ROMANIAN MIGRATION FLOWS IN EUROPEAN COUNTRIES: DOES SOCIAL SECURITY MATTER?

Cosmin Enache¹ Ciprian Pânzaru²

ABSTRACT: In last decades, the globalization process and the removal of barriers on international circulation of persons inside the European Union fostered an increase in migration from Romania towards other European countries. Using a panel framework, our estimates showed that both push and pull factors are entering in the decision function of a Romanian migrant when it comes to choose the destination country. Economic conditions in the destination countries proxied by the level of income per capita and the employment rate are particularly associated with increased migration flows. Also, life expectancy seems to be a significant pull factor. Not least, we also questioned the welfare state as a potential input in the migration decision function. Our findings indicated that only family and childcare support public expenditures are positively associated with migration flows.

Keywords: Migration, Social Security, Panel Data

JEL Codes: F22, H53, C23

Introduction

Migration is one of the key factors that form and change our world; it plays a central role in constantly changing social, economic and political global processes. Migration links neighbouring or distant countries – their economies and cultures – and facilitates persons' and cultural values' mobility. Migration changes the size, ethnicity and age structure of populations, alters the cultural, religious and linguistic composition of societies, and enriches or impoverishes society social and economic strata (Castles 2000). In fact, migration affects cultural and national individual identity both of migrants and their hosts (Triandafyllidou, 2001).

The opposite is also true because environments' and social, political and economic conditions' transformation leads to migration types in constant changing. For instance, an ongoing conflict, an economic crisis and new migration policies (new recruitment schemes or introducing visas) impacts people's behaviour and triggers or affects migration networks, migration systems, and migration decision-making.

Furthermore, the processes of political integration or disintegration – for instance, through Europeanization and globalization or disaggregation of states – lead to the reinterpretation of borders, boundaries and statutes of members. These processes bring new coordinates for migration. Not only the cause and the composition of migration are continuously changing but also the direction and scale of movement (Düvell, 2006).

For instance, in 1960 there were 30 countries in the world that had about half a million migrants (Muñiz-Solari et al, 2010). In 2010, the number of these countries has doubled and the number of migrants exceeded 200 million people, more exactly it reached 213,943.8 thousands (Department of Economic and Social Affairs, The Age and Sex of Migration). More than half, i.e. 86,232.3 thousands, came from less developed countries (ibid.).

¹ West University of Timisoara, Romania, *e-mail: cosmin.enache@feaa.uvt.ro*

² West University of Timisoara, Romania, *e-mail: cpanzaru@socio.uvt.ro*

The largest number of international migrants lived in 2010 in Europe – about 70 million. In Europe, migration started to increase in the '80s, a time when countries such as France, Germany and Britain became priority destinations (International Migration Report, 2011). More recently, especially after the '90s, Italy and Spain have also started to become favourite destinations (ibidem, 2011).

Table 1 indicates how the situation has evolved from 1990 to 2010 in terms of international migration, and distribution on developed and less developed countries.

Table. no. 1.

Development group and major area	Number of international migrants (millions)			Percentage distribution of international migrants			International migrants as percentage of the population		
	1990	2000	2010	1990	2000	2010	1990	2000	2010
World	155.5	178.5	213.9	100.0	100.0	100.0	2.9	2.9	3.1
More developed regions	82.4	104.4	127.7	53.0	58.5	59.7	7.2	8.7	10.3
Less developed regions	73.2	74.1	86.2	47.0	41.5	40.3	1.8	1.5	1.5
Least developed countries	11.1	10.9	11.5	7.1	6.1	5.4	2.1	1.6	1.3
Africa	16.0	17.1	19.3	10.3	9.6	9.0	2.5	2.1	1.9
Asia	50.9	51.9	61.3	32.7	29.1	28.7	1.6	1.4	1.5
Europe	49.4	57.6	69.8	31.8	32.3	32.6	6.9	7.9	9.5
Latin America and the Caribbean	7.1	6.5	7.5	4.6	3.6	3.5	1.6	1.2	1.3
Northern America	27.8	40.4	50.0	17.9	22.6	23.4	9.8	14.2	12.7
Oceania	4.4	5.0	6.0	2.8	2.8	2.8	16.2	16.1	16.8

Estimated number of international migrants and their percentage distribution and share in
the total population, 1990-2010

Source: United Nations (2011).

