

**AMERICAN UNIVERSITY OF ARMENIA**

**Brain Drain in Armenia: The Impact of Education on  
Migration Intentions**

**A MASTER'S ESSAY SUBMITTED TO  
THE FACULTY OF THE GRADUATE SCHOOL OF  
POLITICAL SCIENCE AND INTERNATIONAL AFFAIRS**

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## **Abstract**

The phenomenon of brain drain occurs both in developed and developing countries. Brain drain is also a common phenomenon in Armenia. The objective of the research is to identify intentions to migrate among people with higher education in Armenia. Factors encouraging brain drain in Armenia are also included as a part of the research. Quantitative and qualitative methods are used to analyze both secondary and primary data included in the research.

The paper demonstrates that the unemployment rate among people with higher education has been increasing in Armenia over the past decade. The main findings of the research suggest that temporary intentions to migrate are high among those people who have higher education.

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## **Introduction**

Armenia is one of the countries with highest migration rates among the former Soviet republics. Migration rates especially accelerated after the collapse of the Soviet Union. Migration of people with higher education, known as brain drain, is also one of the main concerns for Armenia.

In this regard, the aim of the current master's essay is to discuss the problem of brain drain as well as factors contributing to brain drain in Armenia. Education is one of the factors that may have a crucial role in encouraging migration intentions. The hypothesis and the research questions of the study are:

H1: People with higher education display more of a desire to migrate abroad compared to those who do not have higher education.

RQ1: How are people with higher education compensated in the Armenian labor market?

RQ2: What are the main factors encouraging migration intentions among people with higher education?

RQ3: Does the factor of having a family member living abroad increase the potential intention to migrate?

The paper includes six chapters. The first chapter is literature review. Different journal articles and academic sources are included in literature review to understand different aspects and studies conducted on brain drain. The second chapter describes the methodology of the research. In order to understand migration intentions among people with high education in Armenia, first of all it is important to understand migration patterns in Armenia in general. To

this extent, the third chapter includes analysis on migration in Armenia derived from the secondary data. The fourth chapter examines migration intentions among people with higher education in Armenia. However, before examining the migration intentions among people with higher education it is important to observe how people with higher education are compensated in the Armenian Labor market. In this regard, the first step was to find out the unemployment rate of the total labor force in Armenia and the unemployment rate of the people with higher education. The analyses of the primary data: survey findings and focus group discussions are included in the fifth chapter. The findings of survey are also compared with the findings of the focus groups discussions. The final chapter includes Caucasus Barometer 2012 survey analysis aimed to answer the last research question formulated for the study. The testing of hypothesis is also included in the final part of the chapter based on the statistic analyses of the survey results. At the end of the essay, limitations are discussed, recommendations are formulated and final conclusions are summarized.

## **Chapter 1: Literature Review**

### **1.1 Labor Migration**

The phenomenon of international mobility of capital and labor occurred in the history of global economy in the beginning of the 19<sup>th</sup> century. The first period of international mobility of capital and labor was introduced by major flows of international migrations. Because during that period the majority of immigrants were unskilled workers, countries understood the need to implement new policies in order to attract skilled immigrants thereby boosting economic development. However, enacted policies and mass immigration terminated with the outbreak of the First World War, and the economic reconstruction of labor mobilization process reformed after the Second World War. In the twentieth century, however, one of the major impacts of globalization became the increasing role of knowledge. The accumulation of knowledge has become one of the core factors of the country's economic development, thus making it competitive in a global economy (Solimano & Watts, 2005; World Bank, 2002).

The technological revolution has had its impact on the global market too. Over twenty years the proportion of high-tech commodities has increased from 30% to 50% resulting in the need for high skilled workers. In order to respond to the increased demand of high-skilled workers in the technological industry, many developed countries have to accommodate the demand of the labor market by skilled workers from other countries (World Bank, 1999).

In regard to the recruitment of qualified workers Güngör (2003) mentions that: "The migration of educated individuals is often considered to be an expensive 'gift' given by the developing world to the economically advanced countries, where the developed countries reap



the benefits of developing countries' investment in education at apparently little cost.”(Güngör, 2003, p. 2).

## **1.2 Brain Drain: Positive and Negative Effects**

The movement of immigrants with higher education in modern literature came to be known as “Brain drain”: departure of educated people from source country to target country. The first implications of brain drain in the 1950s literature appeared when a huge wave of scientists from different parts of the world migrated to the USA. In modern literature migration of scientists was more implemented as transfer or exchange of people with tertiary education from developing countries to developed ones (Bein & Docquier, 2004).

During the period of 1961–1979 over 600,000 specialists from developing countries migrated to developed countries. The majority of migrants were established in the United States (Jałowicki & Gorzelak, 2004). Even in the late 1960s when migration rates among migrates with high education dramatically increased, not all scholars viewed the movement of skilled professionals from countries of origin as a negative factor (Skeldon, 2009).

For instance, Blaug (1969) does not consider brain drain as a threat, emphasizing the argument that science is universal. Scientists, therefore, provide their talent, experience, and knowledge for humankind regardless the place where they reside and work. To this extent, brain drain is profitable for the source countries: emigrated high educated people can contribute to their home countries. The short term loss to the source country may be a gain in the long term period. The reason is that emigrated workers can contribute to their families by sending remittances (Gabel, 1982).

Brain drain literature of the 1970s and 1980s mainly concentrated on short run effects rather than considering the long run effects of the brain drain. On the other hand, brain drain in modern literature finds its positive effects too. For instance, brain drain can positively affect the unemployment rate in a country. The emigration of skilled workers reduces the number of workers in a given labor market, thus people get more opportunity to ensure their workplace (Bein & Docquier, 2001).

Many believe that brain drain degrades human capital in developing countries by weakening the economic growth. However, human migration is not a crucial point in degrading the social welfare, which mainly depends on the individual's ability to save and invest. Development of production will stagnate with less investment in physical capital even if no skilled person or no export of technology occurs. This can be seen especially in socialist economies where brain drain is more evident (Glăvan, 2008).

On the other hand, brain drain is not always beneficial. One of the studies done by World Bank in the United States showed that brain drain can be transformed into brain waste, when the skillful workers do not apply their knowledge in a certain sphere. The study finds differences in placement among highly educated immigrants from different countries. Immigrants with higher education from Latin America or Eastern Europe are more likely to work in unskilled jobs, than those who immigrated from Asia or the Middle East (Özden & Schiff, 2006).

