EMIGRATION TRENDS AND CHALLENGES IN THE FRAMEWORK OF EUROPEAN ECONOMIC INTEGRATION

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Abstract: *The research performed within the paper aims to highlight the importance of labour mobility within the European Union in the deepening context of the European integration process. The EU expansion strategy focuses on an intensified cooperation process with EU's Eastern neighbours which includes both EU candidates, like Macedonia, Montenegro and Serbia, as well as other countries that take part in the Eastern Partnership (EaP) developed by the EU in 2009. This partnership has the main purpose to ensure an institutional framework for debates on joint economic and political issues for all involved partners that may lead to grating them the EU membership statute in the future. Within this perspective, the European integration process and the EU expansion which involves the possibility to expand the free movement of workers from the Eastern countries towards Western Europe, brings out numerous talks on least sensitive and controversial aspects of labour mobility. Moreover, the current refugee crisis confronting Europe points out the necessity to implement accurate strategies and policies for labour market integration of immigrants and asylum seekers, thus transforming the potential negative effects into positive externalities on economic growth. Therefore, our study focuses on the effects generated by emigration on sending economies in terms of labour market outcomes and GDP increases, mainly through remittances. We took into account the latest EU enlargements in 2007 (Romania and Bulgaria) and 2013 (Croatia), thus assessing the emigration impact upon these labour exporting countries during the 2000-2014 period. The developed macroeconometric models take the form of SEM models used for the combined and mediated analysis of the shaping factors of emigration stocks and their economic consequences, which were processed through the MLE method. Moreover, we performed in-sample and out-of-sample predictions of the emigration stocks and remittances for the three countries considered within the panel up until 2020. The results show that wage differentials are extremely important for the migration decision, thus shaping the emigrant stock, along with the labour market outcomes and education, while remittances generate positive effects on sending economies, leading to an increase in total output.*

Keywords: Economic integration, Emigration, Education, Economic growth, Labour mobility, Remittances

JEL classification: F15, F22, F24

1. Introductive issues concerning the key challenges faced by the European Union in the present context of labour mobility and refugee crisis

The increased importance of labour mobility within the European Union in the deepening context of the European integration process brings out to light several important questions regarding the strategies and policies that need to be implemented in order to cope with high emigration/ immigration flows. Moreover, the EU expansion strategy focuses on an intensified cooperation process with EU's Eastern neighbours which includes both EU candidates, as well as other countries that take part in the Eastern Partnership (EaP) developed by the EU in 2009. Thus, there is a projection of the international migration patterns, intensity, structure and size, which proves to be extremely important when we consider the extremely complex effects of this process upon sending and receiving economies.

OEDC (2014) shows that the migration flows registered a shift in trend during latest years, most migrants from Eastern Europe choosing Germany or Austria as main destination country compared to Italy and Spain that are still among the main destination countries, but with a significant decrease compared to previous years, now being only the seventh or eighth position among the largest immigration countries in OECD (Noja et al., p. 98).
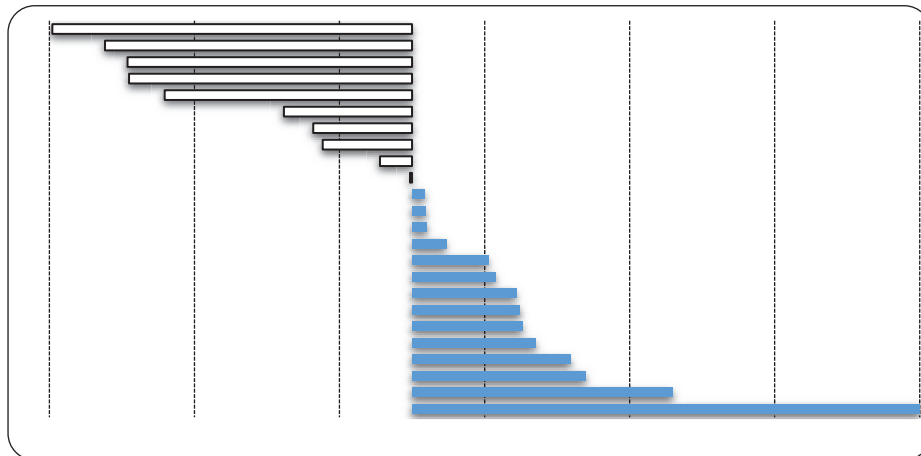