The upward trend is more than obvious. If in 1990 Europe recorded 49.4 million international migrants, in year 2010 there already were 69.8 million people.

In general, international migration is determined by multiple causes. Some reasons may be economic, others may be social, but, generally speaking, both components play their part in making the decision to migrate. In Europe, migration has increased with the socio-political changes that have occurred starting with the '90s. The fall of the Iron Curtain allowed free movement of people from Eastern Europe to the West. Subsequently, the dissolution of the USSR in 1991 and the war in Yugoslavia between 1990 and 1994 have generated new waves of migration.

In this picture, Romania has positioned itself as a leading provider of immigrants. Since 1990 major migration flows from Romania began to be recorded. The first emigrants left for Germany and Hungary, these being in fact ethnic Hungarians and Germans who chose to leave the country. So the first waves of migration were based on ethnic grounds. Of course, these emigrants were joined by others (ethnic Romanians). During the communist dictatorship, there was the phenomenon of illegal immigration (fleeing the country), people wishing to escape the communist camp. At that time, Germany was one of desirable destinations. This was also due to the existing social networks (ethnic Germans who were able to leave legally, their families, friends and so on) and therefore to the greater integration possibilities. After 1990, some of those who dreamt to flee the country and settle in Germany were able to fulfil their wishes. Thus, they joined the ethnic Germans who emigrated at that time. Degradation of the economic situation in Romania during post-communist transition period has influenced the evolution of migration. As Romanian citizens began to perceive the advantages of working abroad, harmonising with existing opportunities, migration became increasingly more pronounced. The consistent upward trend begins to manifest especially after 2000. For that matter, until 2002 Romanian citizens' access to the European space was possible only with a visa. After that year, the visa regime began to be simpler. Romania's accession to the European Union involved total elimination of visas for Romanian citizens and free

movement in Europe. This made 2007 the year in which Romania registered the largest number of emigrants, more than 500,000 people. Figure 1 shows the evolution of Romanian emigrants from 1990 to 2010:



Figure no. 1. – The migration phenomenon Romania during 1990 – 2010 according to Eurostat

http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_ database, table on migr_imm1ctz-Immigration by sex, age group and citizenship, OECD - International Migration Database, http://stats.oecd.org/Index.aspx and author's calculation

This development has led Romania to be the country currently providing most migrants in the European Union. According to Eurostat (2010), about 13 percent of the total population of Romania is abroad.

Regarding Romania, we can say that the political factor was the one who facilitated migration, but the economic factor was the one which shaped it. This study explores the causes that influenced migration from Romania to the European Union. Thus we chose to analyse the following factors: gross domestic product in PPS per capita (GDPPC) employment rate (ER), tax rate (TR), life expectancy (LE), public expenditure on education (PE), old age pensions public expenditure (OAP), family and children public expenditure (FC), sickness and health care public expenditure (SHC), unemployment benefit public expenditure (UB).

The rest of the paper is organized as follows. In the next section is discussed the literature on migration potential determinants. Section 3 presents the empirical methodology used and the main results. Section 4 concludes.

Literature Review

There are many theories and approaches to international migration and its underlying causes. Most studies are based on the idea that the reasons generating migration are often regarded as economic. This is because most theories explaining the phenomenon of migration focus on economic issues.

In fact, on building international migration theories, Arango (2000) believed that this is a 20th century problem. Most contributions, previous to the '60s, are now only of historical interest, possibly producing contributions to the migration vocabulary. Arango's reaction starts from the

omnipresence of the phenomenon's neoclassical theory in any study on migration. It is theory that emphasizes most the role of economic factors in explaining migration, probably the oldest and most well-known theory of migration (Lewis, 1954; Ranis and Fei, 1961, Harris and Todaro, 1970, Todaro, 1976).

At the macro level, according to the neoclassical theory, migration is caused by differences in the ratio between labour supply and demand. Both capital and labour force being mobile move where they can combine best. The labour force leaves poor countries in which there is low capital and wages. It will target countries where there is a surplus of capital and therefore wages are higher. Surplus (of labour force for poor countries, of capital for rich countries) is what generates migration and orients migration flows. From a broader point of view, migration flows are those that balance the deficiencies of the labour market globally.