Horvat (2004) mentions that brain drain is especially becoming a matter of concern for many developing countries: the departure of people with higher education can hinder economic development of these countries. If the government does not implement proper policies to regulate the outflow of skilled migrants or does not implement policies to reverse skillful immigration,

outward immigration will lead to drain, thus eroding human resource capital stock which is especially vulnerable for the developing countries (Thomas-Hope, 2002).

The threat of brain drain is not only common in developing countries but also in developed countries. Canada, for instance, has been losing its skilled workers to the United States. The reason for migration is that the labor market of the United States provides better job opportunities. The loss of qualified workers is not only characterized as departure of individuals, rather those qualified individuals create positive externalities for society. Thus, for Canada brain drain raises several critical issues in economic, fiscal and civic sectors. Skilled workers are the most vital inputs to knowledge-based industries. Therefore, the departure of these people mainly hinders economic development of the country. In the fiscal sector the departure of skilled workers lowers the net contribution to the public sector, thus diminishing the government's ability to finance crucial social services and investments for many citizens. The skilled workers also have their contribution in creating innovative community programs, research centers, and other activities regarding civil society development (Kesselman, 2001).

### **1.3 Factors Encouraging Migration Intentions among Skilled Workers**

While speaking about skilled immigration and about those benefits and drawbacks it is essential to identify the dynamics of brain drain or what are the main reasons for those skillful migrants to leave the country. The trends of migration to Western countries hint to reasons such as higher salaries, better working conditions, stability and political freedom, and improved educational prospects for their children (Jałowicki & Gorzelak, 2004)

The incentives promoting migration are mostly of socio-economic origin. However, the intentions to migrate very often are influenced by friends, family members, and relatives living

abroad. For instance, upon completing studies in universities in host countries, students are very often inclined to pursue their career goals in the host country rather than to return to the homeland. These students, furthermore, encourage other students (friends) to migrate as well. (Dzvimbo, 2003).

The study on the return migration to Armenia 2002-2008 funded by the OSCE Office in Yerevan reveals that students' involvement in migration corresponds to less than one percent of the Armenian households. But student migration has a multiplier effect. In the majority of the student migration cases (60 percent) if a family member is involved in student migration the possibility that the other family member will also be involved in migration for studying purposes is greater (Minasyan, Poghosyan, Gevorgyan, & Chobanyan, 2008).

Another study indicates that education has significant role encouraging migration intentions. One of the arguments is that educated people are more compliant to the changes. Educated people also face fewer risks in migration as compared to those who do not have higher education. One of the examples is the fact that generally high educated people usually have high paid jobs as compared to others. This encourages people with higher education to save money for realizing migration intentions (Levy & Wadycki, 1974).

#### **1.4 Studies on Brain Drain**

A study has been conducted concerning the migration of scientists from ten transition countries. The aim of the study was to evaluate the process and to analyze the results of brain drain in East Central European Countries. The potential migration survey includes only employees directly involved in research in order to evaluate the potential migration of skilled workers. An in-depth survey was carried out in ten Central and Eastern European (CEE)

countries. The study reveals that brain drain has caused several major economic problems hindering development of these countries. The phenomenon of brain drain is still continuing in Central and Eastern European countries (European Commission, 1997).

Another research was conducted by the Research Institute for Labor and Social Affairs Prague in 2009 to evaluate the susceptibility of migration among skilled workers in the Czech Republic. The findings of the questionnaire-based survey of the selected groups of specialists exposed to migration shows considerable differences in the willingness and in the readiness to migrate. The general findings are that the migration of qualified workers usually takes a longer period of time. Specialists also take longer to prepare for their stay abroad. The readiness to migrate among the specialists is influenced by different factors such as age, language skills, and family ties. The general findings of the study showed that majority of respondents did not intend to leave the country. The following decision explained by the fact that the majority of the respondents did not want to live separate from their families. Besides, they feared to face difficulties in an unknown environment (Vavrečková, 2009).

### **1.5 Brain Drain in Armenia**

The phenomenon of brain drain is common in Armenia too. The problem became more acute especially after the collapse of the Soviet Union when thousands of people emigrated from the country. However, the number of studies addressing brain drain in Armenia is quite limited. One of the studies concerning brain drain was conducted by the International Labor Organization in 2009 to evaluate the current situation of brain drain in Armenia. The report particularly underlines the fact that there are certain problems with professional education in Armenia. The Armenian labor market cannot absorb all the labor due to excessive supply of certain

professional groups. Very often, however, "...the qualifications of graduates of Soviet education institutions are no longer needed by the employers and young graduates of Armenian secondary specialized and tertiary education are equally not equipped by the necessary set of skills." (ILO, 2009, p.47).

To summarize, skilled migration or brain drain, in particular, has come under strong criticism on the grounds that it can have a cumulative negative effect on weak economies. This problem is peculiar to many developing countries and the reasons for brain drain or factors leading to it may vary from country to country. There is also an ethical dimension concerning brain drain as mostly the sending countries bear the costs of educating the potential migrants, while the receiving countries enjoy the benefits.

## **Chapter 2: Methodology**

This research is based on both primary and secondary data and combines qualitative and quantitative methods. The primary data was collected by means of two focus group discussions and a survey.

The focus groups included 7 and 6 participants respectively; each focus group discussion lasted for about an hour. The participants of the focus group discussions were graduates of different universities with at least Masters degree. The aim of the first focus groups twofold: to discuss the main topic of the study and to inform the design of the questionnaire for the consecutive online survey with professionals (see below). The second focus group discussion was organized after the online survey was completed. The participants for the second focus group were selected based on their answers to the survey.

The online survey was conducted from February 16 to April 4 among 226 high educated people who completed bachelor, master and PhD and doctorate degrees. Some questions included in the online survey were retrieved from the Caucasus Barometer survey questionnaire (2011). Other questions which were included in the survey questionnaire were derived from the study conducted by Research Institute for Labor and Social Affairs of Prague (2009). The questions formulated based on the first focus group discussion were also included in the online survey. Based on literature review and secondary data the following four professions were identified as the target group for the survey: Political Science/International Affairs, Business/Economics/Finance, Linguistics, and IT/Engineering. The sampling method used was the snowball method. The link to the survey was distributed via professional directories and websites, requesting the participation of the abovementioned groups. The survey, however, was

not representative. In order to observe the results of the online survey SPSS 16.0 program was run.

