Is migration decision rational? Behavioral aspects of migration on Armenia’s example.

Objectives

Structural and institutional changes in transition economies lead to changes in structure of labor and powerful streams of migration. These phenomena amplify the general processes of globalization and openness of borders. Migration processes are especially strongly evident in small transition economies, such as Armenia. According to research by International Labor Organization (ILO 2009) official figures within the first transitional years (1991-1998) show that more than 20% of the population migrated out of Armenia.

Existence of large Armenian Diaspora in different countries of the world is one of the most important factors of development of the Armenian economy. Many money transfers which by different estimates reach from 20% to 30% of gross domestic product are one of the main components of demand in the Armenian consumer market. According to the above-stated research the main stream of migration from Armenia is to Russia. The situation is very similar in other countries of the former Soviet Union. Therefore this research of migration from Armenia is also important from the point of view of regulation of migratory processes in Russia and CIS.

Study of the reasons of migration itself is an interesting problem, however, it is important also from the point of view of understanding of consequences and, hence, development of a correct policy of regulation of migratory streams. Usually the main reason for migration is the difference of in the standards of living in different countries, the level of political freedom, existence of the organized Diaspora of compatriots, and the migratory policy in the accepting country. These issues are rather well studied for transition economies. However, according to the theory of prospects of Kaneman and Tversky (Kaneman, Tversky 1979) making the decision to migrate is a decision-making process in conditions of uncertainty and is not always rational. In certain cases behavioral and psychological aspects can play very important role.
Study of behavioural aspects of decision-making on migration is the main objective of the proposed research. Importance of the subjective perception of own situation in society, optimism and expectations concerning the future, tendency to risk, a patriotic spirit of the respondent and a sense of responsibility for the events in own country are considered. Another objective of this research is definition of a psychological portrait of the potential migrant. This means the degree of dependence of decision-making on such factors as active living position, self-image, as well as importance of opinion of people around.

This research cuts across several disciplines, including economy, sociology, psychology and behavioural economy. For data collection, analysis and interpretation of results econometric methods are used, in particular models of a binary and multiple choices.

**Practical contribution of research**

Migration is an integral component of transition countries. If in the first years of transition these processes happened in chaotic manner, in recent years the state has attempted to produce statistical reports, as well as to actively influence migration through state policy. In particular, in Armenia at the Ministry of Territorial Administration the Public Migratory Service operates. Conclusions of this research will help this process through

- Creation of a thorough migratory policy in Armenia by finding more fine-tuned mechanisms of impact on these processes, rather than relying on the obvious thesis: “improvement of an average standard of living in the country leads to migration reduction”;
- Defining structure of migration not only from the point of view of sex, social status, education, but also considering such factors as, optimism, social and political activity, initiative, tendency to risk etc. All this is very important, as all these qualities in aggregate are also associated with business activity in the country.

**Literature Review**

The more traditional migration approaches focus either on aggregate migration movements or individuals making migration decisions. They thus assume that individuals independently make the decision
to migrate. Some of the migration literature includes a seemingly wider decision-making framework, for example Harbison (1981) paper is entitled “Family Structure and Family Strategy in Migration Decision Making”. However, the migration decision is still not seen as a strategic family decision; the paper only acknowledges that families can influence the individual migrant’s decision, e.g. through the demographic structure. When looking at migration from a gender perspective, family structure can influence the migration decisions of women in particular. As Morokvasic (1984) points out, women migrate not only because of economic motives, but also to get married, due to social constraints, low rights and lack of protection against domestic violence.

Potential migrants are likely to look at factors other than (perceived) expected income gains and lifetime earnings in a variety of geographical locations. These factors are likely to include perceived and real differentials in security from violence, political stability, political and civic freedoms as well as social security and the quality and costs of education, health care and public services. This shows the need to simultaneously consider other important development indicators which are also likely to shape migration behaviour (de Haas, 2010). Based on Sen’s (1999) capabilities approach, we can argue that, taken together, all these factors will determine the extent to which people can enjoy substantive freedoms to live the lives they have reason to value. It would therefore be more appropriate to present migration as a basic response to perceived opportunity or to development differentials.

