Econometric modeling of return migration intentions

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Abstract—This paper aims to explain the return migration decision of educated Romanian migrants and find out whether they hold some characteristics which differentiate them from other Romanian migrants who are decided not to return to their home country. We build our analysis on data from an on-line survey among 589 of Romanian migrants with medium and higher education. We find out that age, employment in the host country, location of family (partner and children), as well as positive emotions related of national identity predict the return migration.

Keywords—return migration, brain drain, decision

I. INTRODUCTION

The vast majority of individuals, acting like rational ones, tried to improve their benefits apace with reducing their efforts. So, it is rational for a person to look for a better fulfillment abroad in terms of jobs, incomes and social position for a temporary period or, sometimes, even definitely, if his/her have the perceptions that other countries could provide him/her with more adequate opportunities as against the natal one.

The impact of high skilled labor force migration for the origin country is different from case to case. For some countries, there are more benefits from brain drain and employment abroad, because the amount of remittances is significantly higher than the earnings of individuals in their origin country.

However, the case of Europe is quite different, as the negative effects of brain drain are not always balanced by the amount of money sent back to the families. Thus a lot of countries concentrate their efforts on designing new policies, especially for certain neuralgic sectors in order to create more attractive condition for their specialists and to diminish their intentions for working in other countries. But in times of crises, when the supply in the origin countries exceeds the demand and when the employment opportunities become scarcer and scarcer, the emigration, and even brain drain is considered a relief for the domestic labour market. So, no policies to alleviate the brain drain or the emigration are designed.

Huge disparities among the countries in term of employment opportunities and the wage differential make some EU developed member states to act like magnets for the specialists of the others developing countries. For these new developing member states attractive measures to retain or to attract back their high-skilled workers are more difficult to be designed and implemented.

“Emigration” is usually defined as “any residing of a local person in another non-resident country for a period longer than one year”⁶. A part of these emigrants consists in individuals with higher education. Not all the emigrant scientists can be considered as “brain drain”, but only those which continue in the destination country their activities in highly specialized scientific areas⁷.

Table 1: Who worked abroad during 1990-2006?, by level of education (%)

<table>
<thead>
<tr>
<th>Level of education</th>
<th>1990-95</th>
<th>1996-01</th>
<th>2002-06</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Secondary</td>
<td>2</td>
<td>8</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Voc.and high school</td>
<td>78</td>
<td>79</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>University</td>
<td>17</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>


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6 UN definition of emigration, in Brain Drain from Central and Eastern Europe, study financed by the European Commission under the framework of COST,
According to the Open Society Foundation study on the temporary residency abroad during 1990-2006\(^8\) the brain drain actually registered low values after 2002. While at the beginning of the period analyzed and of course of the labour migration phenomenon the share of those with tertiary education adventuring abroad reached 17% of the total number of emigrants, at the end of the period and after, the share of those with secondary and high school education starts to increase, in the detriment of those highly qualified.

The debates on the gains from brain drain for the sending countries often waves around arguments like blessing of remittances, the inflow of knowledge and know-how – if the individuals choose to come back at a certain point of their life –, the emergence of a new well-skilled and well-educated workforce, the fostering of new commercial ties, etc. And these are just some of the gains that are mentioned in the specialized studies on the topic at stake.

But it is quite obvious, that the real benefits for the sending countries strongly depends on their capability to attract back skilled emigrants and to provide them adequate opportunities to “enforce” their knowledge acquired abroad. As we can easily suppose, the skilled emigrants could come back with improved managerial competences, entrepreneurial skills and access to certain scientific networks, which could facilitate the inflow of foreign capital.

According to the same study under the coordination of Open Society Foundation, Spain and Italy become the most important host countries of Romanian migrants for labour and most of them are in fact low skilled. Not much was written on returning migrants, their profile and their determinants, even if the returning process is circumscribe to the largest phenomenon of migration. But, as data points out, most of the migrants for labour are in fact in temporary migration, and most of the, at a certain moment in time decide to return to their sending countries. The literature sometimes considers that there are two types of returning migrants. On the one hand the successful ones, that decide to return because they had from the beginning a plan for returning, and on the other hand the failure ones, that decide to return because they cannot succeed to find an appropriate job in their host countries.