Figure 1: Change in permanent flows between 2007-2011 average and 2012
Source: OECD, International Migration Outlook (2014)

Moreover, the anxiety towards emigrants from Central and Eastern Europe in the context of the latest enlargements, mainly 2007 (Romania and Bulgaria) and 2013 (Croatia), but as well towards asylum seekers and refugees coming from Syria and other Arab countries, highlights the importance of international migration policies, along with accurate and efficient immigrants integration strategies defined by the main European destination countries (Germany, Austria, Sweden).

In the latest years, the main migration corridors through Eastern Mediterranean and Western Balkan have gained a significant relevance due to the large number of migrants crossing it by Turkey. At the same time, the Central Mediterranean

route that leads to Italy is also extremely used. Thus, according to the latest official estimates more than 300000 persons have reached Europe by sea since January 2016 until now, including about 210000 in Greece and 120000 in Italy (OECD, 2015).
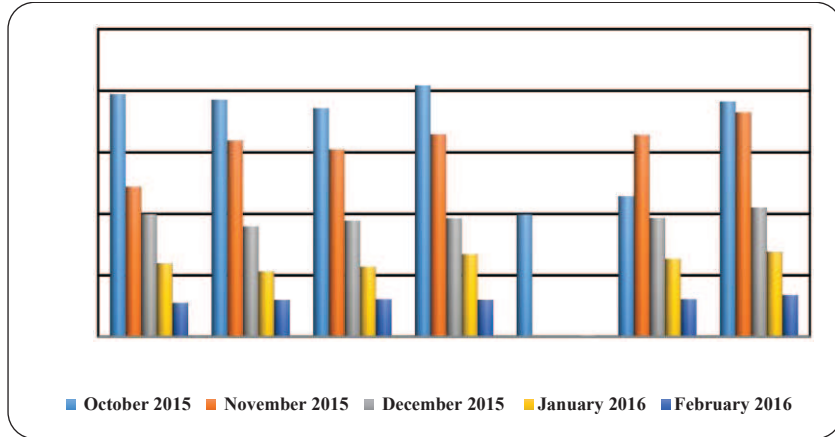

Figure 2: Estimated refugee arrivals per host country (flows through the Western Balkans Route), October 2015 – February 2016
Source: own calculation based on UNHCR data

Within the European Union, Italy, Greece and Hungary are in the front line of refugees, but the final destination countries are Germany (in absolute terms), Sweden or Austria, relative to their population (OECD, 2015).
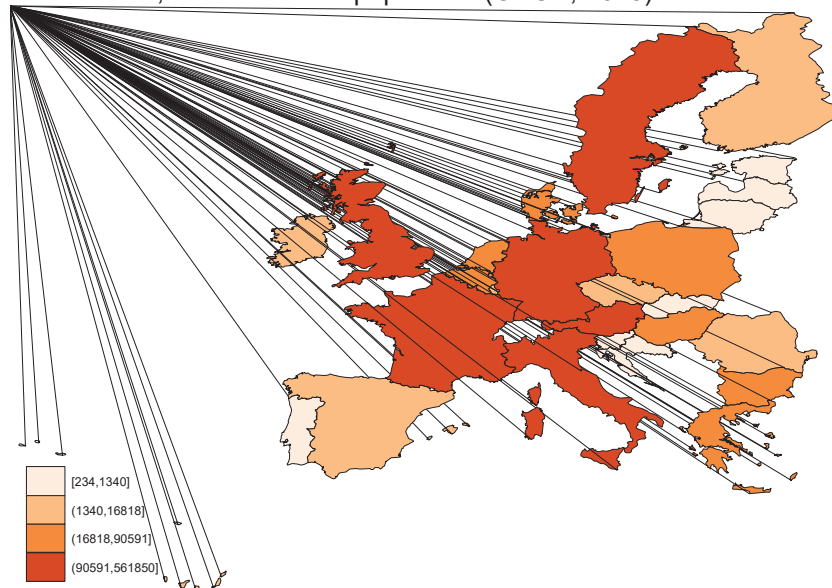