The secondary data of the research is derived from reports and yearbooks of the National Statistical Service of Armenia. Reports from International organizations were also included to obtain a comprehensive understanding of migration tendencies in Armenia, in general, and within the context of brain drain in migration. The Caucasus Barometer survey data is also used in this study. This nationwide representative survey was by the CRRC on October 26 to November 29, 2012, and is based on the responses of 2384 Armenian residents. The survey was conducted using face-to-face interviews with adults 18 years or older.



## **Chapter 3: Migration in Armenia**

### **3.1 Migration after the Collapse of the Soviet Union**

The collapse of the Soviet Union and communist regime fostered massive changes almost in all spheres of the former soviet countries. The former soviet countries underwent major change in the market economy by advancing freedom of enterprise and trade allowing a wider choice of free market transactions and consumption of goods and services. On the other hand, without sufficient development of new industrial sectors in post Soviet countries, unemployment, inequality and poverty increased. The inequality resulted from changes in the structure of wages and from changes in the composition of the labor force. The rising inequality along with other economic, political, and social changes increased incentives to emigrate from these countries during the past two decades. This was especially marked in the South Caucasus and Central Asia, which basically depended on trans-Soviet economic linkages prior to 1991 (Ganguli,2008: Bezemer & Lerman, 2004).

Sharp increase in emigration from the former Soviet countries during the first years of their independence has been explained mostly by ethnic conflicts, especially in the South Caucasus where the political conflicts along with the preceding wars in the region contributed to mass emigration rates. Thus, within the former Soviet countries, the immigration rates in the region are among the highest. Despite the high scale migration rates in the South Caucasus, the literature referring to migration issues lacks systematic research (Dermendzhieva, 2011).

The study on migration done in 2009 by Gallup reveals that about seventy million people living in the CIS countries (the Commonwealth of Independent States including Georgia and Turkmenistan) have the intention to migrate for work and study purposes on a temporary basis.

The study estimates that one in four adults have the intention to migrate for the temporary working purposes, amounting to 24 percent of the population, while those having work-study intentions amount to 25 percent (Esipova & Ray, 2010).

<i>Table 1: Desire to Migrate Permanently, for Temporary Work, or to Study</i>			
Caucasus countries: Armenia, Azerbaijan, Georgia			
European CIS: Belarus, Moldova, Russia, Ukraine			
Central Asia: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan			
	Would you like to move for temporary work	Would you like to study abroad/participate in work –study program	Would you like to move to another country permanently
	%	%	%
CIS overall	24	25	13
Caucasus	31	27	18
European CIS	23	24	13
Central Asia	27	30	10

*Note.* From “Gallup World”, retrieved from <http://www.gallup.com/poll/141746/million-cis-migratetemporarily-work-study.aspx> on April 4, 2013

The same study also shows that the intention to migrate varies from region to region. For instance, the desire to migrate on the temporarily basis is the highest in the Caucasus, and the desire to migrate permanently also ranks high on the list. The European CIS region (which includes Belarus, Moldova, Russia, and Ukraine) demonstrates the lowest expressed desire towards temporary immigration. In the Central Asia permanent intentions to migrate are the lowest as compared to the other two regions, while percentages of those interested in study are higher (Esipova & Ray, 2010).

The indicators for migration also vary among the countries. For example in Armenia the desire to migrate is one of the highest (intention to migrate permanently) among the CIS countries (Esipova & Pugliese, 2013).

*Table 2: Ideally, if you had the opportunity, would you like to move permanently to another country, or would you prefer to continue living in this country?*

Among the aged 15 and older in 12 former Soviet countries	
Country	% desire to migrate permanently
Armenia	40
Moldova	32
Ukraine	21
Belarus	17
Kyrgyzstan	16
Russia	14
Azerbaijan	14
Georgia	14
Kazakhstan	13
Tajikistan	11
Turkmenistan	6
Uzbekistan	5

*Note.* From “Gallup World”, retrieved from [http://www.gallup.com/poll/161591/desire-leave-fsu-ranges-widely-acrosscountries.aspx?utm\\_source=add\\_this&utm\\_medium=addthis.com&utm\\_campaign=sharing#.UV2CvyedKIw.facebook](http://www.gallup.com/poll/161591/desire-leave-fsu-ranges-widely-acrosscountries.aspx?utm_source=add_this&utm_medium=addthis.com&utm_campaign=sharing#.UV2CvyedKIw.facebook) on April 5, 2013

### **3.2 Migration Patterns in Armenia**

In order to understand the migration patterns in Armenia, the literature pertaining to the issue should be concentrated on the causes and consequences of migration. (Dulgaryan, Welton, Erlich, & Golda, 2008).

The emigration from Armenia accelerated especially in 1988 after the disastrous earthquake when about 200, 000 people emigrated from the country in 1988-1989. The Nagorno-Karabakh conflict also became one of the inducements for mass immigration wave, while the period after the declaration of independence escalated another wave of immigration due to economic and energy crisis. The transition period to the market economy being one of the difficult periods corresponded to 475,000 people choosing to leave the country (Yeghiazaryan, Avanesian, & Shahnazaryan, 2003).

The mass immigration of the 90's (especially in the beginnings) which resulted in permanent migration of 800,000 and 1,000,000 people has significantly changed due to considerable political, and economic stability in the country. The survey conducted by the OSCE (2008) on the return migration in Armenia in the period of 2002-2007 estimated the exodus of people amounted to 230,000 people (Minasyan et al., 2008).

The problem of brain drain, as in many countries, has also affected Armenia during the mass migration wave of the 90's. According to some estimates, about 300,000 high level professionals emigrated between 1991-2001, which constituted 34 percent of the migrants of that period. The majority of immigrants, about two thirds, were specialists in engineering and the sciences (Yeghiazaryan et al., 2003).

### **3.3 Positive and Negative Impacts of Migration in Armenia**

The phenomenon of migration in Armenia should be elaborated to understand its drawbacks and positive impacts. The benefits may be seen in economic terms. One of the benefits is related to the labor market. It is believed migration helps to balance the labor market. (ILO, 2009).

The negative consequences of migration similar to the positive ones, may affect different spheres of social, political, and economic life of the country. In this regard immigration of high educated professionals also creates serious problems in Armenia (Yeghiazaryan et al., 2003).

Remittances are often one of the most important financial contributors in the regions of Europe and Central Asia (ECA). Armenia is among five countries in Europe and Central Asia that receives the highest portion of remittances constituting to more than 10 percent of the GDP for the 2004 year (Mansoor & Quillin, 2006).