At the micro level, according to this theory, migration has its origins in the individual's desire to obtain larger gains. At this level, migration is an individual decision based on reason which takes into account differences in wages and displacement costs. The individual makes a cost-benefit type calculation determining him/her to migrate and orienting him/her in the decision to choose a destination or another (Borjas, 1990). The decision to migrate is a function of expected wages, wages valued at destination and migration costs.

As indicated earlier in this section, we will not dwell too much on this theory described in almost all studies on migration. The argument is that exclusive reliance of the role of economic factors in migration is shown to be flawed in many studies (Massey et all, 1998). As such, we will not take into consideration this theory as a dominant one in the current global socio-political conditions when explaining migration. For instance, if the mere natural search of the optimum between the labour resource and capital would be valid, then modern society would face permanent and large scale migration flows from poor to rich countries, and including between rich countries. There is no income equality between them, so, for instance, the European Union would be marked by endless migration flows (from east to west, from south to north, and so on). This is also the argument that led us to introduce in the built model other non-economic variables, for example, the variable of life expectancy (LE).

Of course, the limitations of the neoclassical theory have been highlighted also by other researchers who have tried to identify the deeper underlying reasons for migration. Thus, from the neoclassical theory on migration, the new economics of migration was born (Stark and Bloom, 1985). This theory starts firstly from the premise that the individual does not operate as a completely independent entity but as social being who is interdependent of others. As such, the decision to migrate is not absolutely individual but occurs as a result of the interaction with others, mostly with family. Revenues highlight their importance only in relation to the community of origin. The level on which a household is situated in the community of origin is decisive in the decision to emigrate. Under these conditions, the economic in its absolute form, as the difference between origin and destination revenues, no longer plays the most important role. The decision to migrate is subsumed to the family's risk minimization strategy. It is a result of the need to cover loss of income sources in the country of origin, or the need to diversify sources of income. The decision to migrate is taken in a group (family), but migration is ultimately individual. Thus, the idea of family reunion at destination is lost from sight.

Current theories introduce new elements in the migration equation. It is the case of dual (segmented) labour market theory (Piore, 1979). It refers to the idea of prestige and status. From the perspective of this theory, the labour market is divided into two main sectors: the primary sector and secondary sector. The primary sector is characterized by well-paid jobs with high prestige. The secondary sector includes lower-paid jobs and generally a low level of prestige. For this reason, these jobs are generally shunned by the local population. However, they become attractive to immigrants, thus being a migration generating source.

Other theories highlight the role of international relations in explaining migration. In this case, we note the world system theory (Wallenstein 1974). From this perspective, the world is divided into core countries, semi-periphery countries and the periphery countries (Carlos A. Martínez-Vela, 2001). The world system theory is an adaptation of the dependency theory. It is not a theory of migration in itself. Migration is, in view of this theory, only a mechanism to ensure the strengthening of capitalist order. It occurs due to the penetration of capitalist economic relations from the core countries to the periphery countries (non-capitalist countries). This enhances the mobility of the population (Arango et al., 1993).

In agreement with the specificity of our study, in this presentation of theories on migration we took into account only those offering micro- and macro-level explanations. In explaining migration, these theories relate to economic issues.

Bearing in mind the level of Romanian Migration, this paper contributes to a better understanding of the determinants of Romanian migration. Thus, in our analysis, the role of income in the decision to emigrate (a specific idea to the neoclassical theory of migration) was measured by the gross domestic product in PPS per capita (GDPPC) variable. In the same register of the neoclassical theory of migration, we analyzed the employment rate (ER) as a proxy for labour market conditions. The idea specific to the new economy of migration, namely reducing risks to family income through migration, can be found in the analysis of the variables tax rate (TR), old age pensions public expenditure (OAP), family and children public expenditure (FC), sickness and health care public expenditure (SHC) and unemployment benefit public expenditure (UB).

