may be due to underreporting by AL-households.

A similar situation holds for average household remittances and average household remittances per capita. Their distribution by monetary intervals is similar between the two samples. However, the share of households receiving remittances in the Kosovan sample is three times larger than that in the Albanian sample. This is odd given that other studies have found that this share was around 30 per cent in 2002 and 2005 in Albania. The assumption that in Albania a large proportion of migrants has stopped remitting and the proportion that remits does send larger amounts does not seem to hold either, because KS-households report average monthly household remittances (average monthly household remittances per capita) of five (10) times the value of that reported by AL-households. However, assuming that the share of households receiving remittances is approximately 30

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<sup>4</sup> The difference in per capita GDP were not used for comparison as they reflect also differences in provision of public goods and services not captured by household income. Therefore, comparison just by average wage and employment rate is more reflective of employment and earnings probabilities.

per cent in both countries (as reported by other studies on Albania, and found based on this Kosovan data set), based on the number of households, average household size and annual remittances reported by the respective central banks, own calculations indicate that the average monthly amount of remittances is around 320 Euro in Albania and 480 Euro in Kosova, while in per capita terms they are similar, around 80 Euro in both countries. As in the case regarding income per capita at home, this suggests that AL-households may be under-reporting both their receipt of remittances and their monetary values. Another explanation may be related to questionnaire design and differences in migration patterns. Unlike the Kosovan questionnaire which asks about the amount the family receives from household migrant members, the Albanian questionnaire asks about the amount that the migrants send. Although none of the questionnaires asks explicitly about such money brought by the migrants upon return, in the case of the Kosova this may be implicit. This and the fact that AL-migrants migrate without other family members and usually are seasonal migrants may imply that AL-households do not report the amount of money from earnings abroad that the household migrant members bring in person upon return. To avoid this possible confusion, in the future it is important to ask separate questions on the amount of remittances sent and that brought by migrants upon return.

The AL-survey does not provide information on the income earned abroad by current or past migrants. Therefore, the variable share of those of working age employed abroad (SWAE) has been used as a proxy for income abroad.<sup>5</sup> For consistency and comparability, all model specifications in chapter 5 are re-estimated substituting SWAE for the average monthly household income per capita earned abroad based on the Kosova 2008 data set. The descriptives for SWAE suggest that the two samples are fairly similar with respect to this variable. The

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<sup>5</sup> Please note that this variable is introduced to capture the effect of earnings abroad separately from that of earnings in the home country. Therefore, in all specification only SWAE is used. So, there is no need to create its alternative, TSWAE which is the sum of the SWAE in the home country and abroad.



mean value is around 15 per cent in both and the distribution is similar. The mean value is small as the majority of households have no migrants abroad.<sup>6</sup>

**Table 6.5 Comparative Descriptive Statistics, percentages (numbers) – Kosova 2008 and Albania 2008**

Characteristics of migrants' households	Household including migrant members	Household excluding migrant members	Household including migrant members	Household excluding migrant members
	Kosova 2008	Kosova 2008	Albania 2008	Albania 2008
<b>Emigration plan, %</b>				
Yes	27.87 (97)	27.87 (97)	55.33 (446)	55.33 (446)
No	72.13 (251)	72.13 (251)	44.67 (360)	44.67 (360)
<b>Household income per capita of those employed at home (in Euros), %</b>				
Average (in Euros)	124	132	83.62	83.62
1 to 24	13.13 (42)	11.56 (37)		14.74 (530)
25 to 49	25.31 (81)	21.25 (68)		24.28 (873)
50 to 99	33.44 (107)	35.63 (114)		36.02 (1,295)
100 to 249	20 (64)	22.5 (72)		22.23 (799)
250 to 499	3.75 (12)	4.69 (15)		2.20 (79)
500 and more	4.38 (14)	4.38 (14)		0.53 (19)
<b>Share of those of working age employed abroad (SWAE)</b>				
Average, %		15.2		14.7
0% to 25%		77.43 (271)		83.67 (3,008)
more than 25% to less than 50%		5.14 (18)		0.22 (8)
more than 50% to less than 75%		4.86 (17)		1.75 (63)
more than 75% to 100%		12.57 (44)		14.35 (516)
<b>Remittances (Yes/No), %</b>				
Remittances recipient		24.07 (84)	8.8 (316)	8.8 (316)
Remittances non-recipient		73.07 (255)	91.2 (3,275)	91.2 (3,275)
Remittances no-response		2.87 (10)		
<b>Remittances per capita (in Euros), %</b>				
0	72.29 (253)	72.29 (253)	91.21 (3,279)	91.10 (3,279)
More than 0 to 49	19.71 (69)	16.86 (59)	8.2946 (304)	8.29 (298)
50 to 149	4 (14)	6.29 (22)	0.31 (11)	0.47 (17)
150 to 249	0.57 (2)	0.86 (3)	0 (0)	0 (0)
250 to 499	0.29 (1)	0.57 (2)	0.03 (1)	0.03 (1)
500 and more	3.14 (11)	3.14 (11)	0 (0)	0.11 (4)

<sup>6</sup> Excluding households that do not have any migrants, the mean value of SWAE is much higher in Kosova (58.54 per cent) than in Albania (36.73 per cent).

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Characteristics of migrants' households	Household including migrant members	Household excluding migrant members	Household including migrant members	Household excluding migrant members
	Kosova 2008	Kosova 2008	Albania 2008	Albania 2008
<b>Monthly household remittances (Euros)<sup>7</sup></b>				
Average monthly household remittances	272.51	272.51	51.56	51.56
Average monthly household remittances per capita	33.7	44.1	13.3	11.9
Minimum				
Maximum				
Median				
<b>Share of those under the age of 16, %</b>				
Average, %	24	24	19.63	19.28
0% to 25%	57.47 (200)	56.32 (196)	61.06 (2,195)	59.08 (2,124)
more than 25% to less than 50%	22.7 (79)	22.41 (78)	21.56 (775)	22.70(816)
more than 50% to less than 75%	18.39 (64)	19.83 (69)	17.19 (618)	18.05 (649)
more than 75% to 100%	1.44 (5)	1.44 (5)	0.19 (7)	0.17 (6)
<b>Share of those of working age, %</b>				
Average, %	76	76	82.91	65.91
0% to 25%	0.29 (1)	0.57 (2)	1.61 (58)	7.82 (281)
more than 25% to less than 50%	11.49 (40)	11.49 (40)	9.54 (343)	13.10 (471)
more than 50% to less than 75%	30.17 (105)	28.45 (99)	28.93 (1,040)	33.82 (1,216)
more than 75% to 100%	58.05 (202)	59.48 (207)	59.92 (2,154)	45.26 (1,627)
<b>Share of females in those of working age, %</b>				
Average, %	34	47	31.07	31.28
0% to 25%	30.67 (96)	7.12 (24)	35.94 (1,292)	35.99 (1,294)
more than 25% to less than 50%	45.69 (143)	32.34 (109)	36.88 (1,326)	34.69 (1,247)
more than 50% to less than 75%	19.81 (62)	53.12 (179)	22.87 (822)	24.95 (897)
more than 75% to 100%	3.83 (12)	7.42 (25)	4.31 (155)	4.37 (157)
<b>Education (whether head of the household has higher education)</b>				
Yes		26.3 (91)		13.3 (434)
No		73.7 (255)		87.93 (3,161)
<b>Perception of the household head of the economic situation of the household compared to one year ago</b>				
Improve		27.11 (93)		30.24 (1,079)
Remained the same		44.19 (155)		42.10 (1,502)
Worsened		27.7 (95)		27.66 (987)
<b>Perception of the household head of the economic situation of the household one year from now</b>				
Improve		23.86 (82)		31.11 (990)
Remained the same		66.38 (231)		53.83 (1,713)
Worsened		10.06 (35)		15.05 (479)

<sup>7</sup> The calculation is based only on households that receive remittances.

Characteristics of migrants' households	Household including migrant members	Household excluding migrant members	Household including migrant members	Household excluding migrant members
	Kosova 2008	Kosova 2008	Albania 2008	Albania 2008
Psychic Income				
Household size				
Average household size	7.27	6.27	4.6	4.04
1 to 5	39.83 (139)	49.14 (171)	73.05 (2,626)	81.20 (2,919)
6 to 10	42.41 (148)	41.95 (146)	26.06 (937)	18.80 (676)
11 to 15	12.89 (45)	6.9 (24)	0.78 (28)	0
16 and over	4.87 (17)	2.01 (7)	0.11 (4)	0
Network				
Yes		30.65 (103)		42.84 (1,540)
No		69.35 (233)		57.16 (2,055)
Number of nuclear families				
Average	1.7	1.5	1.26	1.26
1	60.99 (197)	66.38 (231)	75.67 (2,718)	75.67 (2,718)
2	21.98 (71)	22.7 (79)	22.63 (813)	22.63 (813)
3	10.53 (34)	7.47 (26)	1.70 (61)	1.70 (61)
4	4.33 (14)	2.59 (9)		
5	1.24 (4)	0.86 (5)		
6 or more	0.93 (3)	0 (0)		
Location-related characteristics				
Type of area				
Rural		45.69 (159)	54.94 (1,973)	54.94 (1,973)
Urban		54.31 (189)	45.06 (1,618)	45.06 (1,618)

To sum up, the two samples are designed to be clustered stratified random samples, conducted in two different countries in the same year. The sampling framework was similar with respect to type of area and descriptives suggested similarities in this respect. As they represent two random samples from two different countries differences are expected. However, simple descriptive analysis reveals several similarities, especially with respect to demographic and attitudinal variables.

## 6.4 Empirical results

### 6.4.1 Comparison of the empirical results between the Kosova 2008 and Albania 2008 data sets

#### Model 1a Including Migrant Members in the Household (Table 6.6)

As introduced in section 6.1, in this chapter the empirical model of the propensity to emigrate used in chapter 3 is repeated using the Albanian LSMS 2008 and the results are compared with those using the Kosova 2008 data set. This test of the transferability of the model structure to Albanian migration provides a robustness check for the applicability of the household model. Due to lack of data for Albania, in this chapter the model has been modified in one respect: the share of those of working age who are in employment abroad (SWAE) used in the model specifications in chapter 3 and 5 has been substituted for the average monthly household income earned abroad (see section 6.3 for details). For comparability with the Albanian model, this new model specification with SWAE instead of average monthly household income per capita earned abroad is estimated using the Kosova 2008 data set. Similar to chapter 5, two alternatives are deployed where remittances, excluded from income at home, are first defined as a continuous variable (Table 6.6 and 6.7) and then as a dummy variable controlling for whether the household receives remittances (Table A6.2.1 and Table A6.2.1). A further investigation to check whether the results are due to the definition of the household is conducted in that chapter and that approach will be applied here. So, the country comparison will focus on whether re-specification improves the support for the same model structure holding in both countries. It will also focus on whether re-specification provides improved support for the validity of the household view. Later the similarity of model structure between the two countries is examined deploying the BO decomposition as conducted in chapter 5. This technique will investigate whether there is any difference in the emigration probability between the two countries, and if so, whether this is due to differences in characteristics or differing models. For reasons explained in section 5.4.2, the marginal effects of the variables are calculated at the mean values and are not comparable. Therefore, the comparison will focus only on the significance level and direction of the variables but not their magnitude. Also, for the variable capturing the effect of income at home which consists of its simple and squared term, the weighted sum of the marginal effects of the two terms is calculated and interpreted (see section 3.6). For consistency with chapters 3 and 5, the interpretation of results from List-wise Deletion (LD) is provided (Table 6.6), while the results from Multiple Imputation

(MI) are referred to only if the results are different to those under Listwise deletion (Table A6.1.1 and A6.1.2).

Following the approach in chapter 5, before comparing the results by country, first a summary of the empirical results from the estimation using the Albanian LSMS 2008 in terms of their support for the household approach is provided. Compared to the results from the Kosova data set 2007 (section 3.6) and the Kosova data set 2008 (section 5.4.2) which provide broad but not complete support for the household view, the results from the Albanian data set indicate less support for the household perspective (Table 6.6). For reasons given in section 5.4.2, variables for which the a priori sign is ambiguous and are insignificant will not be interpreted. Such a case, however, implies that the variables are not at variance with the household approach. Among the variables capturing household characteristics, none of the variables are statistically significant. All three variables capturing the effect of psychic income are statistically significant. Household size (TS) has the expected positive sign. The results suggest a negative marginal effect of the total number of nuclear families (TNuc) which is in contradiction with the theoretical expectations of the household model. Unfortunately, there is no study controlling for this variable to make a comparison. The expected sign of Network is a priori ambiguous. The results indicate a negative impact, supporting the view that if a household already has a member abroad it is less likely to send another member abroad, perhaps because they may be better informed of the difficulties in emigrating, settling down and the possible aversion against foreigners in the host countries. In the group of location-related variables, only the one controlling for whether the household lives in a rural area (TA) is statistically significant. However, in contrast to the a priori expectations, it has a negative impact suggesting that rural households are less likely to plan emigration. In summary, out of nine variables which have a clearly defined a priori sign only three are significant. However, two of these results suggest a sign different from the hypothesised. In sum, the results suggest that the Albanian estimation provides less support for the household view than the two Kosova data sets. The results are similar when introducing remittances as a dummy variable (Table A6.2.1). The Kosova 2008 model, with the change in

specification (to the one variable as discussed above), gives similar results to the original Model 1 (section 5.4.2), where the results are broadly but not fully in line with the theoretical expectations of the household model (Table 6.6).

The results from the two countries are dissimilar regarding the majority of variables. The marginal effect of the number of those employed abroad (SWAE) and of total remittances per capita (TR), which have an ambiguous theoretical expected sign, but are different in terms of level of significance and sign between the two countries. The marginal effects of both variables are positive in Kosova, but negative in Albania. However, while SWAE is significant in the Kosova model only, TR is significant only in the Albania model (though only at the 10 per cent level. The attitudinal variable, controlling for the effect of the household head perceiving the household economic situation to have worsened compared to a year ago, has the expected positive sign in both countries but is significant only in Kosova.

There are differences in the results in terms of sign and level of significance regarding the estimates of the variables that capture the effect of psychic income. The marginal effect of total household size (TS) has the expected positive sign in both countries, but is significant only in Albania. The marginal effect of Networks, which has an ambiguous sign, although negative in both country estimations, is significant only in Albania. The estimated effect of the total number of nuclear variables (TNuc) is significant in both countries, but it has the expected positive sign only in the Kosova model.

The results also suggest differences regarding the location-related variables. The marginal effect of the variable that controls for whether the household lives in a rural area (TA) is statistically significant in both countries. However, it has the expected positive sign in Kosova, but the opposite in Albania. In contrast to the results for Kosova, the marginal effect of the regional unemployment rate (RU) is negative and insignificant in the Albania model. Keeping the same definition of a household, but introducing remittances as a dummy variable the results are similar to the above (Table A6.2.1).