The other side of the remittances may bear adverse effects. Another finding on the remittances was observed by Grigoryan and Melkonyan (2011), stating that "...remittance-receiving household in Armenia work fewer hours. They also spend less on the education of their children, perhaps expecting to migrate themselves or are confined to a subsistence-type spending pattern by a combination of the remitter's oversight and moral hazard." (Grigoryan & Melkonyan, 2011, p.150).

### **3.4 Family Ties and Motives to Migrate**

Very often the direct information link for realizing migration intentions both for potential migrants and return migrants is provided by social networks including family members, friends, and colleagues. A survey with 349 respondents led by the Cross-Regional Information System on the Reintegration of Migrants in their Countries of Origin in Armenia in 2012 reveals that family support (especially financial) has an integral role in the migration decision-making process, also in the immigration related process (such as journey preparations). Therefore, the results reveal that 47.3 percent of the respondents received family support before immigration, while 11.3 percent obtained support already residing abroad. In the last case, return migration, 37 percent of the return migrants received assistance from the family links for realizing remigration intentions (CRIS, 2012).

Another survey was conducted by European Training Foundation (ETF) among 8000 respondents from Armenia and Georgia in the period 2011-2012. The study aimed to examine the relationship of development and skills and migration intentions between potential and returned migrants. According to the analyses of the study, family ties decrease the intentions to migrate. In this regard, in Armenia 72 percent of the returned migrants had children at home. Almost the same picture was observed in the Georgian case where 73.4 percent of the returned migrants had children. For returned migrants the main reasons to migrate for both countries are the lack of jobs in the home country, and better pay and career prospects in a host country. For the same questions, the prospective migrants cited the same motives for migration intentions (ETF, 2013).

The migration issues may vary from country to country depending on various factors including historical period. The South Caucasus with its three countries is one of the regions that encounter this issue. Particularly, for Armenia, migration is associated with several positive and negative aspects. Brain drain is one of the aspects of migration, although “...there is still no serious research on the impact of the “brain drain” on the development perspectives of Armenia” (Yeghiazaryan et al., 2003 p. 10).

## **Chapter 4: Migration among Skilled Workers in Armenia**

In order to understand how people with higher education are compensated in the Armenian labor market, it is necessary to observe the participation of skilled workers in the Armenian labor market, and what the main motives contributing to the migration intentions among people with higher education are. Before examining the above mentioned issues, it is also of great importance to get an overview of the holistic picture of the Armenian labor market.

### **4.1 The Armenian Population and Labor Market**

The Armenian population makes up 3,018,854. In this regard, while speaking about the Armenian labor market, it should be noted that the economically active population comprises 63 percent of the population for the 2011, while for the 2012 the rate slightly decreased amounting 62.7 percent (Census of Republic Armenia, 2011). According to Armenian National Statistical Service, the total unemployment rate for 2012 is 17.1 percent (See table 3). Though the unemployment rate is still high, it has dramatically decreased since 2001 when unemployment rate was 38.4 percent.



*Table 3: Unemployment rate (% of total labor force) in Armenia for the period 2001-2012*

<b>year</b>	<b>absolute value %</b>	<b>year</b>	<b>absolute value %</b>
<b>2012</b>	17.3	<b>2006</b>	27.8
<b>2011</b>	18.4	<b>2005</b>	31.2
<b>2010</b>	19.0	<b>2004</b>	31.6
<b>2009</b>	18.7	<b>2003</b>	31.2
<b>2008</b>	16.4	<b>2002</b>	35.2
<b>2007</b>	28.7	<b>2001</b>	38.4

*Note.* From “Armenian National Statistical Service” 2013, retrieved from <http://www.armstat.am/en/?nid=126&id=08010> on April 9, 2013

As compared to the Armenian unemployment rate indices, the Georgian unemployment rate indices are considerably less, especially in comparing the period from 2005-2007.

*Table 4: Unemployment rate (% of total labor force) in Georgia for the period 2005-2011*

<b>year</b>	<b>absolute value %</b>	<b>year</b>	<b>absolute value %</b>
<b>2011</b>	15.1	<b>2009</b>	16.9
<b>2010</b>	16.3	<b>2008</b>	16.5
<b>2007</b>	13.3	<b>2005</b>	13.8
<b>2006</b>	13.6		

*Note.* From “National Statistics Office of Georgia” 2013, retrieved from [http://www.geostat.ge/index.php?action=page&p\\_id=146&lang=eng](http://www.geostat.ge/index.php?action=page&p_id=146&lang=eng) on April 9, 2013

Speaking about the economically active population of Armenia, the National Statistical Service of the Republic Armenia reports that employment rate among economically active populations is increasing. If the employment rate for the 2008 was 49.8 percent (of the economically active population), in 2012 the rate reached 51.9 percent (Armstat, 2013).

The fact that the employment rate among economically active population rises does not mean that the economically active population with higher education is better compensated in the labor market. On the contrary, there is a reverse effect between the rise of the economically active population and the economically active population with a higher education. This can be observed from the Statistical Yearbooks of Armenia from the years 1998-2011.

*Table 5: Unemployment rate (%) among economically active population with higher education*

year	%	year	%
<b>2011</b>	19.5	<b>2004</b>	13.3
<b>2010</b>	19.5	<b>2003</b>	13.0
<b>2009</b>	14.2	<b>2002</b>	12.5
<b>2008</b>	12.4	<b>2001</b>	12.3
<b>2007</b>	11.8	<b>2000</b>	12.0
<b>2006</b>	14.4	<b>1999</b>	-
<b>2005</b>	14.0	<b>1998</b>	12.2

*Note.* From “Armenian National Statistical Service: Yearbooks 2001-2012, retrieved from <http://www.armstat.am/en/?nid=45> on April 9, 2013

#### **4.2 The Involvement of Skilled Workers in Migration**

One of the studies done in 2005-2007 by OSCE Armenia on labor migration in Armenia among 1500 households reveals that the majority of respondents has secondary education. The study also reveals that 18.2 percent has higher education, 16.2 percent of which has master degree, while the smallest portion of the respondents, less than one percent, obtained PhD degree. The majority of respondents (labor migrants) with higher education are either engineers or economists. The core motivation for migration as stated by respondents is a combination of

lack of jobs in the homeland and a search for better pay. Only less than five percent of respondents stress the absence of profession-specific jobs as the cause of migration. (Minasyan, Poghosyan, Hakobyan, & Hancilova, 2007).

In another study on return migration to Armenia from 2002-2008 done by the OSCE nearly 20 percent of Armenian households were involved in labor migration. The study surveyed 2500 households in order to examine migration patterns. According to the results, only 9 percent of labor migrants received higher education. The survey estimations show that 10 percent of the skilled labor migrants left the country in hope to find better career opportunities abroad. (Minasyan et al., 2008).