Finally, migration is a continuous search of the individual to improve his/her economic situation and quality of life. In general, population movements occur to more prosperous areas where these desires for economic welfare and psychological comfort can be satisfied. It is the reason behind introducing the variable of life expectancy (LE) in the built model as an element of psychological comfort in individual life.

Almost all theories on migration – whether at micro- or macro-level – overlap the idea of the push and pull model (Lee, 1966), namely on the existence of migration generating factors in the country of origin (push) and on the existence of also migration generating factors in countries of destination (pull). This article only analyses the role of the "pull" type factors as they are highlighted in a number of theories on migration.

Methodology and Results

The empirical sample consists in 12 European countries (Austria, Czech Republic, Denmark, Finland, France, Germany, Italy, Luxemburg, Netherlands, Slovenia, Spain and Sweden) which share common economic, demographic and social features when it comes to migration flows from Romania. From an economic point of view, all have a higher income per capita than Romania. From a social point of view, all are democracies and western civilizations. Not least, all the countries in the sample are in a demographic transition, with declining fertility rates and increasing life expectancy and old aged dependency ratio.

Data used for 1998-2007 period were extracted from Eurostat on-line database at 06/22/2012.

For empirical estimation, single-equation regression framework was considered. Given the relative homogeneity of the countries in the sample, we assumed poolability and group the data into a panel (N=12, T=10).

As dependent variable, we used the migration flow from Romania to respective destination country, measured as the number of long-term migrants from Romania to respective country.

As independent variables, we used two sets of migration flows determinants.

First, we included in our empirical model some "traditional" determinants of migration, as suggested by different migration theories and available empirical evidence. To account for general economic condition in the destination country, we used gross domestic product in PPS per capita (GDPPC) as a proxy for income level, employment rate (ER) as a proxy for labour market conditions and tax rate (TR) as a proxy for the state intervention. Moreover, to account for general level of health in the destination country, we used life expectancy (LE) as an independent variable. Also, to check for a possible impact of education on migration decision, we included in the empirical specification the public expenditure on education (PE) as percents of gross domestic product.

Second, in order to test if the welfare state conditions in the destination country act are important for Romanian migrants, we included in the empirical model four welfare state variables of interest: old age pensions public expenditure (OAP), family and children public expenditure (FC), sickness and health care public expenditure (SHC) and unemployment benefit public expenditure (UB). All variables were expressed in PPS per capita.

Old age function pensions public expenditure was defined according to European Commission (2011), including the government payments made to ensure a replacement income after retirement, to guarantee a certain income after a prescribed age, and to provide goods or services specifically required by the elderly.

According to European Commission (2011), family and children public expenditure includes the financial support offered to households for bringing up children, the financial assistance provided to people who support relatives other than children, and the social services specifically designed to assist and protect the family and children.

The sickness and health care related public expenditure comprises all cash benefits that replace in whole or in part loss of earnings during temporary inability to work due to sickness or injury and the value of medical care provided in the framework of social protection to maintain, restore or improve the health of the people protected (European Commission, 2011).

Unemployment benefit public expenditure includes a wide range of government payments made in order to replace in whole or in part income lost by a worker as a result of job loss, to provide supplementary income to new entrants in the labour market, to compensate for the loss of earnings due to partial unemployment; to compensate for early retirement, to cover the cost of training for those looking for a job, and to achieve other various related objectives (European Commission, 2011).

Descriptive statistics for all variables are given in Table 2.

Table no. 2.

Descriptive statistics										
	MF^1	$GDPPC^2$	ER^3	$L\bar{E}^4$	PE^5	TR^6	OAP^7	FC ⁸	SH^9	UB^{10}
Mean	13420.53	25610.92	66.26	78.02	5.48	42.10	2370.44	644.32	1741.65	403.08
Median	502.00	23700.00	65.60	78.20	5.30	41.50	2513.36	623.90	1706.07	450.12
Maximum	271443.0	68600.00	77.40	80.90	7.70	52.10	3560.85	2163.65	3387.48	767.98
Minimum	24.00	12300.00	51.30	74.10	3.90	33.50	838.31	79.13	718.95	65.31
Std. Dev.	36945.04	9356.42	6.01	1.55	1.05	4.95	692.56	438.05	528.85	193.65
Skewness	4.59	2.36	-0.22	-0.53	0.46	0.20	-0.43	1.58	0.60	-0.30
Kurtosis	27.37	9.74	2.69	2.83	2.06	2.09	2.17	5.97	3.46	2.10
Jarque-Bera	3363.81	335.57	1.46	5.70	8.54	4.94	7.16	93.22	8.27	5.79
Probability	0.00	0.00	0.48	0.06	0.01	0.08	0.03	0.00	0.02	0.06
Observations	119	119	119	119	119	119	119	119	119	119