**Table 6.6 Emigration Propensity – Model 1 including household migrant members**

	Kosova 2008		Albania 2008		Expected sign
	Marginal effects	Cluster robust P> t	Marginal effects	Cluster robust P> t	
Household Characteristics					
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	1.6E-05	0.92	-0.002	0.22	
<i>SWAE</i>	0.001	0.01***	-5.0E-04	0.41	Ambiguous
<i>TR</i>	0.001	0.27	-0.004	0.07*	Ambiguous
<i>TSU16</i>	-0.002	0.73	0.002	0.25	Ambiguous
<i>TSWA</i>	0.002	0.59	0.001	0.40	Positive
<i>TSFWA</i>	-0.003	0.27	-7.1E-04	0.47	Ambiguous
<i>Edu</i>	0.01	0.92	-0.02	0.85	Ambiguous
<i>Improved</i>	-0.05	0.56	0.04	0.19	Negative
<i>Worsened</i>	0.22	0.001***	0.04	0.35	Positive
Psychic Income					
<i>TS</i>	0.004	0.59	0.04	0.03***	Positive
<i>Network</i>	-0.04	0.65	-0.12	0.06***	Ambiguous
<i>TNuc</i>	0.02	0.04**	-0.12	0.003***	Positive
Location-related characteristics					
<i>RU</i>	0.006	0.01***	-0.004	0.80	Positive
<i>TA</i>	0.14	0.06**	-0.16	0.002***	Positive
Number of	350		802		
Wald chi2	n/a		n/a		
Prob>chi2	n/a		n/a		
Pseudo R2	0.11		0.07		
Log likelihood	-150.81		-509.69		

In sum, compared to Kosova the Albania data set performs worse in terms of support for the appropriateness of the household approach. The results from this analysis of model structure stability across countries suggest that the model may not be robust. However, as discussed in detail in section 5.4.2 and referred to in section 6.1, this analysis has several limitations. Therefore, the results from this analysis of the same model structure applying to both countries have to be taken with caution. Similar to chapter 5, the Blinder-Oaxaca decomposition technique is pursued (in section 6.4.3) to reduce the limitations of this comparative analysis.

## **6.4.2 Further investigation of the emigration propensity**

### **Model 2a Kosova-based household (Table 6.7)**

As introduced in section 6.1, the model is respecified to investigate whether the relatively poor support for the household view in the case of Albania and differences in terms of statistical significance and sign of the variables between Kosova and Albania are the result of model specification. The respecification is based on a narrower definition of the households. The rationale for and the implications for other variables of the new specification are provided in detail in section 5.4.3. This section is similar in structure to section 6.4.1 in that it first provides a discussion of the extent to what the results from the respecification provide support for the household view in the case of Albania and then compares the empirical results between the two countries. Again, the interpretation of results is based on Listwise Deletion (Table 6.7), while those from Multiple Imputation (MI) are referred to only in case of differences between the two methods (Table A6.1.2).

Respecifying the model by excluding migrant members from the household definition the results are fairly similar to those from the previous specification in terms of support for the theoretical expectations of the household model in the case of Albania. There are three differences in results between this specification (Table 6.7) and that provided in Model 1 (Table 6.6). Unlike in the previous specification, among the socio-demographic characteristics the share of those under the age of 16 (SU16) and the share of those of working age (SWA) are both statistically significant. The a priori sign of SU16 is ambiguous and results suggest a positive effect. The marginal effect of SWA has the expected positive sign implying that households with a larger SWA have a larger excess labour supply and therefore are more likely to plan emigration. The marginal effect of Network is insignificant in this new specification. However, given its ambiguous a priori sign this is not problematic. The other two variables capturing the effect of psychic income and the location-related variable TA are statistically significant and have the same signs as in the previous specification. Redefining remittances as a dummy variable, the results are similar (Table A6.2.2). So, respecifying the model does not provide an improvement regarding the support for the theoretical expectations of the model.



Following the approach in section 6.4.1, this new specification of the Kosova 2008 Model 2 is discussed in terms of support for the household view. Similar to Model 2 (section 5.4.3), the results again suggest broad but not complete support for the household model (Table 6.7).

Similar to the case based on Model 1, the country differences are found for the same variables under this specification (Table 6.7). However, the comparison based on this redefinition indicates additional differences. Comparing the results by significant variables shows that the two countries are different also with respect to two socio-demographic characteristics, the share of those under the age of 16 (SU16) and share of those of working age (SWA). The estimated effect of SU16 is negative and insignificant in Kosova, but positive and significant in Albania, while the marginal effect of SWA has the expected positive effect and is significant only in Albania (it is negative but insignificant in Kosova). Similar to Model 1, the marginal effect of remittances per capita (R) is positive and insignificant in the Kosova model, while it is negative and significant in the Albania model. Under multiple imputation, the marginal effect of remittances (R) is, however, insignificant in both country estimations. Unlike in Model 1, the results from both country estimations suggest that the marginal effect of Network is insignificant in both countries. However, given its ambiguous a priori sign this is not unexpected. Again, there are differences with regard to the other two variables capturing the effect of psychic income, household size (S) and number of nuclear families (Nuc) and the location-related variable controlling for type of area (TA). The marginal effect of S is significant only in the Albania model, while the marginal effect of Nuc is significant in both country estimations but has the expected positive sign only in the Kosova estimation. Under multiple imputation, the marginal effect of Nuc is insignificant in the Kosova model, while it is significant and has a negative sign in Albania which is in contradiction with a priori expectations. The results give a significant marginal effect of TA in both estimations, but it has the expected positive sign only in the Kosova model. Redefining remittances as a dummy variable, the results are similar (Table A6.2.2). Similar to Model 1, the results from the respecification suggest differences in model structure between the two countries.

**Table 6.7 Emigration Propensity – Model 2 excluding household migrant members**

	Kosova 2008		Albania 2008		Expected sign
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t	
<b>Household Characteristics</b>					
<i>Weighted sum of the marginal effects of YH and YH_SQ</i>	7.9E-06	0.97	-0.008	0.17	
SWAE	0.001	0.01***	-0.0002	0.78	Ambiguous
R	0.001	0.15	-0.004	0.05**	Ambiguous
SU16	-0.003	0.722	0.004	0.003***	Ambiguous
SWA	-0.0004	0.96	0.004	0.001***	Positive
SFWA	-0.002	0.16	9.4E-05	0.93	Ambiguous
Edu	0.002	0.94	-0.01	0.91	Ambiguous
Improved	-0.06	0.46	0.05	0.17	Negative
Worsened	0.23	0.001***	0.04	0.39	Positive
<b>Psychic Income</b>					
S	0.003	0.64	0.05	0.04**	Positive
Network	-0.01	0.92	-0.10	0.20	Ambiguous
Nuc	0.03	0.01***	-0.10	0.02***	Positive
<b>Location-related characteristics</b>					
RU	0.007	0.001***	-0.002	0.89	Positive
TA	0.15	0.05**	-0.17	0.001***	Positive
Number of	300		802		
Wald chi2	n/a		n/a		
Prob>chi2	n/a		n/a		
Pseudo R2	0.12		0.09		
Log likelihood	-150.81		-502.09		

In sum, the respecification is not an improvement regarding the support for the household view for the Albania model. The simple comparison of results from the respecification by significance level and sign of the marginal effects of the variables indicates that the same model structure may not apply to both countries. The results are different regarding six out of eight variables which have a clear expected sign. Out of six variables where the a priori sign is ambiguous, three variables are different between the two country estimations. As argued in section

5.4.2 and referred to in the previous section, the argument that the model structure differs between the two countries have to be taken with caution given the limitations of this analysis. Following the approach in chapter 5, in the following section the Blinder-Oaxaca decomposition technique is applied to both model specifications (Model 1 and Model 2) in order to overcome the shortcomings of this simple comparative analysis of stability across the two countries.

### **6.4.3 Investigation of the overall stability across countries using the extended Blinder-Oaxaca decomposition for non-linear models**

Following the analysis in chapter 5, given the limitations of the analysis by comparing the probit results for the two countries, in addition to it the extended Oaxaca-Blinder decomposition for nonlinear models is conducted to analyse the magnitude and significance of the difference in the probability to emigrate. As considered in that previous chapter, this technique allows the decomposition of the differential into the relative contributions of the characteristics and coefficients effects as well as checking for their statistical significance. The decomposition into these two effects is of importance. It analyses whether the differential, if any, is due to the statistical differences in the mean values of the variables, discussed in section 6.3 or to differences in the estimated coefficients. If differences in the latter are significant this suggests that the same model structure does not apply in Albania: the variables may have different relative impacts on the Albanian probability to emigrate or other factors are relevant and have not been included in the Albanian model. Another possibility, as discussed in more detail in chapter 5, is that both models suffer from missing variables or incorrect functional form as the coefficient effect is measured by the residual (for details see section 5.5).

This decomposition method is identical to that deployed in chapter 5. So, given the focus on whether the same model structure is applicable in modelling the Albanian propensity to emigrate this analysis deploys the approach of the principle BO decomposition in that it assumes  $\Omega$  to be a null-matrix or equal to I. The hypothesis in this analysis, as discussed earlier, due to the socio-economic,

demographic and migration related similarities between the two countries, the differential, if any, should be due to differences in the characteristics effect and that the same model structure of the emigration behaviour applies to Albania.

**Table 6.8 Blinder-Oaxaca decomposition - analysis of stability of the emigration propensity model between Kosovo and Albania**

	Model 1a)		Model 2a)	
	Coefficient	P> t	Coefficient	P> t
<b>Using Kosovo as the standard</b>				
Characteristics effect	-0.02	0.53	-0.06	0.15
Coefficients effect	0.19	0.001***	0.22	0.001***
<b>Using Albania as the standard</b>				
<b>Characteristics effect</b>	<b>-0.05</b>	<b>0.39</b>	<b>-0.02</b>	<b>0.78</b>
<b>Coefficients effect</b>	<b>0.22</b>	<b>0.001***</b>	<b>0.19</b>	<b>0.04**</b>
Number of observations A	802			802
Number of observations	300			300
Bootstrap replications	50			50

In Table 6.8, the results from the BO decomposition technique are summarised. The second panel provides results using the Albanian data set as the standard. For comparison, the first panel provides results using the Kosovan data set as the reference. The results between the two panels are similar. In both panels, the coefficients effect is statistically significant for both model specifications (Model 1 and Model 2). This suggests that the variables controlled for have differing relative magnitudes of effect on the probability to emigrate. However, it may also suggest that the same model does not apply to Albania, that is, variables that affect migration behaviour in that country are not included. The results are the same when introducing remittances as a dummy variable in the two model specifications (Table A6.3.1). Given the focus is on whether the same model structure holds for both countries, no detailed BO decomposition is provided for testing which individual coefficient estimates are different between the two country estimations.

## **6.5 Concluding remarks**

In this chapter, the wider applicability of the household approach to modelling migration behaviour is investigated. For this purpose the analyses in chapter 5 are replicated using the Albanian LSMS examining whether the same model of the propensity to emigrate applies to Kosova and Albania in 2008. The results based on the Albanian LSMS 2008 are compared with those based on the Kosova 2008 data set. However, due to lack of data and for consistency and comparability the model is respecified by substituting the share of those of working age employed abroad for income per capita earned abroad.

Country comparison by demographic characteristics and household structure suggests that considering the household as a decision making unit may be appropriate in the case of Albania. Additionally, the two countries are fairly similar with respect to their social, demographic, and political characteristics. The economic situation in Albania is better. Yet, comparison with host countries' economic situations suggests that both still have poor macroeconomic performances and therefore the same push/pull factors shape migration behaviour. So, it is not surprising that they are fairly similar with regard to the propensity to emigrate, reasons to emigrate as well as remittance patterns. Descriptives show that the two countries are similar with respect to the majority of the variables to be used in the empirical investigation.

The results indicate less support for the appropriateness of the household approach in the case of Albania when compared to the results from the Kosova model. Following the approach in chapter 5, a check is made to examine whether the results are due to specification. The results indicate that respecification does not provided any better support for the household perspective. In both specifications, the results suggest that the household view is less appropriate in modelling the probability of sending at least one or one additional member abroad for economic reasons in Albania compared to Kosova.

The simple comparative analysis focussing on the significance level and sign of the marginal effects by variables shows that there are differences between the

two country estimations. This suggests lack of support for the a priori hypothesis of the same model structure of the propensity to emigrate applying in both countries. The model is respecified to examine whether the lack of support for the hypothesis of no structural differences in the economic model of the emigration propensity between the two countries is due to particular specification. Respecifying the model does not improve the results. Given the limitations of this simple comparative analysis, the extended BO decomposition technique is deployed to investigate whether any significant differential exists and if it results from differing model structures. The results from the decomposition analysis suggest statistically significant differences due to model structure in all model specifications for the two countries.

In summary, the empirical results indicate that the Albanian LSMS 2008 performs less well in terms of providing support for the household view compared to the 2008 Kosova data set. The results from the analysis of model structure stability across countries based on the simple country comparison of the propensity to emigrate suggest that neither the model of economic emigration nor its re-specification applies to Albania. The results from the further investigation using the BO decomposition suggest that there are structural differences between the two countries and the same model does not apply to Albania. Again the respecified model does not improve the results.

# CHAPTER 7

## CONCLUSIONS AND POLICY IMPLICATIONS

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### 7.1 Introduction

The key research focus of this thesis is on investigating the applicability of the household perspective to modelling migration behaviour, with special reference to Kosova. The objectives are introduced in chapter 1 and include:

1. Critically reviewing the literature on the conceptual approaches applied to investigating the determinants of emigration and the optimal migration duration.
2. Developing a model using a household perspective, based on the nature and structure of KS-Albanian households, and modelling and testing its validity in the context of the determinants of the propensity to emigrate for economic reasons from Kosova.
3. Developing the household approach to consider the determinants of the probability to return conditional on migration duration and testing the validity on data from KS-Albanian households.
4. Investigating the robustness of the results of the household model of the determinants to emigrate through:
  - 4.1 Testing the stability over time of the migration model in objective 2, given the major political change of 2008, that is, the Declaration of Independence.

- 4.2 Testing the transferability of the economic model of the emigration propensity to the case of Albania.
- 4.3 Exploring the validity of the household perspective in modelling the determinants of the propensity to emigrate for economic reasons, by redefining the household.
5. Discuss of policy implications for Kosova based on the findings of the above analyses.

In the previous chapters, the objectives listed above have been addressed. Here, the focus will be on summarising the major findings of the analyses, elaborating their respective policy implications, identifying the major contributions to knowledge, considering the limitations of the analyses and identifying suggestions for future research. This chapter is structured as follows. The next section provides a summary of the main findings, followed by the identification of the major contributions to knowledge. In section 7.4, policy implications are elaborated derived from the major findings. The limitations of this research and suggestions for further research are discussed in the last two sections.