Labour market segmentation and increasing levels of education and occupational specialization partly explain why we can expect significant labour migration within and between countries even in the absence of large income differences. Labour markets are not homogeneous but typically segmented (Castles and Miller 2009; Massey et al. 1993; Piore 1979). The level of complexity and segmentation of labour markets tend to increase with the level of economic development, a process which is also closely associated with concomitant increases in educational levels and occupational specialization (de Haas 2009). This drives people to migrate, mainly within but also across national borders in order to optimize the match between skills and labour market demand. Within a neoclassical framework, and if we consider migration as a human capital investment (Sjaastad 1962; Becker 1962), migration decisions will be guided by people’s perceptions of present discounted value of lifetime monetary and non-monetary benefits in other geographic locations.
People are then expected to migrate when they assess that the lifetime benefits of migrating outweigh the costs of the migration investment. This explains why migration is more common among younger and more educated people. Younger migrants have longer periods over which to reap the returns on the migration investment. In addition, more specialized professions requiring a higher education appeal to geographically larger labour markets.

In particular, migration economists have explored the role of income inequality and relative deprivation in origin countries in determining individual propensities to migrate. The new economics of labour migration (Stark 1984; Stark and Taylor 1991) identified relative deprivation as one of the main migration motives, arguing that a major difference between the relative deprivation approach and the welfare function approach is that, in the utility approach, the marginal utility of income is a function of income alone and hence does not depend on the income of others (Stark and Yitzhaki 1988). The new economics of labour migration (NELM) questioned the idea that income has a constant effect on utility across socio-economic settings – a set increase in income means the same thing to a person regardless of his or her position in the income distribution (Massey et al. 1993; Stark et al. 1988; Stark and Taylor 1991). NELM hypothesizes that people and households migrate not only to improve income in absolute terms, but also to increase income relative to other households. Stark, in particular, has argued that migration propensities will be positively correlated with inequality in the origin societies, and negatively correlated with inequality in the destination societies.

The application of a capabilities framework to the analysis of migration might also help us explain the, perhaps counter-intuitive, finding that a lack of political freedoms appears to be negatively associated with emigration rates (de Haas 2010). Although political repression is likely to increase migration aspirations, repression also tends to coincide with higher emigration restrictions such as exit visas and financial and bureaucratic obstacles to obtaining passports (McKenzie 2007), which decrease capabilities to migrate, and the latter effect may well be stronger than the former (de Haas 2010). Autocratic states tend to have a higher capability to constraint emigration than democratic states do, as freedom of emigration is a fundamental human right.

Methodology
The data source for this research is a survey carried out by CRRC Armenia together with UNDP [http://crrc.am/index.php/en/163](http://crrc.am/index.php/en/163). The study on social cohesion in Armenia was carried out by the Caucasus Resource Research Centers (CRRC)-Armenia in partnership with UNDP Armenia. The study is part of a larger project—“Enhancing Dialogue and Trust Building in Armenia”—developed and implemented by UNDP Armenia. The main goal of the project is to support “the improvement of the social fabric and confidence in society through participatory discussions on national priorities that are identified as a result of the first-ever nationwide survey of social cohesion in Armenia.” The main objective of this project is to equip the government and civil society organizations with the tools needed to improve public policy regarding development priorities.

To achieve the main objective, a nationwide representative survey with quantitative and qualitative components was conducted by CRRC with 3,200 adults over the age of 18.

The main hypothesis which will be tested is the following: whether psychological aspects and aspects of subjective perception of surrounding reality influence making decisions on migration or the potential readiness in the near future to join ranks of migrants.

It is considered that the main motives of migration are the "rational" reasons of economic character. The proposed research does not intend to disprove this thesis. Rather it will look at the case of Armenia to understand whether or not behavioural aspects have a role in making decisions to migrate.

The relevance of such hypothesis is supported by the fact the majority of the respondents thought that “not feeling needed here” was an important factor in influencing their decision to migrate.
As seen from the table, this tendency is especially significant in case of male respondents who are the main part of labor migration. Obviously this reason is primarily psychological, rather than economic.

The proposed models for data analysis are the binary and multiple choice models which have been described in detail in classical textbooks of econometrics (Agresti 2002, Green 2008). SPSS package will be used for the analysis. Application of SPSS package for survey research through models of binary and multiple choices is described in detail in the book of one of the co-authors of this proposal (Gevorgyan 2010).