¹ MF = Migration Flows (Persons); ² GDPPC = Gross Domestic Product per Capita (PPS per capita); ³ ER = Employment Rate (% of active population); ⁴ LE = Life Expectancy (years); ⁵ PE = Public Education (% of GDP); ⁶ TR = Overall Tax Rate (% of GDP); ⁷ OAP = Old Age Pension Public Expenditure (PPS per capita); ⁸ FC = Family and Children Public Expenditure (PPS per capita); ⁹ SH = Sickness and Health Public Expenditure (PPS per capita); ¹⁰ UB = Unemployment Benefit Public Expenditure (PPS per capita).

For estimation purposes, for all variables were taking logs, therefore all estimated coefficients will represent elasticities.

Before any estimation, we tested our variables for stationarity using four commonly used panel unit root tests (LLC test (Levin, Lin and Chu, 2002), IPS test (Im, Pesaran and Shin, 2003) and two Fisher-type tests which use ADF and PP tests (Maddala and Wu, 1999 and Choi, 2001).

All the four test employed have as a null hypothesis the existence of a unit root. But, only the LLC test uses the null hypothesis of a common unit root for all the cross-section of the panel, while the IPS, ADF-Fisher and PP-Fisher tests drop this homogeneity hypothesis. The results of the unit root tests are given in Table 3. All variables are non-stationary in levels and become stationary after first differencing (with the notable exception of unemployment benefit public expenditure variable.

Table no. 3.

Unit Root Tests									
Unit R	oot Test	LLC ^a	IPS^{b}	ADF Fisher ^b PP Fish					
Variable	Series in:	t*	W-stat	χ^2	χ^2				
I N(ME)	Levels	-1.51*	2.46	11.54	22.27				
	First Diff.	-2.64***	-1.22	34.08*	37.02**				
IN(CDDDC)	Levels	3.08	4.35	3.38	3.51				
	First Diff.	-6.51***	-2.62***	49.26***	62.21***				
I N/ED)	Levels	-2.13**	0.83	21.84	35.36*				
LN(EK)	First Diff.	-2.65***	-0.60	26.25	36.78**				
IN(IE)	Levels	1.99	4.45	2.74	2.93				
	First Diff.	-10.97***	-4.62***	71.38***	91.88***				
I N(DE)	Levels	0.70	1.13	13.50	21.58				
LN(PE)	First Diff.	-6.35***	-2.62***	48.94***	63.80***				
LN(TR)	Levels	0.32	1.72	9.86	11.06				
	First Diff.	-5.47***	-3.03***	51.15***	52.24***				
LN(OAP)	Levels	-0.98	2.75	9.42	20.81				
	First Diff.	-11.49***	-4.65***	68.46***	79.50***				
LN(EC)	Levels	-4.14***	0.78	31.99	46.18***				
LN(FC)	First Diff.	-4.86***	-1.35*	34.97*	49.22***				
I N(SHC)	Levels	-4.93***	0.34	23.87	31.90				
LN(SHC)	First Diff.	-8.39***	-3.34***	58.26***	81.31***				
I M/LID)	Levels	-0.07	1.73	10.04	10.83				
Lin(UB)	First Diff.	0.19	0.33	20.37	21.44				

(***), (**) and (*) denotes rejection of the unit root hypothesis at the 1%, 5% and 10% levels, respectively. ^a A kernel sum-of-covariances estimator with Bartlett weights was used.

Bandwidth selection was made using Andrews method.

^b Number of lags included in ADF regression was selected using Modified Akaike Information Criterion.

Given that using non-stationary time series in regression analysis could generate misleading results, due to spurious regression, we chose to use a model in first differences. However, since models in first differences have no long-run solutions, this choice will lead to the loss of long-run properties. Therefore, any inference will be short-run oriented.