## **7.2 Summary of Main Findings**

The central research question relates to the appropriateness of the household perspective in explaining migration behaviour among KS-households. To address this several complementary hypotheses are developed and tested. The impact of demographic, social, economic and political characteristics of the home country on the trend and structure of migration are analysed in chapter 1, within the context of push and pull forces affecting economic migration. This analysis suggests that the main push and pull factors are better employment opportunities, wages and social welfare systems. This chapter also provides a summary of the history and patterns of migration and remittances, indicating that both are sizeable in Kosova and that the propensity to emigrate is still large and mainly for economic reasons. Thus, in this chapter the importance of the questions to be addressed in this research programme is established. Additionally, it provides a setting for the development of the models and an important background against which the results are considered.

To address the first research question, the literature on the conceptual frameworks used to model the migration decision is critically reviewed. The main conclusion is that there is no fully articulated conceptual rationale underpinning the household approach.



Consequently, there is no agreement about the theoretical rationales for the inclusion of independent variables and hence on model specification. Although a few studies do provide a theoretical rationale for the independent variables used, there are inconsistencies in this regard in their definitions, proxies and empirical results. In the critical literature review, additional gaps in the literature are identified. Specifically, none of the previous studies of return migration take the household perspective; they either deploy an individual approach to modelling or arbitrarily include both individual and household independent variables. Therefore, there is no consistency either in the theoretical frameworks, in the empirical proposition or in the econometrics techniques. The other main gap identified in the literature is that although some of the studies analyse the decision to emigrate in different countries (van Dale et al., 2005a; van Dalen et al, 2005b; Gibson and McKenzie, 2009), they apply the model to the pooled sample and to the country samples separately but do not provide a detailed analysis of similarities/differences. Furthermore, they do not provide a decomposition analysis, which would enable the investigation of whether the same model structure holds across countries. As summarised below, these gaps are addressed in this research programme.

The absence in the literature of a fully articulated and consistent theoretical framework to modelling migration is first addressed with reference to how the household view of decision making in other fields of economics has developed. Reference is also made to the Kosovan context, focussing on the socio-demographic and economic characteristics of KS-Albanian households. This suggests that given the prevailing social relations and the dominant system of values within KS-Albanian households the household can be considered as the social decision-making unit, validating the household view as the appropriate basis for modelling migration in that country. Accordingly, based on the expected utility maximisation framework, an initial theoretical framework for analysing household behaviour is outlined. This been customised to reflect the socio-economic idiosyncrasies prevailing in Kosova. The household as a social unit is modelled as deciding whether to send at least one or one additional member abroad for economic reasons. As such, the conceptual framework concentrates only on the first stage of the decision-making process, ignoring the second stage of which members of the household should be sent abroad. This theoretical framework is developed into an empirical model to test the applicability of the household perspective to economic emigration. Accordingly, in the empirical analysis the household is defined as consisting of household members living in the home country and those currently residing abroad. Given the non-response rate in the sample, as a robustness

check multiple imputation is deployed in the empirical estimation. The results from both approaches are similar and broadly in line with the theoretical expectations of the model. Support is found for the hypothesis of a nonlinear relationship between household income per capita at home and household economic emigration plans. This result is similar to the findings in the majority of the studies critically reviewed and is referred to as the “migration hump”. However, the impact of average monthly household per capita income of those abroad and remittances on the probability of emigrating are insignificant. None of the household demographic characteristics is statistically significant at the 5 per cent level of significance. KS-Albanian households are found to be selective in migration behaviour in terms of education. Previous empirical analyses focussing on the individuals’ education level were inconclusive regarding the effect of this variable on the probability to emigrate. The results from studies investigating this effect through household educational attainment provide either a positive, nonlinear or insignificant relationship between education and emigration. Similar to Carletto et al. (2004) and Germenji and Swinnen (2006), the results in this research suggest that Brain Drain is not an issue in the case of Kosova, since it is found that households whose head has higher education have a lower probability of emigrating. Unlike other studies, this research introduces another measure of relative wealth controlling for the trend in relative wealth over time. As expected, households whose heads perceive the economic situation to have worsened have a higher probability of sending one or one additional member abroad. The variables capturing the impact of psychic income are not found to have any significant impact on the households’ emigration plans. Among the location-related variables, only the dummy variable controlling for whether the household lives in a rural area is significant. Similar to the empirical findings reported in van Dalen et al. (1985/6) and Phuong et al. (2008), the results suggest that the probability of planning economic emigration is higher among rural households. Although the results in most of the studies reviewed indicate a positive network effect, in the model developed in this research this effect is ambiguous and the results suggest that its effect is insignificant.

In chapter 4, a new theoretical framework is developed to test the applicability of the household perspective by modelling the decision of return migration of KS-households. The definition of the household in this chapter is narrower than that in chapter 3, as it does not include the part of the household that lives in the home country. However, it is based on the same assumptions as the theoretical framework in chapter 3, that is, it is customised to reflect the socio-economic characteristics of Kosova and is only concerned with the first stage of the decision-making process. The empirical model derived from this framework

deploys the Cox proportional hazards model to investigate the determinants of the probability to return conditional on migration duration. The results indicate only broad support for the theoretical expectations of the economic model. The household income variable is significant and has a non-linear impact on the hazard to return, though among the household demographic characteristics only the variable share of females in the migrant household is significant and has the expected positive sign. All the psychic income variables are insignificant. Another conclusion is that the return decision was influenced also by political factors. The broad but not full support for the economic model and the statistical significance and high relative importance (high coefficient) of the dummy variable controlling for the whether the household has emigrated during the war suggest that, in addition to economic factors, non-economic are also important in determining the decision whether to return.

To examine the robustness of the household model the stability of the determinants of the migration decision between the period before and after the Declaration of Independence in Kosova is examined. The stability of this aspect of migration behaviour has not been considered in previous research for any country. In this analysis, the household model of the determinants of migration is replicated using a 2008 Kosovan data set and the results compared with those for 2007. The comparison indicates that the extent to which it supports the theoretical expectations of the household model is similar. However, a simple comparison of the results by variable, focussing on their direction and level of significance, between the two years shows differences regarding the level of significance of three independent variables, though this does not establish if the difference between estimated coefficients is statistically significant. This comparative analysis also does not provide: a test of the statistical significance of the overall differential between the two models; distinguish between the sources of the overall differential; and a test of the statistical significance of the sources of the differential. Therefore use is made of the extended Blinder-Oaxaca decomposition technique for nonlinear models. Stability over time is supported by the lack of statistical significance of the coefficients effect. The results from the detailed BO decomposition suggest that there is insufficient evidence to reject the hypothesis that the characteristics effect of the explanatory variables have remained stable over time, except for those for the attitudinal variable, controlling for whether the head of the household perceives the household economic situation to have worsened, and type of area, a dummy variable controlling for whether the household lives in a rural area.

Although the results suggest that the overall model structure has remained stable over time, because the results are not fully in line with the theoretical expectations an amended model of the household approach is investigated. The model is respecified by redefining the household as consisting only of household members living in the home country. This new definition incorporates the idea that family ties may weaken with time leading to the choices of migrant members not being considered in the joint decision-making of the home-country based household. The new specification again produces similar results between multiple imputation and list-wise deletion. The re-specification of the model performs slightly better than its counterpart in terms of support for theoretical expectations. For example, using the 2007 data set with the respecified model, the variable proxying the share of those of working age is statistically significant both when remittances are defined in levels and as a dummy variable. The counterpart of this variable, total share of those of working age, is insignificant in the original specification irrespective of the definition of remittances. Using the 2008 data set, the variable capturing the network effect and the weighted sum of the marginal effects of the per capita income abroad and its squared term are statistically significant in the respecified model, but not in the original specification. To investigate the stability over time comparisons are again made using the data sets for the period before and after the Declaration of Independence. Again, the simple comparison of results by variable in terms of direction and level of significance suggests differing model structures. However, for reasons explained above the extended BO technique is conducted. The results from this technique indicate that the model structure has remained stable, and that only differences in terms of mean values of variables are statistically significant. These results do not alter when the household is redefined.

The usefulness of the household view is tested on another country's data by estimating the same model of the propensity to emigrate deployed in chapter 3 and chapter 5 using the Albanian LSMS 2008. Albania is selected as a comparator country given its similarities in terms of structure and nature of the household, migration and remittances patterns and push and pull factors. In this empirical analysis, due to lack of data, the per capita household income at home is substituted for the share of those of working age in employment. For consistency, the substitution is undertaken for both countries. The results from this analysis indicate that the model performs better with Albanian data in terms of support for the theoretical expectations of the household model. The simple comparison of the results by variable suggests differences between the Kosovan and the Albanian model. To investigate whether this is due to differences in the mean values of the variables and/or

of differing model structure the extended BO decomposition was again deployed. The results suggest that the same economic model of emigration does not apply in these two countries. The household was redefined to check whether respecifying the model would affect the results. The results again suggest that the revised model performs better for Albanian data in terms of the results being more consistent with theoretical expectations.

The last research objective, which deals with the policy implications of the research findings, is addressed separately in section 7.4.

In sum, in this research the applicability of the household perspective to modelling household migration behaviour in Kosova is examined. Given the lack of a fully articulated conceptual framework underlying the household perspective, an initial formulation of the household approach is outlined and tested. The empirical results are broadly in line with the theoretical expectations of this conceptual approach. A separate theoretical framework is developed and tested in the context of the determinants of return migration. The results from this analysis also provide broad support for the household perspective and suggest that both economic and political factors are important. The robustness of the model is examined through testing its stability over time and its transferability to the case of Albania. Results remain broadly consistent with the expectations of the model. However, while the results suggest that the model is stable over time, they do not provide support for the stability of coefficients between Kosovo and Albania. The results from the respecification by redefining the household provides slightly better support for the applicability of the household perspective and also indicate that the model structure is stable over time. In the context of the country comparison, the respecification again does not provide support for the transferability of the model. However, the results indicate that the respecification provides slightly better support for the theoretical expectations of the model to the case of Albania compared to Kosova. In summary, this thesis provides some, but not overwhelming, support for the validity of a household perspective in modelling migration decisions in Albania and Kosova.

### **7.3 Main Contributions to Knowledge**

The literature on migration economics is immense and contains many studies providing empirical investigations of migration, both in terms of emigration and return migration decisions. There are several studies specifically investigating Albanian migration. However, to my knowledge, currently, there is no published or publicly available migration study empirically investigating plans to emigrate and/or to return using Kosovan data. So,

this research is the first to investigate the determinants of households' plans to emigrate for economic reasons from that country.

In the economics of migration, there are alternative approaches to theorising the decision to emigrate. In their empirical propositions, though, the majority of the studies tend to take a rather eclectic approach. Overall, there is lack of consistency in migration research, both in terms of the conceptual approaches and empirical results. Given the previous lack of a fully developed approach in the literature, and the strong household units found in Kosova, this thesis introduces a theoretical framework based on the household perspective to model households' emigration plans. This theoretical framework is extended to investigate the determinants of the probability of return conditional on the migration duration of households. So far and to the best of my knowledge, such a household perspective has not been used by any other study in this context. This research contributes to knowledge by being the first to provide a further exploration of household aspects of migration decisions. Specifically, it empirically investigates the wider applicability of the household approach exploring stability over time and across countries of the model structure and respecifying the model in terms of an alternative definition of the household, that is excluding migrant members.

This research also contributes to knowledge by augmenting the list of the determinants of emigration plans. It is the first to consider the impact of remittances separately from the effect of the income and to introduce attitudinal variables that control for the households' opinions on their comparative economic situation. It is argued that remittances capture both an income effect and, being independent from the risk associated with home-country income, remittances may capture the effect of overall household risk diversification. According to the income effect, due to migration being costly, poorer households are less likely to emigrate due to liquidity constraints. However, rich households are also expected to have a lower probability of emigration given the diminishing marginal utility from income. This suggests a non-linear relationship between remittances and the probability of planning the emigration of a household member. The risk effect, however, suggests a negative impact of remittances on the probability of sending a member abroad as remittances are expected to lower overall household income risk. In the analyses, two different definitions of this variable are introduced to avoid possible inaccurate responses for the total amount of monthly remittances. In the various estimates, only the dummy variable on remittances is found to be statistically significant, except for the original specification using the 2007 sample. The attitudinal variable is argued to provide a forward-

looking opinion about the change in household wealth over time and hence to influence household decision-making. This attitudinal variable, controlling for whether the household expects a worsening in its economic condition, is found to be significant throughout model specifications using Kosovan data, though in the case of Albania this variable is significant only in one model specification. The attitudinal variable may not be a good proxy for forward-looking expectations, although in chapter 5 it is argued that in periods of structural change modelling rational expectations is difficult. To overcome this potential limitation in the 2008 survey a question as to whether the household head expects the economic situation of the household to improve, remain the same or worsen in the future is added. This new version of the attitudinal variable is used in the empirical investigation in chapter 5 enriching the contribution to knowledge regarding the attitudinal variable. The results suggest that the attitudinal variable, controlling for whether the household expects an improvement in its economic condition, is significant throughout model specifications using the Kosova data set 2008.

The stability of the models of migration behaviour following the major political change in Kosova, the Declaration of Independence in 2008, is investigated. To my knowledge an investigation of structural changes over time in the migration models in any country/countries has not been previously conducted. Hence, this research contributes to knowledge by providing an original examination of the stability over time of migration relationships both by comparison of independent variables separately and by deploying the extended Blinder-Oaxaca decomposition technique for nonlinear models. Despite the large political change, the results suggest that the model of the propensity to emigrate has remained stable over time. However, given the short time period between the two data sets, this result has to be taken with caution.

Another contribution to knowledge comprises the examination of the transferability to Albanian migration behaviour of the model. The major argument in favour of the transferability is that these two countries by having the majority of the population of the same ethnicity, share a common cultural tradition and mentality. Additionally, both in Kosova and Albania migration and remittances are of a large scale and are considered to be an important strategy for coping with economic hardship. The two countries are also similar regarding the push and pull factors affecting migration. Additionally, they have both faced political instability in the late 1990s, though in the Kosovan case the consequences were of a higher degree. The empirical analysis motivated by these arguments is the first to

investigate whether the same structure can be used to model a household's plan to emigrate in two countries that are similar in several respects.

This thesis gives other contributions to knowledge in terms of the econometric techniques applied to issues neglected in the migration literature. It is the first migration study to use the STATA command *margeff* to calculate the marginal effect of the variables in a probit estimation in a nonlinear fashion as suggested by Bartus (2005). Interpreting the marginal effects of the term and squared term of a variable separately in nonlinear models is inappropriate as the "all else equal" does not apply (Norton et al., 2004). However, previously all migration studies ignored this issue. The other technique introduced in this thesis but ignored in other migration studies is data imputation. Stemming from surveys, migration data sets are usually characterised by a significant degree of missing data. This holds for the data sets used in this thesis. The consequences of missing data include loss of efficiency and complication in data handling and analysis; to avoid these problems in this research use is made of multiple imputation.