#### **4.3 The Intentions to Migrate among Professional Groups**

The increase of unemployment rate among different professional groups in Armenia is explained by excessive supply of certain professional groups in the Armenian labor market. The Armenian labor market is especially absorbed with professional groups related to Economics and Social Sciences. (ILO, 2009).

Speaking about the employment opportunities among high educated people, it should be mentioned that economists, being the largest professional group, very often encounter difficulties in finding a job due to excessive supply over the demand in the Armenian labor market. On the other hand, the intentions to migrate are not high among economists despite the rate of unemployment. The main reason for migration is pertained in finding job (Minasyan et al., 2008).

The intention to migrate for education opportunities is high among professional groups belonging to the fields of Humanities and Social Sciences. For the Architecture and Construction

professional group the majority views migration as an employment opportunity. For the professional group of Mechanical engineering, for instance, migration intentions for 100 percent related to employment opportunities in the destination country. In the same way, 100 percent of the labor migrants belonging to this professional group are successful in finding job in a destination country (ILO, 2009).

The professional group belonging to Informational Technologies is considerably less in the number of graduates as compared to other professional groups. The unemployment rate for this professional group is 20 percent. In regard to this, the migration rate among IT specialists is the least as compared to the other professional groups. One of the core reasons for lower intention to migrate is related to the fact that IT specialists can find well-paid jobs in Armenia considerably easier compared to the other professional groups. (ILO, 2009).

To summarize the unemployment rate is constantly increasing among people with higher education. In response to the lack of workplaces, many professionals have to leave the country for finding job opportunities abroad. In this regard, scarcity of work places as being the main motivator for migration. The income level is also among the major reasons for migration (Yeghiazaryan et al., 2003).

## Chapter 5: Primary Data Analyses

Migration intentions among people with higher education in Armenia has been discussed previously, based on the findings of different studies. In order to obtain an empirical overview from potential migrants with higher education concerning the migration issues two focus group discussions and a small sample size survey was conducted from February 17 to April 4 among 226 high educated people. The sample size, however, is not representative. The choice of professions is categorized into 4 groups. As a result, the respondents are classified in the following professional groups.

*Table 6: List of the professions grouped into categories*

	N	%
<b>Political Science/International Affairs</b>	53	23.5
<b>Business/Economics /Finance</b>	55	24.3
<b>Linguistics</b>	54	23.9
<b>IT/Engineering</b>	64	28.3
<b>Total</b>	<b>226</b>	<b>100</b>

The gender breakdown among the survey respondents comprised of 45.1 percent of males (N 102), while females were 54.9 percent (N 124). For the age group, the average age was 28. The youngest participant was 21 (N 1), while the eldest participants' age was 50 (N 4). For the family status: 31 percent of the respondents were married, while about two thirds were single (64.6 percent). Five percent of respondents were divorced, while the other 5 percent refused to

answer. Continuing the questions concerning the family position, only 24.3 of the respondents had children, while 2.7 percent were expecting.

Along with distinguishing the participants’ professions, the education level among the respondents groups was categorized into three levels. One of the main criterions for the education level is that it ought to be completed.

*Table 7: Level of education completed*

	<b>N</b>	<b>%</b>	<b>Valid %</b>
<b>Bachelor degree (5year)</b>	16	7.1	7.1
<b>Master degree</b>	180	79.6	79.6
<b>PhD and Doctorate degree</b>	30	13.3	13.3
<b>Total</b>	226	100	100

The respondents were also asked to indicate their employment status. According to the responses, 83.2 percent had a job, while 15 percent did not have a job. In order to observe whether there is correspondence between the professions and the current job of the respondents, the question “*Does your education correspond with your job?*” was asked. The majority of the respondents 58.9 (valid) percent answered positively. On the other hand, more than one quarter of the respondents 28.9 (valid) percent answered that the job and education partially correspond. Only 12.2 (valid) percent reported the mismatch between their job and education correspondence.

In order to have a perspective about the employment place the respondents were asked to mention the primary place of employment describing their workplace type.

*Table 8: Primary place of employment*

	N	%
<b>Employee in a foreign or international organization, company, enterprise, or joint venture</b>	72	31.9
<b>Employee in a medium-sized or big local private organization, company, or enterprise</b>	43	19.0
<b>Employee in a state organization, company, or enterprise</b>	32	14.2
<b>Employee in a local or international non-governmental or non-profit organization</b>	17	7.5
<b>Run my own business / Self-employed without employees, including working on a land plot</b>	14	6.2
<b>Other</b>	2	.9
<b>Employee in a small local family business / household production</b>	1	.4
<b>Total</b>	181	80.1
<b>Missing values</b>	45	19.9
<b>Total</b>	226	100

As it can be seen from the table the majority of the respondents are employed in foreign or international organizations and companies. The employment in these types of organizations is probably not conditioned only by the professional skills, but also by the good command of a foreign language. For this purpose, and in general, the respondents were asked to evaluate their knowledge of a foreign language from the scale 1-7, where 1 means “not at all” and 7 “excellent”. Another indicator to measure the knowledge of a foreign language, particularly, the English language was the survey, which was conducted in English. According to the survey

results on the English language evaluation, only one person rated the command of English on the scale of 3. The majority of the respondents 36.7 percent assessed their command of English as a 7. The results hypothetically presume that the majority of the respondents have a good command of English.

As to the Russian language, only 2 people (0.9 percent) did not have a command of Russian, while compared to English, 50.9 percent of the total respondents reported their knowledge of the Russian Language as a 7. French was also included as a foreign language in the survey. However, unlike English and Russian the majority (37.6 percent) did not know the language and only 2.2 percent rated their knowledge of French as being 7.

The survey, as mentioned above, was conducted to obtain empirical data not only regarding the respondents' education level, but also their intentions to migrate. In this regard, the respondents were asked about their intentions to work, live, or study abroad.

*Table 9: Are you considering going to live / work abroad?*

	<b>N</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
<b>Yes</b>	67	29.6	30.0	30.0
<b>I am thinking of it</b>	68	30.1	30.5	60.5
<b>No</b>	47	20.8	21.1	81.6
<b>Undecided</b>	41	18.1	18.4	100.0
<b>Total</b>	223			
<b>Missing value</b>	3	1.3		
<b>Total</b>	226	100.0		



The results show that the majority of the respondents exhibit the intention to migrate. However, the response for “undecided” is also high. It means that part of these respondents may change their intentions towards migration decisions. So if overall the intentions to migrate correspond to the cumulative percent (60.5), the overall intentions to migrate may increase correspondently.