We employed a two-step estimation strategy. First, we estimated a basic model of migration flows, using only the first set of independent variables. The structural form of the basic empirical model is:

$$\Delta \ln MF_{it} = \Delta \ln GDPPC_{it} + \Delta \ln ER_{it} + \Delta \ln LE_{it} + \Delta \ln PE_{it} + \Delta \ln TR_{it} + \varepsilon_{it}$$
(1)

After we derived the appropriate empirical specification, we added welfare state variables to the basic model. However, in order to avoid potential multicoliniarity problems the welfare state variables were included in the basic model separately.

We started estimation with a model with individual effects. The selected model is the one in (1), but with $\varepsilon_{it} = \alpha_i + \lambda_t + u_{it}$, where α_i is the individual country effect, λ_t is the time effect and u_{it} is the idiosyncratic error component.

Time effects will capture developments over time which are common to all countries. Specifying time effects in this fashion leads to a within time estimation which will eliminate all common trends and external shocks to which countries are jointly exposed.

To start, we ran a fixed effects OLS estimation with both cross-section and period fixed effects. The results are shown in column 1 of the table 4. Using an F-test we ruled out the validity of cross-section effects. For period effects, we could reject the null hypothesis that all effects are zero. Therefore, a one-way (period) fixed effects model is appropriate. This leads to a within time estimation which will eliminate all common trends and external shocks to which countries are jointly exposed. We followed the Baltagi (2001) estimation procedure, first removing the period mean from both the dependent variable and the independent variables and then performing the regression with the demeaned values. The estimation results are given in column 2 of table 4.

Next, we estimate the empirical model in (1) as a one-way random effects model, assuming $\varepsilon_{it} = \lambda_t + u_{it}$, (where λ_t is the individual period effect, and u_{it} is the idiosyncratic error component) and Cov(X_{it}, λ_t)=0. The results are given in column 3 of table 4.

In order to discriminate between fixed effects and random effects models, a Hausman test was employed. The high value of the test lead to the rejection of the null hypothesis that both estimators are consistent, indicating that only fixed effects estimator is consistent.

After deriving the functional form for the empirical model which best fits the data, the specific panel data issues like residual autocorrelation and cross-section heteroskedasticity were addressed. Given that the value of Durbin-Watson statistic is close to 2, there is no autocorrelation in the residuals. To address the heteroskedasticity problem, we allowed for a different residual variance for each period (period heteroskedasticity) and used FGLS estimation procedure. Also, we computed White robust standard errors, treating the panel regression as a multivariate regression, with an equation for each cross-section. In this approach, the conditional variance matrix $E(\varepsilon_t, \varepsilon_t' | X_t^*)$ can depend on X_t^* in arbitrary, unknown fashion. In this manner, the estimator is robust to different error variance in each period (Wooldridge, 2007). The results of this FGLS estimation are given in column 4 of Table 4.

Because changes in the natural logarithm are (almost) equal to percentage changes in the original series, our model shows the short-term reaction of migrants flow growth rate to changes in growth rates of the independent variables.

The estimation results showed that the general economic conditions in the destination country mater for Romanian migrants. The coefficient for gross domestic product per capita variable is positive and significant. This shows that in periods of economic expansion the growth rate of migration flows tends to increase. Conversely, in periods of economic recession, the growth rate of migration flows will slow down.

The conditions in the labour market in the destination country proved to be another determinant of migration flows. An increase in employment rate in the destination country will also trigger a positive effect on migration flows from Romania.

The general level of taxation, captured through the tax rate variable, prove to be insignificant for Romanian migrants' decision to choose the destination country.

Another variable which proved to have a significant impact on migration flows is life expectancy. Increasing life expectancy in one country of the sample is more likely to attract a higher number of Romanian migrants than in previous period.

Changes in the level of public expenditure on education seem to not affect Romanian migrants' decision to choose the destination country.

We re-estimated the model after we added separately the welfare state variables. The results are given in columns 5-8 of Table 4. From the four welfare state variables, only the public

expenditure on family and children proved to be significant and positively related to migration flows from Romania to destination country. This finding highlights the emphasis given by Romanian migrants to public support for families when it comes to choose a destination country.