Surprisingly, migrants decide to return even after large periods of time spent in host countries. Little is known about how migrants form their decision to migrate back to their origin countries. While emigration is a simple statistical model, where wage differentials explain decisions to migrate, returning migration happens even when conditions in host countries remain more favourable as against the ones in the origin countries. A new category of models was developed, where returning migration ties to be explained using non-monetary determinants, decisions taken in family, having children or not, etc. Stark and Taylor (1991) explained that the decision to return is modeled by the relative deprivation of migrants in their host countries. Djajic and Milbourne (1988) considered that returning migrants have a higher preference for consumption in their origin countries than in the host ones. Dustmann (1999) considered that a migrant could decide to return when the currency of the host country have a higher purchase power in the home country.

Most of the studies pointed out that the higher educated usually have a higher probability to return, as the host countries do not put a premium on their education and they do not succeed to find adequate employment. In the same time, those low skilled have a smaller probability to return as they usually succeed to find in host countries employment in accordance with their education – mainly due to the labour market segmentation. Also, migrants decide to return when there is a premium on their education and their skills in the home countries. Other studies pointed out that usually the migrants from Central and Eastern European countries that decide to return have a higher propensity for self-employment and entrepreneurship.

Due to the structure of the migration for labour abroad in terms of level of education and skills we do not expect to register significantly high levels of intentions for returning.

According to Martin and Radu (2011) in 2006 the returnees represented 7.65% percents in total active population aged 24-65. The rate of return migration was higher for men, up to 11.09% than for women (up to 4.51%). The pattern was similar for Poland, Latvia and Slovakia.

So, this paper aims to explain the return migration decision of Romanian migrants and find out whether they hold some characteristics which differentiate them from other Romanian migrants who are decided not to return to their home country.

### II. THEORETICAL BACKGROND

We build our analysis on data from an on-line survey among Romanian migrants carried out in 2008 by the Romanian Research Institute for Quality of Life. 589 of Romanian migrants with medium and higher education were investigated on issues regarding their life style, values and intentions of returning to Romania. The sample included migrants living in 42 countries. Most migrants were located in USA, Spain, France, Italy, Belgium, Canada, Great Britain, Ireland, Germany and Qatar.

<table>
<thead>
<tr>
<th>Table 2: Investigated Romanian migrants by gender (N=589)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

For the construction of our econometric model we shall consider several issues. First, the return migration decision is part of a system of decisions for optimal allocation of resources through the lifecycle (Borjas, 1994), meaning that, after the migrant gains economic and/or human capital in the host country, he could estimate that the returns to the gained capital are higher in his country of origin.

Then, the return decision is connected with the individual planning horizon and, in describing this time horizon, the original migration decision plays an important part (Klinthall, 1999). If the original migration decision contains the wish to return someday, then the planning horizon is practically divided in two periods of time: before and after the return. In this case migration is seen as a way of increasing future consumption in the country of origin, income being higher in the host country, but the utility of consumption being higher in the country of origin; thus, the allocation between work, leisure and consumption will not be the same during the two phases, i.e. before and after return (Dustmann, 2000).

But, if migration is not planned as temporary, the migrant is indifferent in relation to the consumption in origin or host country and only a change in the economic opportunities in the origin or host country could make him choose to return (Dustmann, 2000; Borjas and Bratsberg, 1996).

Other authors, such as Yang (2006) believe that the decision to return is related to either one of the two: (1) the individual preferences to live in the country of origin and spend in this country what he had accumulated in the host country; and the individual decides to return at the moment when the marginal utility of the additional income gained in the host country is less than the opportunity cost of a life lived in another country than the country of birth or (2) a minimum targeted level of income or other gains in the host country.

Another reason for return migration could be the dissatisfaction with regards to the achievements one has accomplished in the host country (Borjas and Bratsberg, 1996). However, return could be caused by an unpredicted event, happened either in the origin, or host country (Tunali, 2000).

### III. DATA AND METHODOLOGY

Thus, having in mind the above mentioned aspects, we propose a model which relies on several predictors of migration return decision, grouped in the following categories:

- Socio-demographic variables (age, gender)
- Participation to the labour market in the host country
- Marital status and location of the partner
- Parental status and location of the children
- Importance of national identity
- Work and income satisfaction

The model has the return decision as dependent variables, measured as a binary variable, so the equation we employ is a binary logit or probit.