## 7.4 Policy Implications

In this section, based on the empirical findings in the thesis, policy recommendations are derived focussing on the implications of the household approach and the optimal utilisation of emigration and return migration from the perspective of the economic development of Kosova. The results summarized in the previous section suggest that the household perspective is appropriate when addressing migration behaviour among Kosovans. Accordingly, when assessing and designing migration policy in Kosova the household perspective seems to be the appropriate starting point. In chapter 1, it is argued that the main reasons for emigration are the lack of paid employment opportunities and low wages. These are more pronounced in rural areas. The results from the model of the determinants of the propensity to emigrate suggest that middle-income households are more likely to emigrate compared to the low and high-income households. Additionally, it is found that households that have a higher share of those of working age (a proxy for the household unemployment ratio), perceive the economic situation of the household to have worsened compared to one year ago and live in a rural area are more likely to emigrate. Given these and the host countries' restrictive immigration policies, one suggestion may be to design and implement policies related to encouraging circular labour migration in the form of labour demand contracts implemented in the 1960s (section 1.2). Such policies



would entail cooperation with host countries in identifying their labour market needs in order to design and provide training programmes to potential circular migrants. These policies should focus on low-income households that have a high share of those of working age.

The literature review in chapter 2 provides evidence of both positive and negative selection with respect to education among emigrants. In chapter 3, the empirical results suggest that in the case of Kosova negative selection in terms of education holds among those planning to emigrate, indicating that emigration does not have a negative impact on the average human capital and average productivity in Kosova. The results from the model of the probability of return conditional on migration duration, presented in chapter 4, provide some, although limited, support for a higher hazard of returning of those that have attained or are attaining education abroad. This finding is in line with the view that return migration has a positive impact on the average human capital and average productivity in Kosova. Currently, the Ministry of Education, Science and Technology is implementing a “Brain Gain” programme focussing on attracting highly-skilled Kosovans that work abroad to return and work for government institutions in Kosova. In doing so, the programme offers financial incentives and professional development opportunities. Other programmes implemented by the Ministry provide financial support for students who are attaining education abroad conditional on them returning and working for at least three years for government institutions. These policies are part of the National Strategy on Migration of the Republic of Kosova. Following the empirical results, to continue benefitting from the enhanced productivity of highly-skilled returnees, it is recommended that the government continues with such programmes. To facilitate these programmes, policy-makers should focus on improving the efficiency of the nostrification system of diplomas and professional titles obtained from foreign education institutions. Additionally, the support found for the appropriateness of the household perspective raises the need for the “Brain Gain” programme to be accompanied by policies that provide reintegration and other services for the families of the highly-skilled.

To better utilise highly-skilled returning workers, another important policy recommendation is to facilitate their employment in the private sector as well. In this regard, given the limited labour market demand for the highly-skilled it is important to encourage investment, both domestic and foreign. To do so, it is recommended that the government strengthens the institutional and legal infrastructure related to improving the

business environment.<sup>1</sup> In this thesis, no empirical analysis of the uses of remittances is conducted. However, remittances have been shown to be important at the household and macroeconomic level in Kosovo (section 1.4) and results in chapter 3 and 5 indicate that they are possibly a determinant of the decision to emigrate. These findings, together with the empirical results in chapter 4 indicate that the hazard to return is higher among the middle-income households, suggesting a need for further investment promotion policies. Accordingly, it is recommended that the government, in addition to the above mentioned policy about improving the business environment, provide returnees with information about investment opportunities and technical support in establishing businesses. Moreover, given the possible importance of remittances, the government should be motivated to design policies that facilitate and improve the cost efficiency of transferring remittances. In this regard, the Central Bank of the Republic of Kosovo has drafted the Strategy on the National Payment System in Kosovo which aims at adopting the General Principles for International Remittance Systems of the Committee on Payment and Settlement Systems of the World Bank. The policy recommendation in this context is to adopt and implement these general principles as soon as possible.

Aiming at starting a Visa Liberalisation process, the government has signed repatriation programmes with host countries. To support this programme, the Ministry of Labour and Social Welfare provides protection and reintegration services and employment and training opportunities for returnees. The empirical findings in chapter 4 indicate that return is more likely among those that have emigrated during the war. Therefore, it is recommended that the government continues implementing the above-mentioned policies focussing on potential returnees in general.

## **7.5 Some Limitations of this Research**

To fill the gap of a lack of a coherent conceptual framework on migration decisions in the literature, two theoretical models are outlined in this thesis, one modelling the intention to emigrate and the other modelling the decision to return. However, both models are based on several assumptions which limit their general applicability. The theoretical frameworks are concerned with only the first stage of the decision-making process, ignoring the second stage of which household members would be affected by the migration decision. Additionally, the two conceptual frameworks cannot be considered as

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<sup>1</sup> Policy recommendation relating to the improvement of the business environment is outside the scope of this thesis.

generally applicable decision-making frameworks as both have been customised to deal with Kosovan household characteristics.

The empirical results in this thesis are broadly supportive of the applicability of the household perspective to modelling migration behaviour in Kosova. Limitations of this thesis are mainly related to the definition of variables resulting from the specificities of the data sets used. In the theoretical framework, households are modelled as maximising the expected present value of utility including in their choices the possibility of sending at least one or one additional member abroad. This outlined theoretical framework is translated into an empirical proposition where the dependent variable is the households plan to send at least one or one additional member abroad for economic reasons. As explained in detail in chapters 3, 5 and 6, the possible answers to whether any of the household members plan to emigrate vary slightly between the three questionnaires leading to different potential interpretations. This issue is solved in a rather arbitrary manner by considering the third option as missing in all three data sets. This however, limits the comparability of the dependent variable across the three data sets used and may affect the results. To explore this, the analyses are conducted using multi imputation for missing data. As common in empirical analyses based on survey data, another similar limitation is data missingness in all empirical analyses conducted in this thesis. Reflecting this weakness in addition to list-wise deletion the estimations are also conducted using multiple imputation.

Other limitations relate to the wealth and income variables. In the theoretical framework households are modelled as maximising the expected present value of utility from current and future consumption subject to the income constraint. Income is modelled, among others, as a function of pecuniary income and wealth. While the latter represents ownership of valuable goods and resources, the former is comprised of disposable income earned at home, disposable income earned abroad and government transfers. However, due to lack of data the analysis has been limited to controlling for the effect of income only, ignoring ownership of assets. However, the definition of the income variables is also limited. According to Deaton and Muellbauer (1980), deflating household income variables by household size provides a crude remedy for the issue of differences in household size and compositions. These authors argue that a more reasonable deflator for converting household income into a comparable needs-corrected income variable is the equivalence scale (for details see chapter 3). Such equivalence scales for KS-households are not available, while using equivalence scales measured for other countries is not considered reasonable given the specificities of the Kosovan society. Therefore, the remedy for this

issue was limited to controlling for household age composition as an important determinant of wealth and hence household migration decision. Another limitation of this research due to lack of data is the way the proxy for household educational attainment is measured. Carletto et al. (2004) measure household average education as the average adult education in years within the household. The Kosovan data sets used here only provide information on the education level of the head of the household. Hence, although the Albanian LSMS 2008 provides such information, the education level of the head of the household is used throughout the analyses to control for household educational attainment. This approach, though, was based on the arguments provided in Plug and Vijverberg (2005) about the children's educational attainment being a positive function of parent's IQ scores. Additionally, according to the Albanian LSMS 2008 only 10 per cent of the households declare receiving remittances and the average monthly household remittances are reported to be 50 Euros. This is odd, given that, according to the 2002 and 2005 Albanian LSMS data sets studies report that 30 per cent of Albanian households receive remittances and that the average monthly household remittances are approximately 100 Euros.

The empirical analysis of the optimal migration duration is conducted using the same data set. The limitation of this analysis is related to the variables used in this analysis controlling for the socio-economic and demographic characteristics of the migrant members. All these variables were created based on information that the head of the household provided on behalf of the migrants. Although full knowledge of the demographic characteristics of migrants is expected, the head of the household may not fully be informed on specific socio-economic issues related to the migrants, such as their exact employment status, income level and/or profession, house-ownership. This may cause problems with the estimation of the model of return migration.

The analysis of the stability over time and that of the transferability of the model structure to Albania are also characterised by limitations resulting from the nature of the data sets. The stability over time of the models on migration behaviours is examined following the major political change, the Declaration of Independence. Though politically an important change, the time difference between the two data sets can be considered as short in terms of the anticipated resulting economic changes. The analysis of appropriateness of the household approach in Albania and the transferability of the same economic model deployed in Kosova is hindered by the inability in the Albanian LSMS 2008 to distinguish between households who plan emigration for economic reasons and those

that plan to do so for other reasons. However, given that the majority of those planning to emigrate do so for economic reasons, as reported in IOM (2009), all cases were considered as plans of economic emigration.

## **7.6 Suggestions for Further Research**

As elaborated in section 7.5, the household approach outlined in this thesis is incomplete as it only focuses on the first stage of the decision-making process and considers the household decision-making process as a black box. Additionally, it assumed that the two stages of emigration decision-making are independent. Another limitation is that it is customised to reflect the political and socio-economic characteristics prevailing in Kosova. Given these limitations it is recommended that an analysis taking the household approach be developed which interlinks the first stage of the decision-making process outlined here with the second stage of which members of the household should be affected by the household migration decision. Another recommendation entails developing a more general household model which would be applicable to the political and socio-economic contexts of other countries.

The results are broadly consistent with the theoretical expectations of the household model. Given the time constraint of this research programme, an analysis taking the individual approach to modelling migration behaviour in Kosova was not conducted. Therefore, it is recommended that a similar analysis be undertaken to test whether the individual approach performs better in modelling migration decisions in Kosova. However, for this purpose a new data set would be needed. The results from the Blinder-Oaxaca decomposition technique are in line with the expectations that the model structure has remained stable over time. However, the time lag between the two surveys may be too short for any significant improvement in the socio-economic situation to take place. Given this future research could investigate this issue with a data set stemming from a survey to be conducted in a more distant future in Kosova.

The lack of support for the same model structure of the propensity to emigrate holding in both Kosova and Albania and the finding that differences are due to the coefficients effect, warrants further investigation. Therefore, future research should focus on improving the model specification by introducing additional relevant variables, such as household assets, and by correcting for the proxy on educational attainment and the income variable by using equivalence scales appropriate for KS-households and AL-households.

Additionally, as argued above, the analyses are limited due to the definition of the dependent variable. In the future, it is recommended that the dependent variable in both the Kosovan and Albanian surveys be defined in a common and consistent way. Also, future Albanian LSMS data sets need to provide a variable allowing the distinction between emigration for economic and non-economic reasons. Another important issue related to the data sets is that future surveys should focus on reducing the non-response rate. Together these improvements would improve the comparability of the data sets and avoid possible bias resulting from these issues.

When investigating the probability of return conditional on migration duration, the data set should be based upon a survey of migrant respondents rather than their household members based in the home country. As this would avoid, or at least reduce, issues concerning possible inaccurate responses on the socio-economic characteristics of the migrant members. As introduced in the previous section, the issue of inaccurate responses when home-based household members respond is not expected regarding migrant member's demographic characteristics.

A wider issue that has not been investigated is the optimal migration duration from the perspective of the economic development of the home country. For this purpose, the following relationships could be investigated: the determinants of the propensity to emigrate, of sending remittances, of the optimal migration duration, and the level of transferable human capital acquired in the host country based on the household approach. This thesis provides empirical investigation of two of the relationships. Conditional on data availability, future research could complement this thesis by conducting empirical analyses on the other two relationships and interrelating results at the household level within an appropriate economic growth model to draw conclusions on the relationship between migration duration and home country economic development.

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## Appendix 1 Professional development

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### Working papers:

The Impact of Remittances on Educational Attainment – a comparative study of Kosova and Bosnia, 2009. Research Report financed by the Austrian Science and Research Liaison Offices Ljubljana/Slovenia and Sofia/Bulgaria (ASOs).

The Propensity to Emigrate from the Perspective of the Home Country – a Comparison over Time between two Kosovan Data Sets – research paper presented at the GDN conference, held at CERGE-EI, Prague 2010.



## Appendix 3.2 List of variables used in the empirical model

**Table A3.1.1 Variable label and variable definition – Model 1 including household migrant members and Model 2 Kosova-based Model**

Label	Abbreviated definition	Definition
<i>P</i>	Probability to emigrate	Probability to emigrate = 1 if household plans to send at least one or one additional member abroad for economic reasons
<b>Household Characteristics</b>		
<i>TYH</i>	Total income at home	Household income, excluding remittances, of those employed in the home country divided by household size including migrant members
<i>TYA</i>	Total income abroad	Household income, excluding remittances, of those employed in the host country divided by household size including migrant members
<i>TR</i>	Total remittances	Remittances divided by household size including migrant members
<i>RDV</i>	Remittances as a dummy variable	Remittances = 1 if household receives remittances
<i>TSU16</i>	Total share of those under the age of 16	Share of those under the age of 16 including migrant members
<i>TSWA</i>	Total share of those of working age	Share of those of working age including migrant-members
<i>TSFWA</i>	Total share of females in those of working age	Share of females in those of working age including migrant members
<i>Edu</i>	Education	=1 if household head in the home country has higher education
<i>Improved</i>	The household head perceives the economic situation of the household to have improved compared to one year ago	=1 if the household head in the home country perceives the economic situation of the household to have improved compared to one year ago
<i>Same</i>	The household head perceives the economic situation of the household to have remained the same to one year ago	=1 if the household head in the home country perceives the economic situation of the household to have remained the same compared to one year ago
<i>Worsened</i>	The household head perceives the economic situation of the household to worsen compared to one year ago, 0 otherwise	=1 if the household head in the home country perceives the economic situation of the household to have worsened compared to one year ago
<b>Psychic Income</b>		

<i>TS</i>	Total household size	Number of household members within the household, including migrant members
<i>Network</i>	Network	= 1 if household has any household members abroad
<i>TNuc</i>	Total number of nuclear families	Number of nuclear families within the household, including migrant members
<b>Location-related characteristics</b>		
<i>RU</i>	Regional unemployment rate	Regional unemployment rate
<i>TA</i>	Type of area	= 1 if household lives in a rural area