ю. 4.

Migration Flows Estimation									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
VARIABLES	OLS	OLS	OLS	FGLS	FGLS	FGLS	FGLS	FGLS	
	Fixed	Fixed	Random	Fixes	Fixes	Fixes	Fixes	Fixes	
	Effects	Effects	Effects	Effects	Effects	Effects	Effects	Effects	
	Two-way	One-Way	One-Way	One-Way	One-Way	One-Way	One-Way	One-Way	
	Robust	(Period)	(Period)	(Period)	(Period)	(Period)	(Period)	(Period)	
		Robust	Robust	Robust	Robust	Robust	Robust	Robust	
Constant	-0.29*	-0.20***	-0.09	-0.20***	-0.20***	-0.22***	-0.19***	-0.23***	
	(0.15)	(0.06)	(0.11)	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)	
$\Delta \ln(\text{GDPPC})$	8.33***	5.87***	4.84***	6.85***	7.03***	5.77***	7.13***	7.45***	
	(2.90)	(1.63)	(1.10)	(1.19)	(1.34)	(1.34)	(1.67)	(1.10)	
$\Delta \ln(ER)$	13.07***	14.87***	13.92***	11.85***	11.75***	11.37***	12.03***	11.16***	
	(4.69)	(3.46)	(3.35)	(2.22)	(2.06)	(2.22)	(2.11)	(2.14)	
$\Delta \ln(LE)$	20.67	15.61	0.69	14.57**	14.62**	12.02*	15.87**	17.22***	
	(17.43)	(11, 32)	(14 56)	(6.73)	(676)	(6.81)	(6 47)	(6 36)	
$\Delta \ln(PE)$	1 98	1 69	1 26	1 42	1 49	1.65	1.50	1.69	
<u> </u>	(1.50)	(1.76)	(1.31)	(1.11)	(1.17)	(1.03)	(1.23)	(1,11)	
$A\ln(TR)$	(1.5))	(1.70)	(1.51)	1.00	(1.17)	(1.07)	(1.23)	(1.11)	
	(2.50)	(2,27)	(2, 20)	(1, 17)	(1, 22)	(1, 10)	(1.22)	(1.20)	
$A_{\rm he}(O A D)$	(2.52)	(2.55)	(2.29)	(1.17)	(1.22)	(1.10)	(1.22)	(1.20)	
$\Delta \ln(OAP)$					-0.31				
					(1.55)				
$\Delta \ln(FC)$						1.38***			
						(0.38)			
$\Delta \ln(SH)$							-0.52		
							(1.42)		
$\Delta \ln(\text{UB})$								-0.56	
								(0.54)	
Observations	107	107	107	107	107	107	107	107	
Number of	12	12	12	12	12	12	12	12	
countries									
Adj. R-	0.22	0.27	0.16	0.35	0.34	0.39	0.34	0.35	
squared									
F-test	2.25***	4.05***	4.95***	5.31***	4.88***	5.58***	4.90***	5.03***	
DW-stat	2.00	1.92	1.95	1.99	1.99	2.10	2.00	1.97	
Jarque-Bera	13.41***	28.70***	52.01***	11.57***	10.75***	7.12**	11.72***	12.54***	
F-test all α_i	0.43								
=0									
F-test all λ_t	3.10***								
=0									
Hausman χ^2			9.99*						
			Standard a	more in nore	nthagag				

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Conclusions

Our analysis highlighted that some "traditional" migration determinants documented in the literature are entering in the decision function of a Romanian migrant when it comes to choose the destination country.

The income motive is one of the well documented push factors of migration. Our results showed that income trend in the destination country acts as a catalyst for migration flows from Romania. The number of Romanian migrants tends to increase in periods of economic prosperity and to decrease in periods of economic slowdowns.

Also, as expected, the labour market dynamic in the potential destination country affects the migrations flows from Romania. An improvement in the level of employment in the destination country attracts a higher number of Romanian migrants.

Another interesting finding regards the positive relation between the life expectancy trend in the destination country and migration flows. Romanian migrants seem to prefer countries with an increasing life expectancy and a potential better general health.