The following binary models will be used:

\[
\text{Logit}[P(y = 1)] = \beta_0 + \sum_{i=1}^{m} \beta_i X_i + \sum_{i=1}^{n} \gamma_i Z_i \\
\text{probit}[P(y = 1)] = \beta_0 + \sum_{i=1}^{m} \beta_i X_i + \sum_{i=1}^{n} \gamma_i Z_i
\]

Where \( y \) is the binary dependent variable, \( \beta_0, \beta_i, i = 1 \ldots m, \gamma_j, j = 1 \ldots n, \) - are the estimated parameters, \( X_i \) - dependent variables, and \( Z_i \) – control variables.
Logit models for nominal response variables pair each category with a baseline category. Most software uses the last category as the baseline. For $c$ outcome categories, the baseline-category logit model is

$$\text{Logit}\left[ \frac{P(y = i)}{P(y = c)} \right] = \beta_0 + \sum_{i=1}^{m} \beta_i X_i + \sum_{i=1}^{n} \gamma_i Z_i$$

In order to increase precision answers to some questions will be grouped where possible. So, for example, the question "What is the probability for you to go abroad to find employment" assumes 4 answers: “Not probable at all”, “Somewhat not probable”, “Somewhat probable”, “Very probable”. During the analysis the first two answers will be incorporated in one group as not willing to migrate, and the last two will be grouped into one category of willing to migrate. Such grouping will allow to apply binary models (logit and probit) to an testing of models in which the new variable described above will be an explaining variable.

For the specification of models the “algorithm of backward” realized in SPSS will be used. When using this algorithm all possible explaining variables join in model, and then depending on the significance of each variable, at each stage are removed one by one. The algorithm comes to an end when only significant dependent variables are left in the model.

Models will allow estimate probabilities of change of a dependent variable depending on change of explaining variables. For interpretation of models the approach of an odds ratio will be used also. For testing of models the Loglikelihood, Cox;Snell R Square, Negelkerke R Square and Hosmer and Lemeshow tests will be used. All of them are performed in SPSS.

Some dependent variables of binary and multiple models are given in the following table:

<table>
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<tr>
<th>QL14.1. What is the probability for you to go abroad for education</th>
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<td>QL14.2. What is the probability for you to go abroad to find employment</td>
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<td>QL14.3. What is the probability for you to emigrate to live in another country</td>
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</table>
QL15.1. When do you think it could happen? Go abroad for education

QL15.2. When do you think it could happen? Go abroad for employment

QL15.3. When do you think it could happen? Emigrate to live in another country

Some independent variables are given in the following table:

C12.1. Can you describe how you feel towards yourself?

C12.2. Can you describe how you feel towards your family?

C12.3. Can you describe how you feel towards your coworkers?

C12.4. Can you describe how you feel towards your neighbors?

C12.5. Can you describe how you feel towards your friends?

C12.6. Can you describe how you feel towards your relatives?

C12.7. Can you describe how you feel towards strangers?

C17. Please indicate how satisfied are you with your life as a whole?

C18.1. How much do you agree with the following statement? I am optimistic about the future

C18.2. In order to get ahead nowadays you are forced to do things that are not correct

C18.3. I feel left out of society

C18.4. Good luck is more important than hard work for success

C18.5. Life has become so complicated today that I almost can’t find my way
Thus explaining control variables in models will be sex, age, residence (urban, rural), real economic condition of a household (expenses, income), existence of relatives abroad, and others.

Bibliography

20. Геворгян Р. “Модели бинарного и множественного выборов в SPSS”, Ереван, Лусакн, 2010.

**Participants**

Rita Hovhannisyan – project manager, graduate student of YSU

Ruben Gevorgyan, FRM – participant of the project, Candidate of Physical and Mathematical Sciences, Associate Professor of Mathematical Methods in Economy, Economics Department of YSU.

Ruben Gevorgyan is the supervisor of postgraduate study of Rita Hovhannisyan, so the authors of this project have collaboration experience. The head of this project is Rita Hovhannisyan as this subject has direct link with the subject of her dissertation and, therefore, she will dedicate more of her time to this project.

The following division of work is proposed:

Rita Hovhannisyan – research of migratory processes in transition economies, the formulation of hypotheses, work with literature, interpretation of the received results, work with the database.
Ruben Gevorgyan – task statement, testing of models, research of behavioural aspects, interpretation of the received results.

Ruben Gevorgyan teaches Econometrics and Behavioural Finance at Mathematics and Economics Departments of YSU and has experience of testing of econometric models and research of behavioural aspects of decision-making.

Alternative/additional sources of funding

Within this project no other sources of financing are expected. At the same time participants of the project will use their work hours at YSU for its implementation

Project timetable

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