The description of the equation is the following:

\[ R_i = c + \alpha_{SD} \cdot SD_i + \alpha_{LM} \cdot LM_i + \epsilon \]

where \( R_i \) is the return decision (1 if the migrant wishes to return to Romania, 0 if the migrant is decided to stay in the host country) and the independent variables are grouped in the categories we mentioned earlier.

### IV. MAIN RESULTS

Almost one quarter of the investigated Romanian migrants intend to return to Romania, but most of them do not know when this will happen. In fact, only 14.5% of the sample plans to come back to Romania having a certain time horizon in mind for this fact. Around one fifth of the investigated migrants intend to return to the origin country, but they cannot estimate the moment of their return. This means that their intention is characterized by a high level of uncertainty. However, we include all those expressing the wish of returning in the category of migrants intending to come back to Romania. All the others represent the category of those with no intention of return migration.

Table 3: Investigated Romanian migrants by their intention to return to home country (N=589)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>With intention, in the next months</td>
<td>7.0%</td>
</tr>
<tr>
<td>With intention, in the next years</td>
<td>7.5%</td>
</tr>
<tr>
<td>With intention, without a planning horizon</td>
<td>19.2%</td>
</tr>
<tr>
<td>With no intention</td>
<td>28.4%</td>
</tr>
<tr>
<td>Not knowing</td>
<td>34.8%</td>
</tr>
<tr>
<td>Not answering</td>
<td>3.2%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4 presents results of the logit model explaining the return migration intentions. We find out that age increasing inhibits such intentions. This result is consistent with findings of other studies that show that age increasing reduces the propensity towards mobility. Our analysis complements these studies by demonstrating that the effect of age is still the same when considering return migration. On the other hand, gender has no significant impact on returning intentions.

Also, participation to the labour market in the host country affects negatively plans of returning to Romania. Thus, migrants who are employed in the destination country are less interested to come back home. This variable represents a valuable proxy for both the quality of social integration and for the level of living in the host country. We think that higher wages from some countries as compared with Romania are acting as pull factors for migrants living abroad. However, work and income satisfaction in the destination country has no significant influence on our dependent variable.

On the other hand, location of partners influences intentions of Romanian migrants to return home. Those having husbands/wives/partners in Romania are more willing to come back, while migrants whose partners live in the same destination country as they do are less willing to return to Romania. So, we find out we can predict the return probability on the ground of location of the migrants’ partners.

Not only partners influence propensity to return migration, but also having children. Our results show that migrants who are parents have more intentions to come back to the origin.
country. Moreover, location of the children has a stronger impact on return probability. Thus, migrants who have children in Romania are more interested to return to their home country. So, family connections explain an important part of the propensity for returning migration.

Finally, valorization of national identity measured as pride of being Romanian predicts the willingness of the migrants to come back home. Those who value their nationality have more intentions to return as against the others. So, Romanian migrants who feel that they belong to the Romanian national group are more connected to their origin country.

Table 4: Predictors of return migration intentions among Romanian migrants (N=589)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Exp. (B) (Sig.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.962 (0.007)</td>
</tr>
<tr>
<td>Participation to the labour market in the host country (1=being employed)</td>
<td>0.579 (0.023)</td>
</tr>
<tr>
<td>Location of the partner (1=Romania)</td>
<td>3.370 (0.014)</td>
</tr>
<tr>
<td>Location of the partner (1=host country)</td>
<td>0.595 (0.020)</td>
</tr>
<tr>
<td>Parental status (1=with children)</td>
<td>1.689 (0.036)</td>
</tr>
<tr>
<td>Location of children (1=Romania)</td>
<td>4.807 (0.003)</td>
</tr>
<tr>
<td>National identity (1=pride to be Romanian)</td>
<td>3.867 (0.000)</td>
</tr>
</tbody>
</table>

Note: R Square Nagelkerke = 0.192
Overall Correct Predicted Percentage = 72.9%

V. CONCLUSIONS

Our findings show that analyzing socio-demographic profile of educated Romanian migrants, data on family and employment issues, as well as characteristics of their national identity, one can predict their propensity towards return migration.

Thus, returning home of “brains” that once have migrated from Romania depends of age, employment in the host country, location of family (partner and children), as well as positive emotions related of national identity.

REFERENCES