In order to obtain even more specific and detailed information on migration, concentrating now on the four professional groups, the results of survey among professional groups are the following:

<i>Table 10: Intentions to migrate by professional groups</i>			Field education				Total	
			Political Science/ International Affairs	Linguistics	Business/ Economics /Finance	IT/Engineering		
Would you like to live/work abroad	yes	Count	19	16	13	19	67	
		% within would you like to live/work abroad	28.4%	23.9%	19.4%	28.4%	100.0%	
		% within field education	37.3%	30.2%	23.6%	29.7%	30.0%	
	I am thinking of it	Count	15	11	20	22	68	
		% within would you like to live/work abroad	22.1%	16.2%	29.4%	32.4%	100.0%	
		% within field education	29.4%	20.8%	36.4%	34.4%	30.5%	
	no	Count	11	12	13	11	47	
		% within would you like to live/work abroad	23.4%	25.5%	27.7%	23.4%	100.0%	
		% within field education	21.6%	22.6%	23.6%	17.2%	21.1%	
	Undecided	Count	6	14	9	12	41	
		% within would you like to live/work abroad	14.6%	34.1%	22.0%	29.3%	100.0%	
		% within field education	11.8%	26.4%	16.4%	18.8%	18.4%	
	Total		Count	51	53	55	64	223
			% within would you like to live/work abroad	22.9%	23.8%	24.7%	28.7%	100.0%
			% within field education	100.0%	100.0%	100.0%	100.0%	100.0%

The overall results demonstrate that the intention to migrate is high among all professional groups. The highest intention towards migration was demonstrated by professionals belonging to the field of Political Science and International Affairs. The responses of the other groups were almost identical. Business/Economics/Finance professional group: 60 percent, IT/Engineering professional group: 64.1 percent. The field which demonstrated the least intention to migrate was that of Linguistics which still amounted to 51 percent.

To the question “*Do you have a family member or close relative currently living abroad, outside the borders of Armenia?*” 70.8 percent of the total respondents answered positively. As discussed above, family members, friends, and relatives very often have an effect on the decision to migrate. Whether or not family ties have a significant influence on the respondents’ intentions to migrate will be analyzed later in the analyses with a nationwide sample size survey conducted by the Caucasus Research Resource Centers (CRRC).

The duration for staying abroad among those respondents who revealed the intention to migrate and who already took steps or is preparing for the realization of migration intentions were varied.

*Table 11: If you migrate / want to migrate how long you do intend to stay abroad?*

	<b>N</b>	<b>%</b>	<b>Valid %</b>	<b>Cumulative %</b>
<b>Less than 1 year</b>	16	6.2	8.0	8.0
<b>1-2 years</b>	26	11.5	14.8	22.7
<b>3-5 years</b>	23	10.2	13.1	35.8
<b>Longer than 5 years but not permanent</b>	24	10.6	13.6	49.4
<b>Permanent if possible</b>	47	20.8	26.7	76.1
<b>Undecided</b>	42	18.6	23.9	100
<b>Total</b>	176	77.9	100.0	
<b>Missing value</b>	50	22.1		
<b>Total</b>	226	100.0		

During the focus group discussion the same question was asked to the participants. The majority of respondents were in favor to migrate, however, the intention of staying abroad were mostly temporary.

“If I have a chance to migrate, I would like to stay there temporary. First of all, there is unknown environment for me and I do not know what would be my chances to find appropriate job. Besides, my intentions may change depending on the situation. One important thing is that my family members live in Armenia. So I would rather stay abroad for 2 years.” (Economist, Female 28 years).

For the majority of the potential migrants who also took several steps to actualize their intentions, the most desired country is the United States of America. Canada is the second most desired country. However, European countries also attract higher intentions to migrate to among potential migrants.

Speaking about the intentions to migrate, it is important to understand which motives lead to migration. According to the survey results, among the potential migrants which indicated the intention to migrate, the main motives for migration are career growth opportunities, better pay, and better prospects for their children.

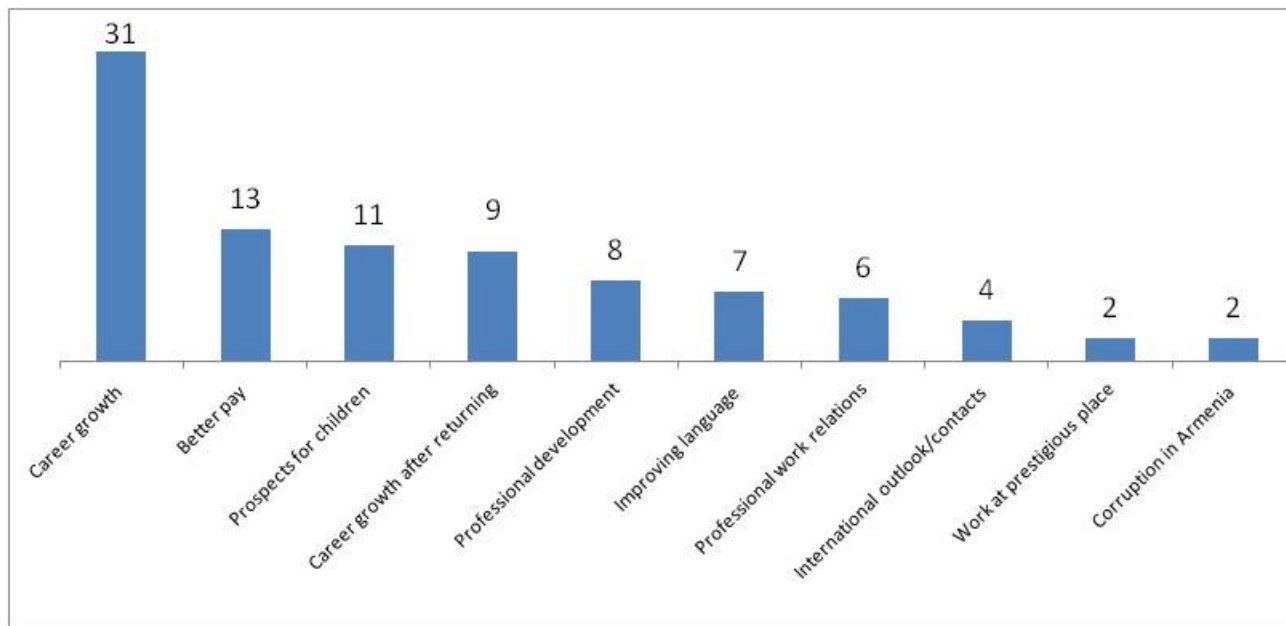


Figure 1: Motives encouraging migration. Survey results among four professional groups

During focus group discussions the intentions encouraging the participant to migrate were the following:

“There may be several motives for me to migrate. First is to obtain better career opportunities. The other thing, which is the most important for me when you feel yourself free in

a society with certain attached values. To say the truth, I am not very much fond of those values which exist in the Armenian societal realities.” (Linguist, female 27 years).