**Table A3.1.2 Variable label, variable definition – Model 2 Kosova-based model**

<b>Label</b>	<b>Abbreviated definition</b>	<b>Definition</b>
<i>P</i>	Probability to emigrate	Probability to emigrate = 1 if household plans to send at least one or one additional member abroad for economic reasons
<b>Household Characteristics</b>		
<i>YH</i>	Income at home	Household income, excluding remittances, of those employed in the home country divided by household size of those living in the home country
<i>YA</i>	Income abroad	Household income, excluding remittances, of those employed in the host country divided by household size living abroad
<i>R</i>	Remittances	Remittances divided by household size living in the home country
<i>RDV</i>	Remittances as a dummy variable	Remittances = 1 if household receives remittances
<i>SU16</i>	Share of those under the age of 16	Share of those under the age of 16 living in Kosova
<i>SWA</i>	Share of those of working age	Share of those of working age living in Kosova
<i>SFWA</i>	Share of females in those of working age	Share of females in those of working age living in Kosova
<i>Edu</i>	Education	=1 if household head in the home country has higher education
<i>Improved</i>	The household head perceives the economic situation of the household to have improved compared to one year ago	=1 if the household head in the home country perceives the economic situation of the household to have improved compared to one year ago
<i>Same</i>	The household head perceives the economic situation of the household to have remained the same to one year ago	=1 if the household head in the home country perceives the economic situation of the household to have remained the same compared to one year ago
<i>Worsened</i>	The household head perceives the economic situation of the household to worsen compared to one year ago, 0 otherwise	=1 if the household head in the home country perceives the economic situation of the household to have worsened compared to one year ago
<b>Psychic Income</b>		
<i>S</i>	Household size	Number of household members within the household living in Kosova
<i>Network</i>	Network	= 1 if household has any household members abroad
<i>Nuc</i>	Number of nuclear families	Number of nuclear families within the household living in Kosova

<b>Label</b>	<b>Abbreviated definition</b>	<b>Definition</b>
<i>P</i>	Probability to emigrate	Probability to emigrate = 1 if household plans to send at least one or one additional member abroad for economic reasons
<b>Location-related characteristics</b>		
<i>RU</i>	Regional unemployment rate	Regional unemployment rate
<i>TA</i>	Type of area	= 1 if household lives in a rural area

## Appendix 3.2 List of the number and percentage of missing values by variable label

**Table A3.2.1 Number of observations and number of missing values**

Variable	Number of observations	Number of missing values	Percentage of missing values
$P_i$	1313	71	5.41
Household characteristics			
<i>TYH</i>	1035	349	33.72
<i>TYA</i>	1109	275	24.79
<i>TR</i>	1070	314	29.35
<i>TS16</i>	1343	41	3.05
<i>TSWA</i>	1343	41	3.05
<i>TSFWA</i>	1343	41	3.05
<i>Edu</i>	1100	284	25.82
<i>Attitudinal variable</i>	1082	302	27.91
Psychic income			
<i>TS</i>	1343	41	3.05
<i>Network</i>	1092	292	26.74
<i>TNuc</i>	1343	41	3.05
Location-related characteristics			
<i>RU</i>	1343	41	3.05
<i>TA</i>	1343	41	3.05

## Appendix 3.3 Sampling methodology - selected extracts from the Riinvest Manual

### 1. Survey sample and methodology

Riinvest Institute is conducting the second part of the research on the status of Kosovars in Diaspora. The first part of the research included only employed Kosovars abroad. The second part of the research that is being carried out now is focused on their households in Kosova. The research is of a great importance for institutions responsible in drafting development policies, as well as for building cooperation policies and creating conditions for Diaspora investments in Kosova.

The survey is being conducted within the project “Remittances of the Kosovar Diaspora”, a project that Riinvest is carrying out in cooperation with the Kosovar Fund for Open Society, for the Forum 2015 Roundtable that is going to take place in October 2007. The aim of this research is to identify the current situation with regard to remittances sent by the Kosovar Diaspora, and their purpose and use by the relatives back home.

The first research includes 1250 households and aims to:

- a. Indicate socio-demographic and other specifics; and
- b. Identify the optimal sample appropriate for researching subsidies and related specifics.

The second research will include 400 respondents – households that have one or more relatives in the Diaspora.

While establishing the sample we used several sources:

- The Kosovar Diaspora Registry. This registry, compiled for the needs of the Election Commission in 2002, was obtained from OSCE. While analyzing the accuracy of the registry we have identified some shortages which were cause for concern when setting up the sample. Some of the shortages of this registry are: the possibility that a large number of people are not registered because of the lack of documentation, the possibility that a number of people are not registered because of their unclear status, the possibility that a part of Diaspora is not registered because they didn't ask for documentation since they have their status resolved in the countries they live in, and finally the possibility that a number of people, at the

moment when the Diaspora Registry was being compiled, possessed their documentation – passports – therefore, did not need any other travel documents.

- The Riinvest survey with Kosovar emigrants was conducted in December 2006. We couldn't rely on the results of this survey either. We considered that the survey didn't represent the population properly. We thought that a number of people may have decided not to travel to Kosova for Christmas. Therefore, this source was not taken as a basis for setting up the sample.
- During a workshop organized by Riinvest Institute for setting up a sample, local experts concluded that, first, a special research should be conducted with households in Kosova in order to identify households, which have family members abroad. The sample for this survey will be based on the data provided by the Voters Official Registry for 2004. Households, the subject of this survey, will be asked about the number of family members living abroad in order to get sufficient information to set up the sample for the second household survey. This would focus only on households which have family members abroad.
- From the Voters Registry, the participation will be stratified based on:
  - municipalities,
  - territorial characteristics – rural and urban zones and
  - regional characteristics.

### **3. Methodology**

The survey unit will be the household. The research includes 1250 households from all over Kosova. Such a sample will ensure an accurate analysis of specifics of Kosova households. The head of the family will be surveyed for the purposes of the research.

Data will be collected through direct contact and interviews with household heads. A questionnaire drafted by the Riinvest project team is the instrument of the survey. The survey will be conducted by Riinvest co-operators, selected from outstanding students of Faculty of Economy in Prishtina. Enumerators will receive training to inform them of the importance of the research, questionnaire content, the way of conducting interviews, data collection and technical aspects of the research. The Project Manager and Riinvest researchers will inspect the work done in the field. Also, the response to every question will

be assessed to ascertain whether it makes sense or not (logical assessment). Data will be processed using Excel and SPSS.

The survey is anonymous. The responses collected from the respondents will be used as statistical data when compiling the research report.

#### 4. Sample selection process

The sample is multi-stratified: according to regions (urban and rural) Voters Registry of 2004 was used as the basis for sample distribution according to rural and urban areas. The structure of distribution in rural areas is 49%, with 51% in urban areas. The participation of municipalities and regions in this registry was also used as the basis when selecting sample.

We decided to have a sample of 1,250 respondents based on the above mentioned data. In numbers, the sample distribution according to territorial characteristics will be: 640 households from urban areas and 610 households from rural areas.

From the results of the survey with 1,250 households the project team will derive the percentage of households with family members living and/or working abroad. Based on these percentages we will establish a new sample, in order to conduct the survey with the households that have family members abroad.

To establish the survey sample we decided to use the Voter Registry of 2004. We used this to stratify the sample according to criteria sufficient to assure that the sample is representative.

**Table A3.3.1 Number of voters by region and type of area (urban/rural)**

	Number of Voters		Total (urban and rural)	% of participation		Total in %
	Urban	Rural		Urban	Rural	
Prishtina	173723	146101	319824	29.4	20.8	24.7
Prizreni	96505	179463.6	275969	16.3	25.5	21.3
Peja	66172	100907	167079	11.2	14.4	12.9
Mitrovica	88507	93977	182484	15.0	13.4	14.1
Gjilani	65461	85341	150802	11.1	12.1	11.6
Ferizaj	58096	65816	123912	9.8	9.4	9.6
Gjakova	43345	31387	74732	7.3	4.5	5.8
	591809	702993.1	1294802	100.0	100.0	100.0

Source: Voters Registry of Central Election Commission, 2004.



Based on these percentages we will stratify the sample, in compliance with the participation, while considering the percentages by municipalities, region, and urban/rural area.

**Table A3.3.2 The number of respondents by region – survey sample**

	Urban	Rural	Total
Prishtina	135	180	315
Prizren	160	100	260
Mitrovica	85	90	175
Ferizaj	60	65	125
Pejë	90	70	160
Gjilan	80	65	145
Gjakovë	30	40	70
	640	610	1250

The second sample that will aim to identify the percentages of households that have a member in Diaspora. The planned sample size will be 400 households.

The methodology of this sample will be somewhat more specific than the identifying survey. Here, the principle of filtering out will be used. Through this principle we search only for those family members that are in Diaspora. However, every time when a family has no one in Diaspora, the choice will be considered inexistent and surveyors will be instructed to follow the criteria in order to ensure the randomness of choice.

## **5. Research activities in the field:**

### **5.1. Research in the villages – rural areas**

According to the work plan, 1,250 households will be interviewed both in rural and urban areas, obeying thoroughly the participation of municipalities and regions.

Each starting point (urban areas-village) will have 5 respondents. The respondent choice will be random. The random choice will be ensured in this way: the surveyor will identify the number of the houses in the village. Then, if the village has 100 houses he will knock on every 20th house, and conduct a total of 5 interviews.

The surveyors will be provided with names of the villages and municipalities where they should conduct interviews.

The starting point of the survey is the centre of the village, school, mosque, or church of the village. Then the surveyor will start interviewing the first family on the left side of the road (if there are no houses on the right side), always having as the starting point the school, mosque, or the church of the village. Then he continues to interview households according to the key provided by the researcher.

The second point of the survey is the first house at the beginning of the village. The surveyor then keeps the same pace (key) (ex: every 20th house).

If the first house selected turns out to be uninhabited, then the surveyor selects the next door house, and continues to keep the same pace (key).

## **5.2. Survey in the city**

In cities (with largest being: Prishtina, Prizren and Peja) the starting point will have also 5 interviews. In order to include all parts of the city, a principle of rings will be used. The principle of rings involves urban areas with different density and different socio-economic structure. The first ring will include downtown areas with 40 % of respondents, while the other two rings (suburban areas) include the rest of the respondents (60 %).

The starting point is the place where the survey starts from. These starting points will be decided by Riinvest. In each starting point (town streets), only 5 interviews will be conducted. Every surveyor in urban areas will be provided with his starting points from where he needs to start interviews. From the starting point, the surveyor interviews the first house, then the fifth, and so on. One should differentiate the interviewing in family HOUSES from interviewing in APARTMENTS

Interviews in houses- The first family on the left or the right side of the street gets interviewed (always making sure to keep the same side while continuing the survey), starting from the given starting point. Then, the fifth house will be interviewed, the tenth, etc. If the house selected for interview is uninhabited or is a business store, then the surveyor should select the next door house and keeps the same pace, until three (3) interviews are finished in that starting point.

If the head of the family is not present when the surveyor visits the family, then the surveyor must return later to conduct the interview. IT IS NOT ALLOWED TO INTERVIEW ANOTHER FAMILY AS REPLACEMENT.

If in the selected house the household is not from Kosova (an international), that house is considered inexistent, and the next door house is taken into consideration (keeping the same pace).

Interviews in apartment buildings– if there is an apartment block, then ONLY ONE FAMILY should be interviewed in a block (entrance). Five blocks (entrances), 5 households (one per each block).

- Block I – left door, middle floor, gets interviewed (if the apartment has 4 floors, in that case the second floor gets interviewed the first time, the second time, the third floor gets interviewed)
- Block II – left door, middle floor
- Block III – left door, upper floor
- Block IV – left door, middle floor
- Block V- left door, middle floor

If the apartment selected for an interview turns out to be uninhabited then that block is ignored entirely, and the surveyor moves to the next block, keeping the same pace. THE NEXT DOOR APARTMENT CANNOT BE INTERVIEWED.

If the head of the family is not present when the surveyor visits the apartment, then the surveyor must return later to conduct the interview. IT IS NOT ALLOWED TO INTERVIEW ANOTHER FAMILY AS REPLACEMENT

If there are not five apartment blocks in order to interview a family per block, then, after finishing the interviews in apartment blocks, the surveyor continues with the next door house, keeping the same pace ( as when interviewing the houses).

If in the selected apartment a foreigner lives in (an international), that apartment is considered inexistent, and the next door apartment is taken into consideration (keeping the same pace).

## Appendix 4.1 List of variable labels used in the empirical model

**Table A4.1 Variable label, variable description and descriptive statistics**

Variable	Description	Mean	Standard deviation
<i>MD</i>	Migration duration of those who have returned and those who are still abroad		
	Household Characteristics		
<i>YA</i>	Average monthly migrants' household income per capita	1340.64	966.8111
<i>YAQ</i>	The square term of average monthly migrants' household income per capita	2727847	4384021
<i>SWAE</i>	Share of those of working age who are employed	75.85425	33.16102
<i>SF</i>	Share of females within the migrants' household	24.50685	26.71546
<i>Edu</i>	=1 if the senior member of the migrants' household has higher education	.1584158	.3655832
	Psychic Income		
<i>Nuc</i>	= 1 if the migrants' household consists of only one person	.3940887	.489257
<i>HouseOwnership</i>	=1 if household owns a house in the host country	.2745098	.4468933
<i>Citizenship</i>	=1 if citizenship of the host country	.5403226	.4990426
<i>EduInstitution</i>	=1 if any member of the migrants' household is attaining or has attained education in the host country	.2925	.4554804
	Political characteristics		
<i>Year1998/99</i>	=1 if the migrants' household has emigrated during the war in 1998/99	.135468	.342645

## Appendix 4.2 The Martingale residuals for continuous variables

Figure A4.2.1 Finding functional form for household income per capita based on Martingale residuals