A particular feature of this paper was to check if the welfare state is a potential input in the migration decision function. From the four main measures of welfare state used in regressions, only the public expenditure on family and children was found to be significant. Increasing public care and support for children and families will attract a higher number of Romanian migrants than in the previous period.

Acknowledgements: This work was co-financed from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/89/1.5/S/59184 "Performance and excellence in postdoctoral research in Romanian economic science domain".

References

- 1. Baltagi B. H., 2001. *Econometric Analysis of Panel Data (Second Edition)*, John Wiley & Sons, Chichester, United Kingdom
- 2. Borjas G. J., 1990. *Friends or Strangers: The Impact of Immigrants on the U.S. Economy*, Basic Books, First Edition, pp.138.
- 3. Carlos A., Martinez V., 2001. World Systems Theory, available online at http://web.mit.edu/esd. 83/.www/notebook/WorldSystem.pdf, accessed 10 Sept. 2012
- 4. Castles S., 2000. *Ethnicity and Globalization: From Migrant Worker to Transnational Citizen*, Sage Publications, London, pp. 12-13
- 5. Choi I., 2001. *Unit Root Tests for Panel Data*, Journal of International Money and Finance, 20, pp. 249–272
- 6. Düvell F., 2006. *Illegal immigration in Europe. Beyond control?*, Houndmills, Palgrave MacMillan, pp. 20-21
- 7. European Commission, 2011. ESSPROS Manual and user guidelines, Eurostat, Bruxelles.
- 8. Harris J. R., Todaro M. P., 1970. *Migration, Unemployment and Development: A Two-Sector Analysis*, The American Economic Review, Vol. 60, No. 1, pp. 126-142.
- 9. Im K.S., Pesaran M.H., Shin Y., 2003. *Testing for unit roots in heterogeneous panels*, Journal of Econometrics, 115, pp. 53-74
- 10. International Migration Report, 2009. A Global Assessment, United Nations, ST/ESA/SER.A/316 pp. 19
- 11. Lee E., 1966. A Theory of Migration, Demography 3(1), pp. 47
- 12. Levin A., Lin C.F., Chu C.S., 2002. Unit root tests in panel data: asymptotic and finitesample properties, Journal of Econometrics, 108, pp. 1-24
- 13. Lewis W. A., 1954. *Economic Development with Unlimited Supplies of Labour*, The Manchester School 22 (2), pp.139–191
- 14. Maddala G., Wu S., 1999. A Comparative Study of Unit Root Tests with Panel Data and a New Simple Test, Oxford Bulletin of Economics and Statistics, 61, pp. 631-652
- 15. Massey D. S., Arango J., Hugo G., Kouaouci A., Pellegrino A., Taylor E. J., 1998. Worlds in

Motion Understanding International Migration at the End of the Millennium, Oxford, Clarendon Press

- Massey D. S., Arango J., Hugo G., Kouaouci A., Pellegrino A., J. Edward Taylor, 1993. *Theories of International Migration: A Review and Appraisal*, Population and Development Review, Vol. 19, No. 3, pp. 431-466
- 17. Piore M. J., 1979. *Birds of passage: migrant labor and industrial societies*, Cambridge, Cambridge University Press.
- Ranis G., Fei J. C. H., 1961. A Theory of Economic Development, The American Economic Review, Vol. 51, No. 4, pp. 533-565.
- 19. Stark O., Bloom D. E., 1985. *The New Economics of Labor Migration*, American Economic Review 75 (2), pp. 173-178.
- 20. Triandafyllidou A. (eds.), 2001, *Migration Pathways. A Historic, Demographic and Policy Review of Four Countries of the European Union*, European Commission Research Directorate, Bruxelles, pp. 89.
- 21. United Nations, Department of Economic and Social Affairs, Population Division, 2011. *Trends in International Migrant Stock: Migrants by Age and Sex*, United Nations database, POP/DB/MIG/Stock/Rev.2011, accessed 11 Sept. 2012
- 22. Wallerstein I, 1974. The modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century, New York Academic Press
- 23. Wooldridge, J., 2007. *Econometric Analysis of Cross Section and Panel Data*, Cambridge, MA, MIT