“If I start to evaluate all the motives they may not end. I may say one thing: you are not valued in your own country. I have obtained two master degrees and I work in a public agency for 5 years. During these years I did not see any progress in my professional career, not speaking about wage. Sometimes I regret that I put efforts in studying. If I earn less or equal to those who even cannot write their names correctly.” (Political analyst, male 32).

As it can be seen from the responses the main motives again related to career growth and pay issues. Besides the concerns to career growth opportunities, there is also an issue related to brain waste.

“I graduated from Yerevan State Linguistic University two years ago. It took me a year to find a job. But the main concern is that it does not relate to my specialization. I work at the hostel for foreign students. Besides, I am working for three employees. I think exploitation becomes a common thing in our society.” (Linguist, female 24 years).

One of the highest factor encouraging migration intentions in the survey was “better prospects for my children”. The same concern was included in the focus group discussions.

“Of course I would like to see better prospects for my children. I want them to study at prestigious universities, to have international outlook, better growth in studies.”(Engineer, female 30 years).

On the question, “*What factors may prevent you from going abroad?*” 42.9 percent of the total respondents responded “*Separation from family.*” The other group responded that the

preventing factor for the intention to migrate is “I have a good job in Armenia’, and “Patriotism and obligation to the country”.

In the focus group discussions one of the main concerns preventing to migrate abroad were high living expenses and travelling costs.

“I have been abroad for many times. I personally lived in Norway for a year. I was there for studying purpose. I may say it is very expensive to live there. Only for food you can spend a lot of money, not speaking about books and other expenses.” (Accountant, male 26 years).

In conclusion, the intentions to migrate are still high among educated people. The motives cited by the respondents of the survey and focus group discussions are mainly of economic origin. The majority of respondents have a family member, friend, or a relative residing abroad, which can change the potential migrants’ intention to migrate. The survey and focus group discussions were conducted to enrich and support some arguments from the secondary data analyses as well as to answer research questions.

## Chapter 6: Caucasus Barometer Survey Analyses

In this chapter the analysis of the Caucasus Barometer 2012, a nationwide survey, is discussed in order to find out whether family ties have a significant influence on encouraging migration intentions. The analysis of the chapter also aims to find out whether the hypothesis of the study is proved or disapproved.

One of the research questions is “*Does the factor of having a family member living abroad increase the potential intention to migrate?*” As it was mentioned in the literature review and in the fourth chapter, according to some findings, family ties have a significant role in formulating decisions regarding migration, both for potential and returned migrants. In order to observe some significant difference between two binary variables “*intention to migrate: yes/no*” and “*relatives living abroad: yes/no*” among respondents with and without higher education, chi-square test was run. The intentions to migrate question, in the Caucasus Barometer survey 2012, were subdivided into temporary intentions to migrate and permanent intentions to migrate. Therefore, by running a chi-square test the following results were observed among a nationwide sample for each case.



<i>Table 12: Intention in temporary migration and family member living abroad</i>					
		Family member living abroad			Total
		No	Yes		
Intention in temporary migration	No	Count	237	827	1064
		% within temporary migration	22.3%	77.7%	100.0%
		% within family member living abroad	50.1%	44.2%	45.4%
	Yes	Count	236	1044	1280
		% within temporary migration	18.4%	81.6%	100.0%
		% within family member living abroad	49.9%	55.8%	54.6%
Total		Count	473	1871	2344
		% within temporary migration	20.2%	79.8%	100.0%
		% within family member living abroad	100.0%	100.0%	100.0%

*Note.* Data is derived from the CB 2012 dataset in SPSS, retrieved from <http://www.crrcenters.org/caucasusbarometer/datasets/> on April 18, 2013

The table shows that the majority of the respondents (79.8 percent) answering question on temporary intention to migrate have a family member residing abroad. The majority respondents expressed intention to migrate, while having a family member residing abroad. However, from the data it is also seen that despite not having a family member living abroad there still exists the motivation of the respondents to migrate. A Chi-square test was run in order to observe the possible statistically significance difference between above mentioned groups.

<i>Table 13: Chi-square tests</i>	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.311 <sup>a</sup>	1	.021

*Note.* Data is derived from the CB 2012 dataset in SPSS by running Chi-square test, retrieved from <http://www.crrcenters.org/caucasusbarometer/datasets/> on April 18, 2013

The results of the test suggest that there is statistically significant difference between the binary variables, which implies that, the factor of having a family member living abroad does increase the potential intention of temporary migration. In order to observe the permanent intention of migration using the basis of permanent intentions, same test was run for the corresponding groups.

<i>Table 14: Permanent migration and family member living abroad</i>			Family member living abroad		Total
			No	Yes	
Permanent migration	No	Count	344	1349	1693
		% within Permanent migration	20.3%	79.7%	100.0%
		% within Family member living abroad	74.1%	72.8%	73.0%
	Yes	Count	120	505	625
		% within Permanent migration	19.2%	80.8%	100.0%
		% within Family member living abroad	25.9%	27.2%	27.0%
Total	Count	464	1854	2318	
	% within Permanent migration	20.0%	80.0%	100.0%	
	% within Family member living abroad	100.0%	100.0%	100.0%	

*Note.* Data is derived from the CB 2012 dataset in SPSS, retrieved from <http://www.crrccenters.org/caucasusbarometer/datasets/> on April 18, 2013.

In the case of permanent migration the scenario is quite different. Having a family member living abroad does not generate intentions to migrate among the majority of the respondents. Chi-square test shows no significant difference (0.550).

One of the objectives included in the study is to find out is whether there is a significant difference in intentions to migrate between those people with higher education as compared to those who do not have higher education. Therefore the hypothesis is the following: people with

higher education display more of a desire to migrate abroad compared to those who do not have higher education. To test this hypothesis the same method of testing was implemented whereby chi-square was run to observe the intention of migration among highly educated respondents. The group of highly educated people was extracted from the same sample of respondents, aiming to compare the same statements as done previously when testing for the variables regarding family members and motivations.