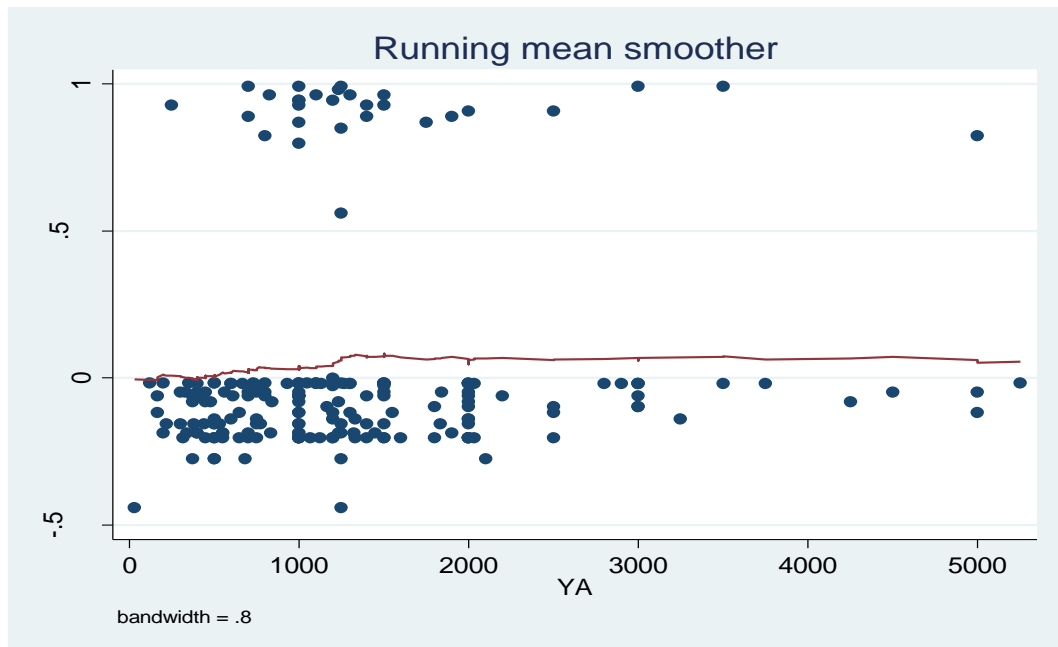
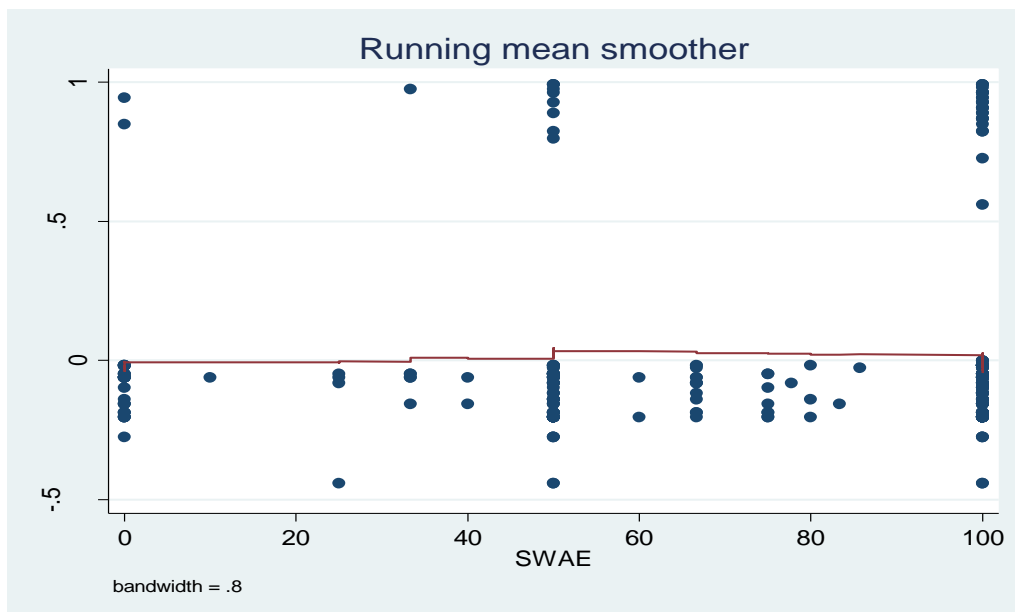
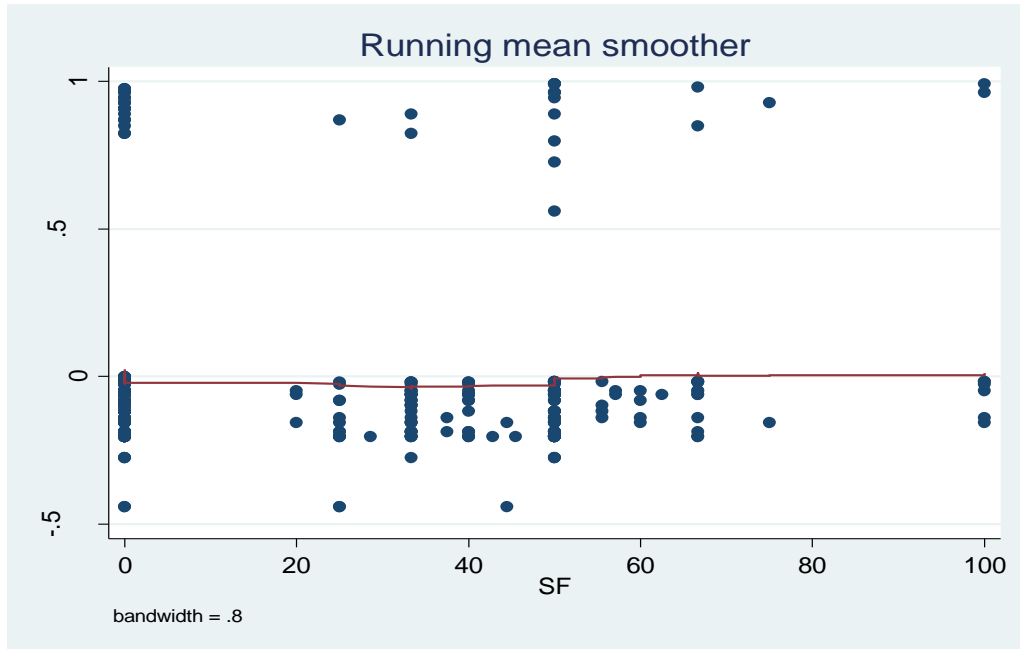


Figure A4.2.2 Finding functional form the share of those of working age employed based on Martingale

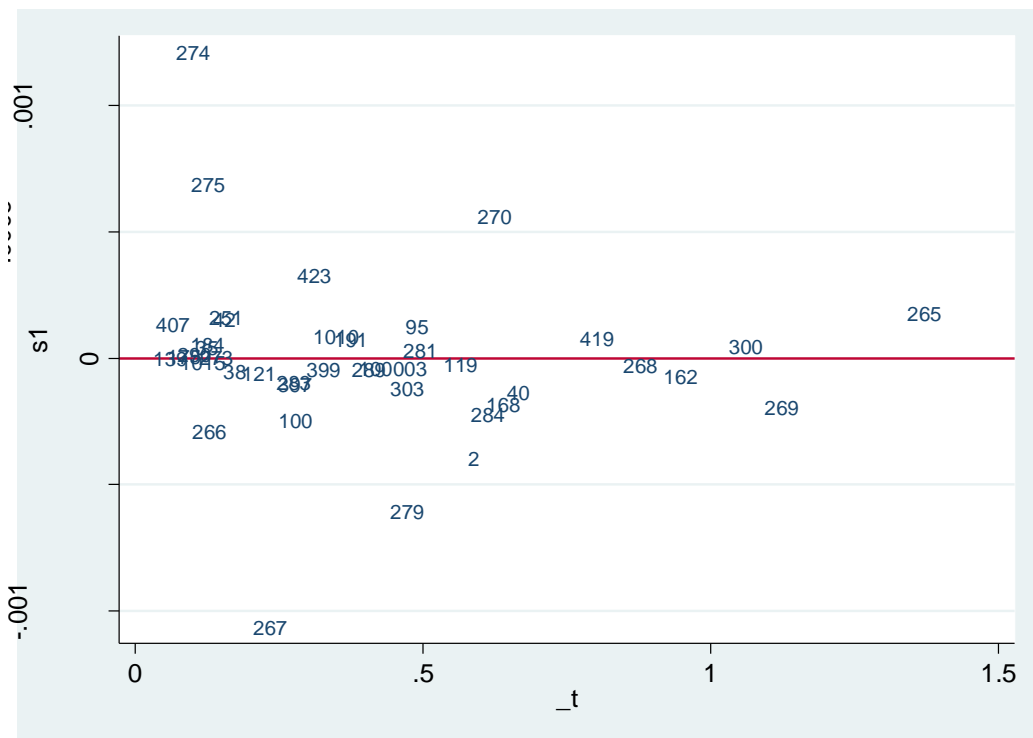


**Figure A4.2.3 Finding functional form for the share of females based on Martingale**

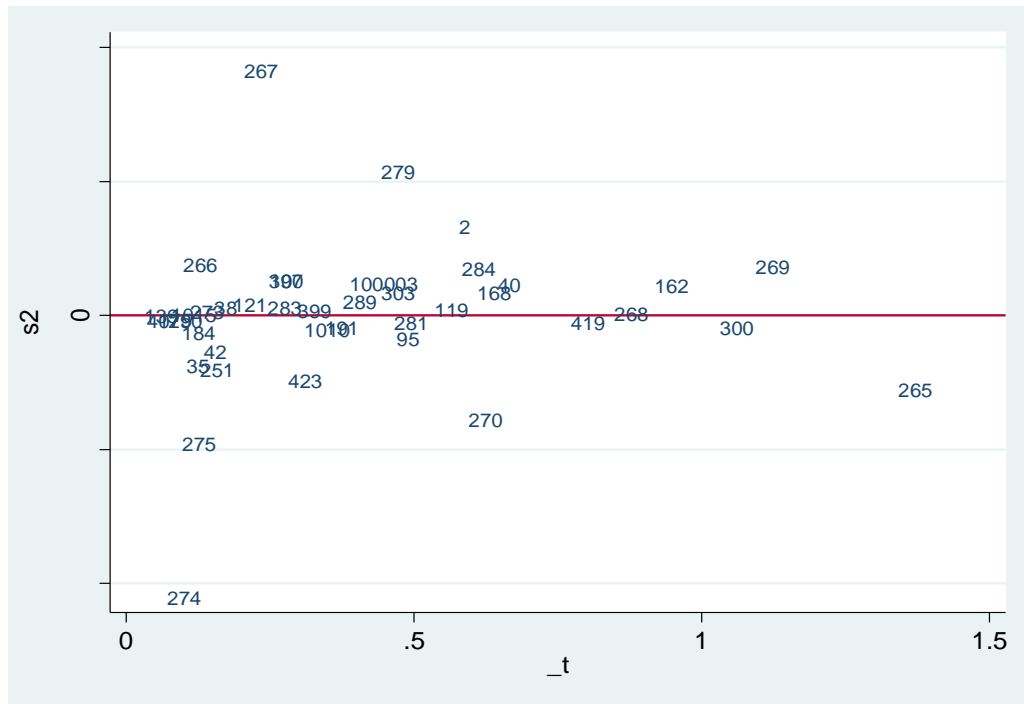


### Appendix 4.3 Dfbeta by variable

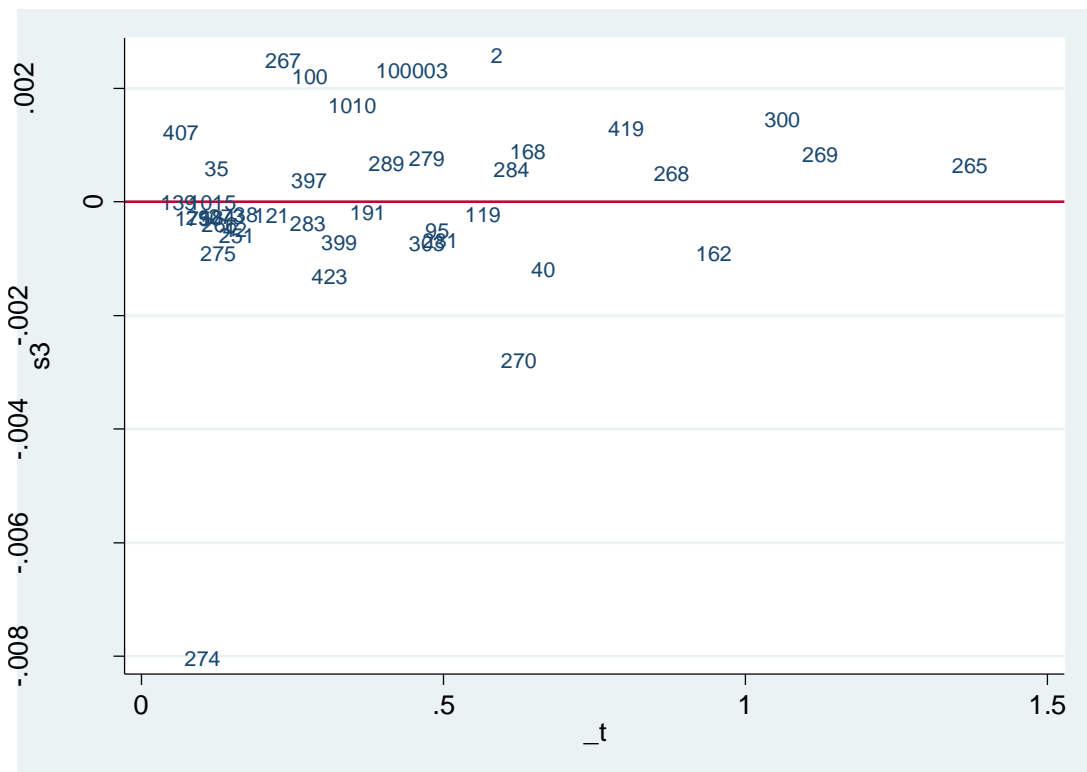
**Figure A4.3.1 Dfbeta for per capita income abroad**



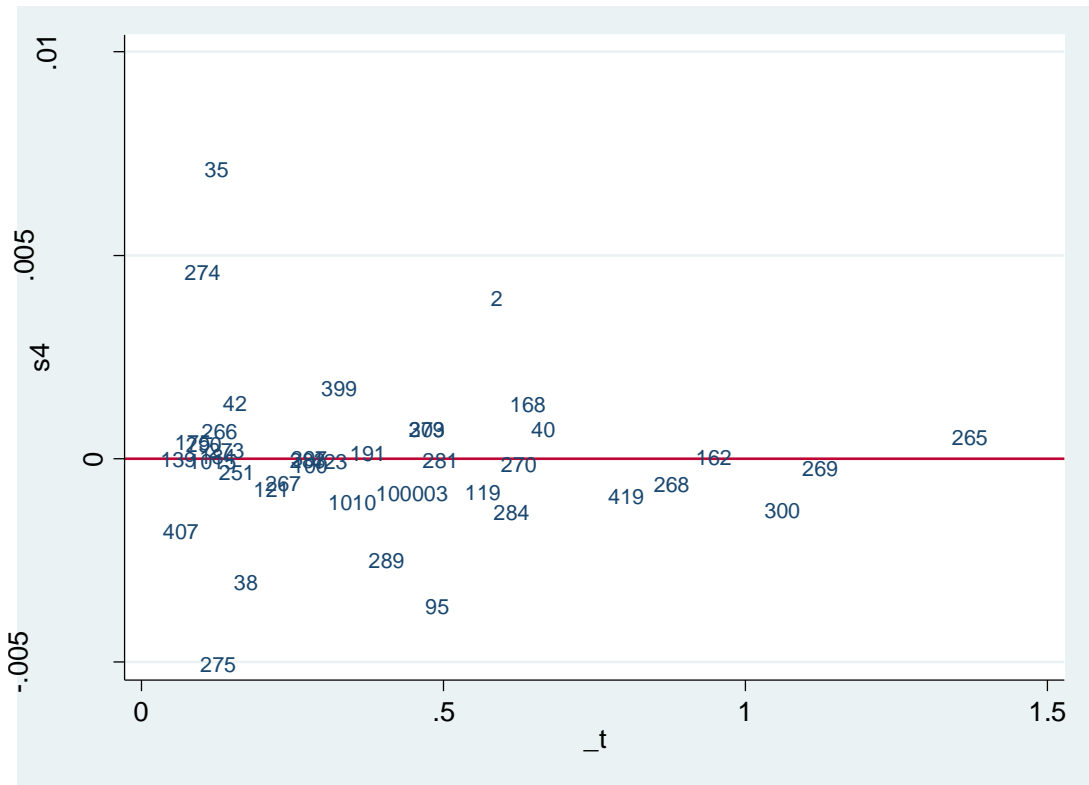
**Figure A4.3.2 Dfbeta for the squared term of per capita income abroad**



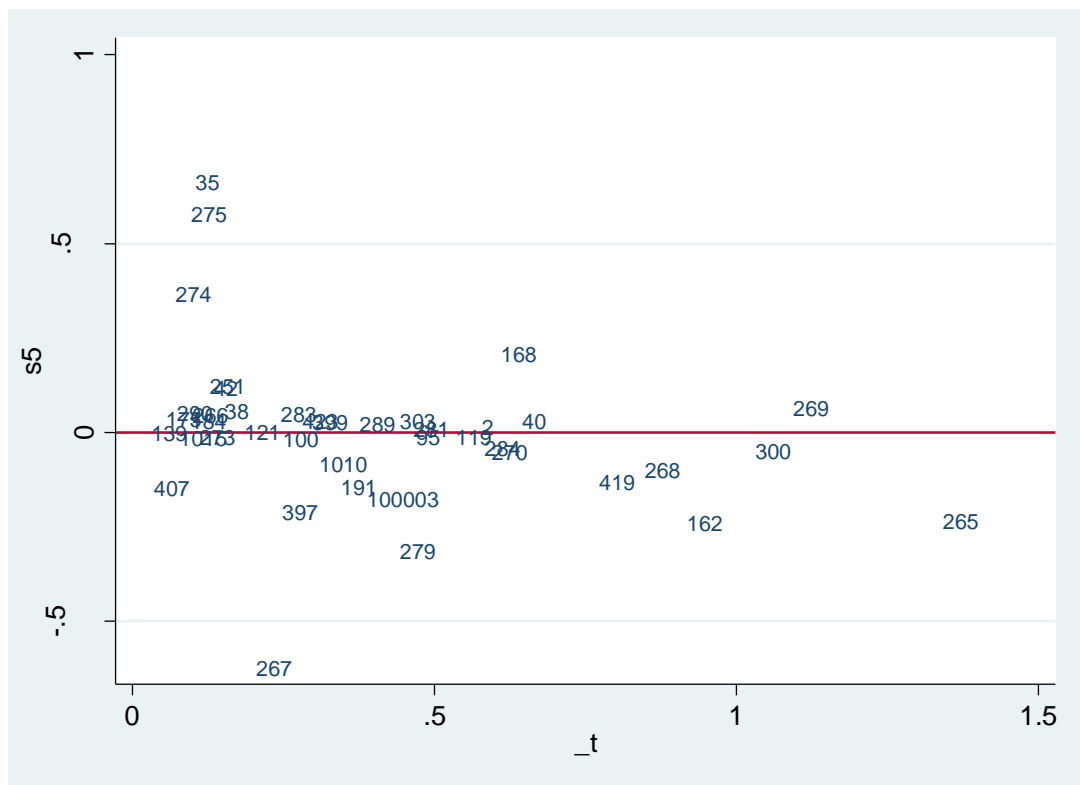
**Figure A4.3.3 Dfbeta for the share of those of working age who are employed**



**Figure A4.3.4 Dfbeta for the share of females**

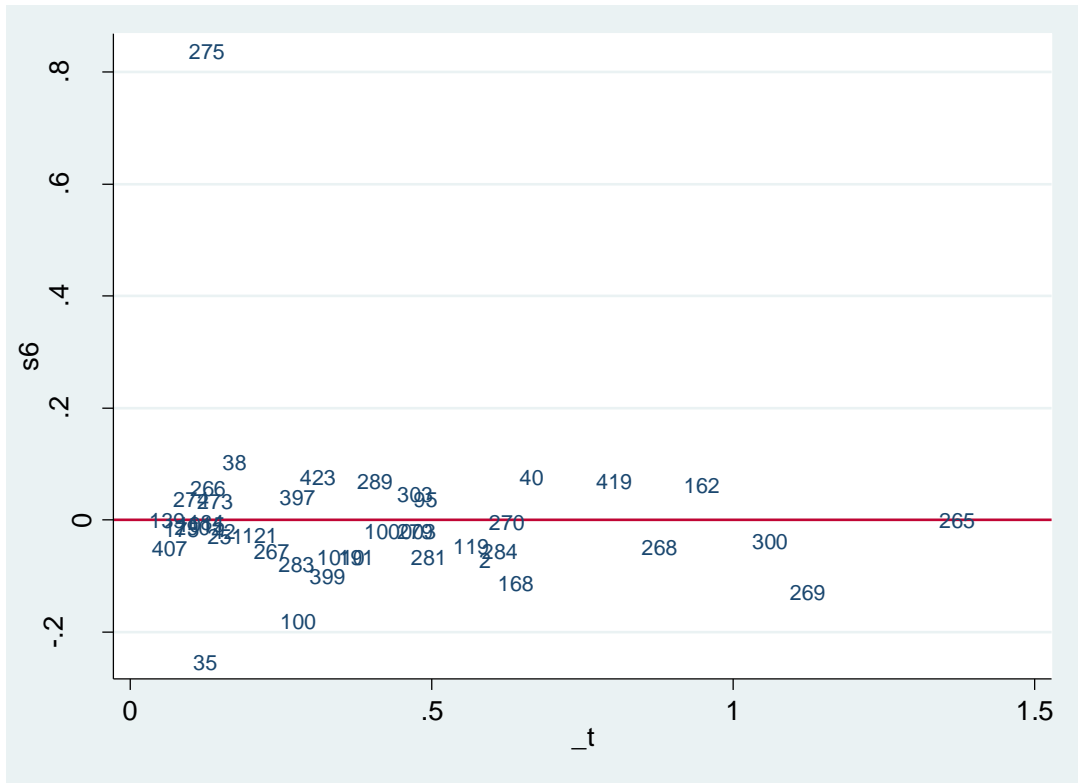


**Figure A4.3.5 Dfbeta for education**





**Figure A4.3.6 Dfbeta for number of nuclear families**



**Figure A4.3.7 Dfbeta for house ownership**

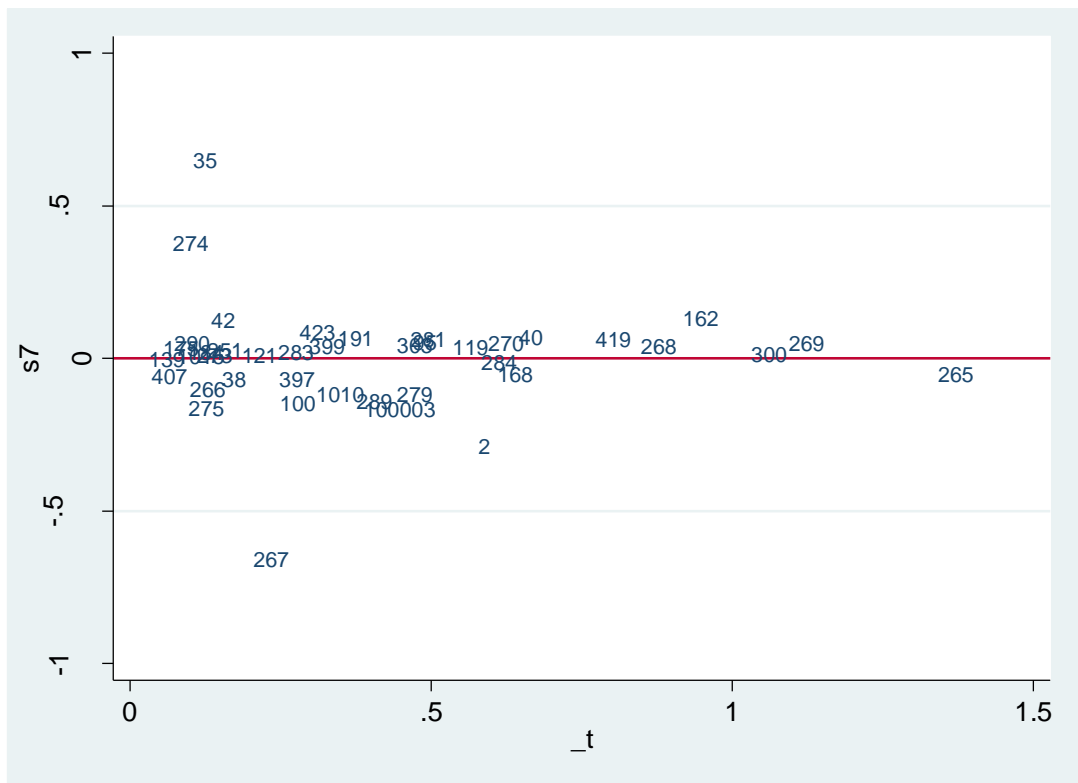
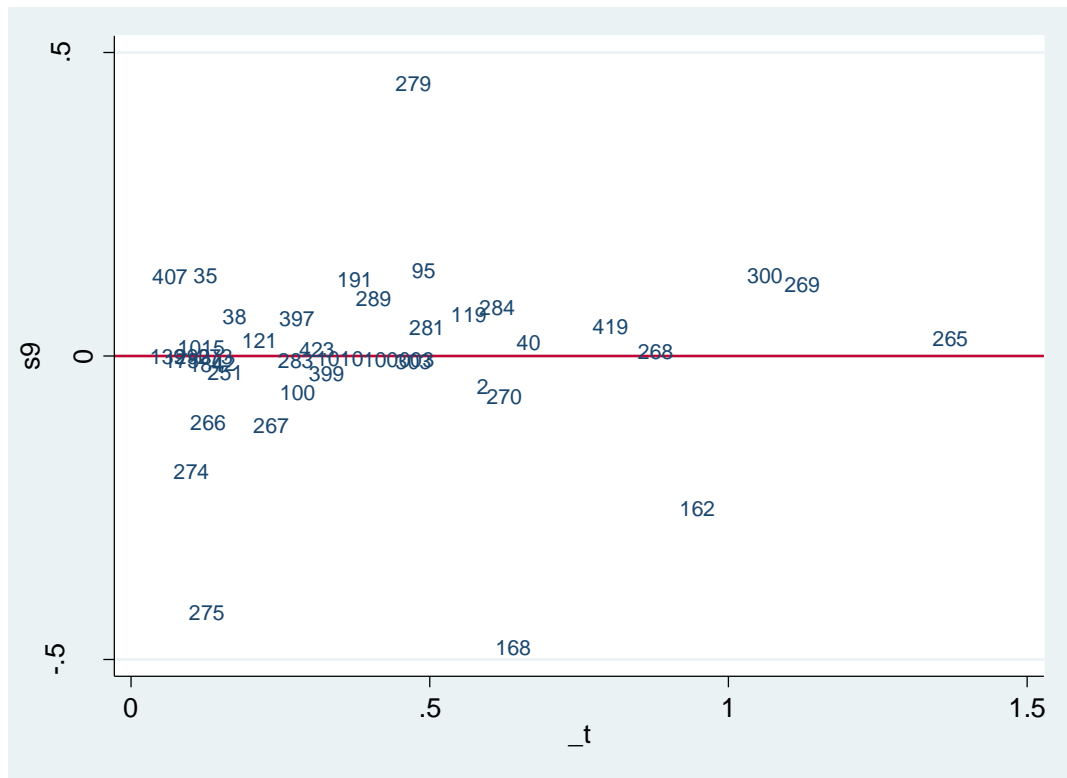


Figure A4.3.8 Dfbeta for Year 1998/99



## Appendix 5.1 Results from employing Multiple Imputation

**Table A.5.1.1 Emigration propensity – Model 1 including household migrant members employing multiple imputation**

	Kosova 2007		Kosova 2008	
	<b>Model 1a) Remittances as a continuous variable</b>			
	Marginal effects	P> t	Marginal effects	P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	-3E-04	0.07**	-2.6E-05	0.97
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>	2E-04	0.34	0.002	0.21
<i>TR<sub>i</sub></i>	-1.4 E-03	0.22	0.002	0.09*
<i>RDV</i>				
<i>TSU16</i>	9.8E-04	0.49	-0.005	0.23
<i>TSWA</i>	0.003	0.07**	-0.001	0.77
<i>TSFWA</i>	-0.002	0.12	-0.003	0.09*
<i>Edu</i>	-0.14	0.01***	0.004	0.94
<i>Improved</i>	-0.02	0.51	-0.05	0.38
<i>Worsened</i>	0.12	0.01***	0.23	0.01***
<b>Psychic income</b>				
<i>TS</i>	0.01	0.13	0.008	0.42
<i>Network</i>	-0.07	0.15	-0.24	0.06**
<i>TNuc</i>	-0.03	0.1*	0.01	0.80
<b>Location-related characteristics</b>				
<i>RU</i>	0.002	0.33	0.04	0.32
<i>TA</i>	0.08	0.01***	0.14	0.01***
Number of observations	1370		274	
Overall probability	0.28		0.25	

**Table A.5.1.2 Emigration propensity – Model 2 excluding household migrant members employing multiple imputation**

	Kosova 2007		Kosova 2008	
	Model 2a) Remittances as a continuous variable			
	Marginal effects	P> t	Marginal effects	P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of YH and YH_SQ</i>	-2.5E-04	0.20	1.1E-05	0.99
<i>Weighted sum of the marginal effects of YA and YA_SQ</i>	5.7E-05	0.20	9.9E-04	0.09*
<i>R</i>	-7E-04	0.34	0.7E-04	0.39
<i>RDV</i>				
<i>SU16</i>	2.4E-03	0.1*	-0.01	0.05**
<i>SWA</i>	4.2E-03	0.01***	-0.008	0.14
<i>SFWA</i>	-0.003	0.01***	-0.003	0.07**
<i>Edu</i>	-0.13	0.01***	-0.02	0.76
<i>Improve</i>	-0.04	0.37	-0.07	0.21
<i>Worsen</i>	0.13	0.01***	0.24	0.01***
<b>Psychic Income</b>				
<i>S</i>	-1.3E-03	0.87	0.015	0.24
<i>Network</i>	-0.08	0.07**	-0.29	0.01***
<i>Nuc</i>	0.03	0.29	0.02	0.72
Location-related				
<i>RU</i>	0.003	0.19	0.05	0.22
<i>TA</i>	0.07	0.01***	0.13	0.01***
Number of observations	1370		274	
Overall probability	0.28		0.25	