The test results suggest that the number of those interested in temporary migration is higher as compared to those who do not want to migrate.

<i>Table 15: Interest in temporary emigration by education groups</i>			education by groups		Total
			respondents without higher education	respondents with higher education	
Interest in temporary emigration	No	Count	850	214	1064
		% within Interest in temporary emigration	79.9%	20.1%	100.0%
		% within education by groups	47.1%	39.9%	45.5%
	Yes	Count	953	323	1276
		% within Interest in temporary emigration	74.7%	25.3%	100.0%
		% within education by groups	52.9%	60.1%	54.5%
Total	Count	1803	537	2340	
	% within Interest in temporary emigration	77.1%	22.9%	100.0%	
	% within education by groups	100.0%	100.0%	100.0%	

*Note.* Data is derived from the CB 2012 dataset in SPSS, retrieved from <http://www.crrcenters.org/caucasusbarometer/datasets/> on April 18, 2013

The number of respondents with intentions to migrate is greater among respondents without higher education. However, within the education groups the intentions to migrate are the

highest among those of having higher education (60.1 percent as compared to 52.9 percent). In order to test the hypothesis “People with higher education display more of a desire to migrate abroad compared to those who do not have higher education,” Chi-square test was done. It shows statistically significant difference in intentions to migrate between two groups: people with higher education and people without higher education. However, while emphasizing the significance, it should be noted that the assumption is made for those who expressed intentions to migrate on a temporary bases.

<i>Table 16: Chi-Square Tests</i>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.875 <sup>a</sup>	1	.003

*Note.* Data is derived from the CB 2012 dataset in SPSS, retrieved from <http://www.crrcenters.org/caucasusbarometer/datasets/> on 18 April, 2013

In order to observe the intentions for permanent migration, the same test was run. The results are the following:

<i>Table 17: Interest in permanent emigration by education groups</i>			education by groups		Total
			respondents without higher education	respondents with higher education	
Interest in permanent emigration	No	Count	1319	371	1690
		% within Interest in permanent emigration	78.0%	22.0%	100.0%
		% within education by groups	73.6%	71.1%	73.0%
	Yes	Count	473	151	624
		% within Interest in permanent emigration	75.8%	24.2%	100.0%
		% within education by groups	26.4%	28.9%	27.0%
Total		Count	1792	522	2314
		% within Interest in permanent emigration	77.4%	22.6%	100.0%
		% within education by groups	100.0%	100.0%	100.0%

*Note.* Data is derived from the CB 2012 dataset in SPSS, retrieved from <http://www.crrcenters.org/caucasusbarometer/datasets/> on 18 April, 2013

In the case of permanent migration, the overall intentions to migrate are not high (27 percent of the respondents). However, when taking a deeper look at the different groups (level of education) we see that the intention for permanent migration was still comparatively high among highly educated respondents (28.9 percent). The significance level proving the hypothesis, on the other hand is not significant:

<i>Table 18: Chi-Square Tests</i>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.316 <sup>a</sup>	1	.251

*Note.* Data is derived from the CB 2012 dataset in SPSS by running Chi-square test, retrieved from <http://www.crrcenters.org/caucasusbarometer/datasets/> on April 18,2013

Thus, we can assume that the null hypothesis is rejected for the intention to migrate on temporary bases, based on the results of the chi-square test. There is significance between the desire to migrate and the level of education, as those with a higher education are more likely to wish to migrate abroad. These results, therefore, confirm the suggested hypothesis. In the case of permanent migration intentions, however, the intentions to migrate are still high among respondents with higher education but the significance level is not high. In this case the hypothesis is not accepted. Therefore, the results suggest the hypothesis is proved partially.

In conclusion, the evidence is overwhelming: most of the respondents are in favor of migration, both for those who have a family member living abroad and for those who do not. The intentions to migrate are higher among those who have higher education. In fact, people with higher education are more prone to migrate, especially for temporary bases as compared to those who do not have higher education.

## **Limitations**

The study along with the general findings and analyses also includes several limitations. One of the major constraints that hinders the further analysis is the absence of systematic research done on brain drain.

The second limitation concerns to the survey conducted among four professional groups. The shortcoming of the survey is that the sample was not representative. Time constraint is also one of the limitations of the study.

## **Recommendations**

The general findings and limitations included in study also provide several recommendations for further study on the topic. Thus in the scope of the research the general recommendation is to implement a serious systematic research on brain drain in Armenia, particularly, examining the factors leading to migration. The other recommendation is to estimate the possible positive and negative aspects of brain drain in Armenia. The research however, needs to include short and long term analyses.



## **Conclusion**

The phenomenon of brain drain is one of the common issues along with migration occurring in the Armenian reality. There are different factors affecting the intentions to migrate among people with higher education in Armenia. Based on the data provided by the National Statistical Service of Armenia, it was found out that the unemployment rate is constantly increasing among people with higher education. As Yeghiazaryan et al. (2003) mention the income level is also one of the important factors that can affect the intentions to migrate. Based on the survey finding among four professional groups the majority of the respondents mentioned the prospects of career growth abroad as the main motivating factor to migrate from the country. The discussions in focus groups revealed almost the same concerns: highly educated people feel they are not valued in their homeland, while there are better career growth opportunities abroad, which leads to increased desire to migrate.

Family ties also have specific role in formulating migration intentions. Based on the secondary data analysis it was found out that family networks can both encourage and discourage migration intentions. The Caucasus Barometer survey results reveal that having family members residing abroad is linked to higher intentions to migrate. However, the intentions to migrate are mainly formulated as temporary. For the permanent migration the intentions to migrate are still high among the respondents. But as the Chi-test reveals there is no significant difference between those groups who have or do not have a family member residing abroad in terms of their intentions to migrate permanently.

The analysis shows that the intentions to migrate are high among people with higher education as compared to those who do not have higher education. The intentions to migrate

temporary among these people with higher education contrary to those who do not have higher education are significantly different. There is no difference between education groups in terms of intentions to migrate permanently. Thus the hypothesis is partially accepted. People with higher education are more inclined to migrate temporarily from Armenia. There is, however, no significant difference among those with higher education, as compared to the rest of the population, in terms of permanent intention to migrate.

The study has several limitations, time constraints being one of those. Considering the fact, that the specific topic of brain drain in Armenia today is addressed by a handful of studies only, more research on the topic is needed.

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