## Appendix 5.2 Results when introducing remittances as a dummy variable

**Table 5.2.1 Emigration propensity – Model 1b including household migrant members**

	Kosova 2007		Kosova 2008	
	<b>Model 1b) Remittances as a dummy variable</b>			
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	-9.1E-04	0.002***	7.6E-04	0.35
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>	6.8E-05	0.35	1.4E-03	0.001***
<i>RDV</i>	0.07	0.02***	0.27	0.001***
<i>TSU16</i>	1.4E-03	0.39	-2.9 E-03	0.60
<i>TSWA</i>	2.8E-03	0.06*	1.3 E-03	0.81
<i>TSFWA</i>	-1.0E-03	0.47	-2.7 E-03	0.14
<i>Edu</i>	-0.17	0.001***	-0.03	0.65
<i>Improved</i>	0.02	0.49	-0.05	0.49
<i>Worsened</i>	0.16	0.01***	0.29	0.001***
<b>Psychic Income</b>				
<i>TS</i>	5.4E-03	0.13	7.1 E-03	0.18
<i>Network</i>	-0.05	0.92	-0.24	0.001***
<i>TNuc</i>	-0.013	0.13	0.03	0.08*
<b>Location-related characteristics</b>				
<i>RU</i>	8.1 E-04	0.92	0.01	0.001***
<i>TA</i>	0.1	0.001***	0.08	0.26
<b>Model Fit Statistics</b>				
Number of observations	929		255	
Wald chi2	n/a		n/a	
Prob>chi2	n/a		n/a	
Pseudo R2	0.09		0.18	
Log pseudolikelihood	-515.00		-120.81	

**Table 5.2.2 A comparison of the emigration propensity with current and forward-looking expectations for 2008 – Model 1 Including household migrant members**

	Kosova 2008	
	Model 1b) Remittances as a dummy variable	
	Marginal effects	Cluster-robust P> t
<b>Household Characteristics</b>		
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	1.2E-04	0.05**
<i>Weighted sum of the marginal effects of TYAi and TYA_SQ</i>	1.4E-03	0.001***
<i>RDV</i>	0.31	0.001***
<i>TSU16</i>	-3.2E-03	0.62
<i>TSWA</i>	4.1E-04	0.95
<i>TSFWA</i>	-3.4E-03	0.12
<i>Edu</i>	-2.2E-03	0.97
<b><i>Future_Improved</i></b>	<b>-0.17</b>	<b>0.001***</b>
<b><i>Future_Worsened</i></b>	<b>0.16</b>	<b>0.08*</b>
<b>Psychic Income</b>		
<i>TS</i>	7.7E-03	0.17
<i>Network</i>	-0.22	0.01***
<i>TNuc</i>	0.02	0.16
<b>Location-related characteristics</b>		
<i>RU<sub>j</sub></i>	8.7E-03	0.07*
<i>TA<sub>j</sub></i>	0.07	0.43
Number of observations		
	255	
Wald chi2		
	n/a	
Prob>chi2		
	n/a	
Pseudo R2		
	0.15	
Log pseudolikelihood		
	-124.91	

**Table 5.2.3 Emigration Propensity – The marginal effect of Worsened**

	Kosova 2008 using mean values of 2007 sample		Kosova 2008 using mean values of 2007 sample	
	Model 1b) Remittances as a dummy variable			
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
<b>Household Characteristics</b>				
<i>Improved</i>	0.02	0.72	-0.06	0.49
<i>Worsened</i>	0.16	0.001***	0.28	0.001***

**Table 5.2.4 Emigration Propensity – Model 2 excluding household migrant members**

	Kosova 2007		Kosova 2008	
	<b>Model 2b) Remittances as a dummy variable</b>			
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of YH and YH_SQ</i>	-8.0E-04	0.004***	3.0E-05	0.74
<i>Weighted sum of the marginal effects of YA and YA_SQ</i>	7.2E-05	0.09*	4.6E-04	0.001***
<i>RDV</i>	-0.02	0.56	0.28	0.001***
<i>SU16</i>	2.3E-03	0.08*	-5.7E-03	0.53
<i>SWA</i>	3.6E-03	0.001***	-3.1E-03	0.75
<i>SFWA</i>	-1.6E-03	0.23	-2.1E-03	0.04**
<i>Edu</i>	-0.16	0.001***	-0.02	0.83
<i>Improved</i>	6.5E-03	0.76	-0.06	0.37
<i>Worsened</i>	0.16	0.001***	0.31	0.001***
<b>Psychic Income</b>				
<i>S</i>	-3.8E-03	0.61	0.02	0.02**
<i>Network</i>	-0.06	0.27	-0.3	0.001***
<i>Nuc</i>	0.03	0.03**	0.04	0.04**
<b>Location-related characteristics</b>				
<i>RU</i>	1.1E-03	0.86	0.01	0.01***
<i>TA</i>	0.09	0.001***	0.07	0.36
<b>Summary Statistics</b>				
Number of observations	929		255	
Wald chi2	n/a		n/a	
Prob>chi2	n/a		n/a	
Pseudo R2	0.09		0.20	

Comparing this estimation model (Model 2b reported in Table A5.2.4) with the similar model where the household includes migrant members (Model 1b reported in Table A5.2.1) there are slight changes but the results are similar for 2007. Again, ignoring variables the marginal effects of which are significant only at the 10 per cent level, the only differences are the marginal effects of remittances and of the number of nuclear families. The former is positive and significant in Model 2b. However, the latter is negative and insignificant in Model 1b, but in Model 2b it is positive and significant, which is in line with



its expected sign. The marginal effect of remittances is negative and insignificant in Model 2b, while positive and significant in Model 1b. According to the theoretical framework, this variable is expected to have an ambiguous impact. Using the 2008 data set, results are similar for the two model specifications. The only differences are the marginal effect of the share of females in those of working age which is negative in both, but significant only in Model 2b, and the marginal effect of household size which is positive in both, but significant only in Model 2b.

### Appendix 5.3. Blinder-Oaxaca decomposition technique: analysis of stability of the emigration propensity between 2007 and 2008 when introducing remittances as a dummy variable

**Table A5.3.1 Blinder-Oaxaca decomposition - analysis of overall stability over time of the emigration propensity between 2007 and 2008**

	Model 1b)		Model 2b)	
	Coefficient effects	P> t	Coefficient effects	P> t
<b>Using 2008 as the standard (Omega=1)</b>				
Characteristics effect	-0.04	0.38	0.08***	0.73
Coefficients effect	0.01	0.85	-0.04	0.30
<b>Using 2007 as the standard (Omega=0)</b>				
<b>Characteristics effect</b>	<b>-0.04</b>	<b>0.07**</b>	<b>-0.01</b>	<b>0.51</b>
<b>Coefficients effect</b>	<b>0.01</b>	<b>0.76</b>	<b>-0.02</b>	<b>0.57</b>
Number of observations for group A	255		255	
Number of observations for group B	929		929	
Bootstrap replications	50		50	

**Table A5.3.2 Blinder-Oaxaca-Fairlie decomposition - detailed analysis of stability over time of the emigration propensity between 2007 and 2008**

	Model 1b)		Model 2b)	
Emigration Propensity	Coefficients effects	P> t	Coefficients effects	P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>				
<i>Weighted sum of the marginal effects of TYA and TYA_SQ</i>				
<i>TR</i>				
<i>RDV</i>	0.005	0.24	0.005	0.28
<i>TSU16</i>	4.0E-04	0.92	-0.002	0.71
<i>TSWA</i>	9.6E-04	0.73	-1.8E-05	0.99
<i>TSFWA</i>	-0.007	0.55	-4.5E-04	0.70
<i>Edu</i>	3.6E-04	0.74	3.4E-04	0.76
<i>Improved</i>	-1.3E-04	0.97	-2.1E-04	0.96
<i>Worsened</i>	-0.005	0.004***	-0.005	0.004***
<b>Psychic Income</b>				
<i>TS</i>	1.4E-04	0.91	0.001	0.51
<i>Network</i>	-0.003	0.29	-0.001	0.65
<i>TNuc</i>	-0.001	0.78	-6.8E-04	0.92
<b>Location-related characteristics</b>				
<i>RU</i>	-7.0E-04	0.6	-7.4E-04	0.60
<i>TA</i>	-0.003	0.03***	-0.002	0.04***
<b>Number of observations</b>				
Number of observations	1170		1170	

## Appendix 6.1 Results from employing Multiple Imputation

**Table A.6.1.1 Emigration propensity – Model 1 including household migrant members employing multiple imputation**

	Kosova 2008		Albania 2008	
	<b>Model 1a)</b>			
	<b>Remittances as a continuous variable</b>			
	Marginal effects	P> t	Marginal effects	P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of TYH and TYH_SQ</i>	-1.9E-04	0.77	-0.003	0.001***
<i>TSWAE</i>	7.6E-04	0.42	-0.001	0.80
<i>TR</i>	8.3E-04	0.39	-0.005	0.16
<i>RDV</i>				
<i>TSU16</i>	-0.006	0.21	0.003	0.09*
<i>TSWA</i>	-0.002	0.69	0.001	0.07
<i>TSFWA</i>	-0.003	0.15	0.0004	0.98
<i>Edu</i>	0.12	0.85	-0.04	0.62
<i>Improved</i>	-0.05	0.44	0.06	0.40
<i>Worsened</i>	0.22	0.001***	0.04	0.63
<b>Psychic Income</b>				
<i>TS</i>	0.004	0.68	0.04	0.001***
<i>Network</i>	-0.02	0.80	-0.14	0.001***
<i>TNuc</i>	0.02	0.63	-0.12	0.02***
<b>Location-related characteristics</b>				
<i>RU</i>	0.004	0.31	-0.004	0.31
<i>TA</i>	0.15	0.01***	-0.16	0.001***
<b>Number of observations</b>				
Number of observations	1370		274	
<b>Overall probability</b>				
Overall probability	0.28		0.25	

**Table A.6.1.2 Emigration propensity – Model 2 excluding household migrant members employing multiple imputation**

Variable	Kosova 2008		Albania 2008	
	<b>Model 2a) Remittances as a continuous variable</b>			
	Marginal effects	P> t	Marginal effects	P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of YH and YH_SQ</i>	-1.3E-05	0.98	-0.002	0.19
<i>COXSWAE</i>	9.5E-04	0.31	-3.0E-04	0.75
<i>R</i>	6.3E-04	0.39	-0.004	0.35
<i>RDV</i>				
<i>SU16</i>	-0.009	0.06**	0.004	0.1*
<i>SWA</i>	-0.007	0.16	0.004	0.001***
<i>SFWA</i>	-0.002	0.11	-0.0007	0.72
<i>Edu</i>	0.02	0.78	-0.04	0.34
<i>Improved</i>	-0.05	0.39	0.005	0.92
<i>Worsened</i>	0.21	0.001***	0.04	0.34
<b>Psychic Income</b>				
<i>S</i>	0.005	0.67	0.05	0.04**
<i>Network</i>	-0.01	0.87	-0.10	0.01***
<i>Nuc</i>	0.04	0.44	-0.08	0.06**
<b>Location-related characteristics</b>				
<i>RU</i>	0.005	0.23	-0.005	0.38
<i>TA</i>	0.13	0.01***	-0.16	0.001***
<b>Number of observations</b>				
Number of observations	1370		274	
<b>Overall probability</b>				
Overall probability	0.28		0.25	

## Appendix 6.2 Results when introducing remittances as a dummy variable

**Table 6.2.1 Emigration propensity – Model 1b including household migrant members**

	Kosova 2008		Albania 2008	
	<b>Model 1b) Remittances as a dummy variable</b>			
	Marginal effects	Cluster robust P> t	Marginal effects	Cluster robust P> t
<b>Household Characteristics</b>				
Weighted sum of the marginal effects of TYH and TYH_SQ	5.2E-05	0.73	-0.0008	0.21
TSWAE	0.001	0.03***	-0.0005	0.45
TR				
RDV	0.22	0.01***	-0.10	0.02***
TSU16	-0.002	0.65	0.002	0.24
TSWA	0.002	0.63	0.001	0.40
TSFWA	-0.002	0.26	-0.001	0.40
Edu	0.02	0.85	-0.02	0.87
Improved	-0.07	0.38	0.04	0.19
Worsened	0.21	0.001***	0.04	0.38
<b>Psychic Income</b>				
TS	-0.0004	0.96	0.04	0.02***
Network	-0.09	0.27	-0.11	0.05**
TNuc	0.02	0.06**	-0.12	0.003***
<b>Location-related characteristics</b>				
RU	0.005	0.01***	-0.003	0.81
TA	0.14	0.05**	-0.16	0.002***
Number of observations	350		802	
Wald chi2	n/a		n/a	
Prob>chi2	n/a		n/a	
Pseudo R2	0.13		0.08	
Log likelihood	-147.75		-509.05	

**Table 6.2.2 Emigration propensity – Model 2 excluding household migrant members**

	Kosova 2008		Albania 2008	
	<b>Model 2b) Remittances as a dummy variable</b>			
	Marginal effects	Cluster-robust P> t	Marginal effects	Cluster-robust P> t
<b>Household Characteristics</b>				
<i>Weighted sum of the marginal effects of YH and YH_SQ</i>	6.15E-05	0.69	-8.3E-05	0.16
SWAE	0.0009	0.06**	-0.0002	0.81
<i>R</i>				
<i>RDV</i>	0.22	0.04**	-0.11	0.01***
<i>SU16</i>	-0.003	0.65***	0.004	0.003***
<i>SWA</i>	-0.001	0.88	0.003	0.001***
<i>SFWA</i>	-0.003	0.13	-1.5E-04	0.99
<i>Edu</i>	0.01	0.87	-0.08	0.94
<i>Improved</i>	-0.09	0.25	0.05	0.18
<i>Worsened</i>	0.21	0.001***	0.03	0.44
<b>Psychic Income</b>				
<i>S</i>	-0.004	0.95	0.05	0.03***
<i>Network</i>	-0.06	0.46	-0.09	0.19
<i>Nuc</i>	0.03	0.07*	-0.10	0.02***
<b>Location-related characteristics</b>				
<i>RU</i>	0.06	0.001***	-0.002	0.89
<i>TA</i>	0.15	0.05****	-0.16	0.002***
<b>Model Fit Statistics</b>				
Number of observations	349		8	
Wald chi2	n/a		n/a	
Prob>chi2	n/a		n/a	
Pseudo R2	0.13		0.08	
Log likelihood	-147.75		-509.05	

**Appendix 6.3 Blinder-Oaxaca decomposition technique: analysis of stability of the emigration propensity between Kosova and Albania when introducing remittances as a dummy variable**

**Table A6.3.1 Blinder-Oaxaca decomposition - analysis of stability of the emigration propensity between Kosova and Albania**

	Model 1b)		Model 2b)	
	Coefficient effects	P> t	Coefficient effects	P> t
Using Kosova as the standard				
Characteristics effect	-0.02	0.52	-0.06	0.16
Coefficients effect	0.19	0.001***	0.23	0.001*****
Using Albania as the standard				
Characteristics effect	-0.07	0.25	-0.04	0.58
Coefficients effect	0.24	0.001***	0.21	0.01***
Number of observations A	802		802	
Number of observations	300		300	
Bootstrap replications	50		50	