Figure 3: Total refugees and asylum seekers by country or territory of asylum within the EU, mid-2015
Source: own process based on UNHCR data through Stata 13

151

Thus, in 2014, about 630000 asylum requests have been registered within the EU Member States, and according to the latest OECD estimates, approximately 700000 more asylum requests have been filled in this year, while the total number could reach 1 million by the end of 2016. Within this context, between 350000 and 450000 persons could benefit from humanitarian protection in Europe, which involves the refugee status, an associated protective status or granting the temporary staying permit due to humanitarian reasons, with extremely important implications in terms of economic consequences for the main destination countries.

2. Literature review on labour emigration shaping factors and effects

Various economic theories on international labour migration focus on the neoclassic approach based on the analysis of wage differentials between sending and receiving economies as incentive for the migration decision. These theories reveal that emigration leads to competition between migrants which lead to wage decreases in countries or regions with capital abundance. At the same time, remittances can lead to economic growth, thus implying a decrease in inequalities and wage differences.

Recent studies on the determinants of labour migration (Clemens, 2011; Kim and Cohen, 2010; Hoti, 2009) reveal the importance of demographic, geographical and social variables in the analysis of emigration rates and the inclination to emigration. At the same time, language, culture and historical elements (Mayda, 2010; Clark et al., 2007), with the age structure of the population (Kim and Cohen, 2010), may have a significant impact on international migration. An aging population in the country of destination may indicate an increased demand for immigrant workers - in this respect are considered also the retirement ages, respectively the participation rates of older people on the labour market. Also, according to other studies (Neumayer, 2005), people living in urban areas have more information on international migration than in rural areas. Infant mortality rate and life expectancy at birth are also demographic indicators of the quality of life, often used in empirical analyzes of international migration - since the factors affecting the health of the population have a significant impact on the inclination for migration. Therefore, a country of origin, characterized by a high rate of child mortality, respectively a low life expectancy on birth, could send more migrants than any other country of origin with a higher life expectancy. Meanwhile, a destination country characterized by a high mortality attracts fewer immigrants relative to another destination country where this indicator has a low value.

The changes induced in the labour force structure generate direct effects on inequality, mainly through the alternations in the share of persons with high wages, respectively low incomes within the economy. The labour supply changes (for origin and host economies), induced by the active population movements, are reflected in the process of wage equalization between countries and markets. Theoretical neoclassical approaches concerning the equalization of wages between markets performing exchanges of employees can highlight a potential wage growth in migrant sending countries, respectively a wage decline in the host economies. Labour free movement between countries (regions) with high and low

wages generate a reduction of income inequalities over a certain period, and as a result, the propensity towards migration tends to decline. Nevertheless, cross-section analyses between countries do not clearly reveal whether the migrants move towards countries with high wages or, alternatively, whether developed countries, with a high level of wages, gave other characteristics and particularities that attract migrants.

Nevertheless, in the absence of a labour surplus, the loss of labour through emigration generates, ceteris paribus, a production decrease for the origin country and changes the functional income distribution in favour of wages. The wage increase effects can be intensified by a demand increase in the source economy. This result is expected only when the migrant sending country has a growing economy that creates new jobs. At the same time, there are several factors generating higher labour gaps, like changes in the education system, low labour mobility, respectively low levels of inter-job mobility (between different jobs) or even long run technological and demographic changes.

From the immigration perspective, Harris and Todaro (1970) have considered what impact is generated upon the economic equilibrium. Their results reflect that in the absence of complete wage flexibility, both the restrictive migration policies and limited wage increases can lead to welfare and thus an improvement in the economic conditions within destination countries. Nevertheless, the result of both policies is not a positive one overall the migrant sending and receiving economies. Piore (1979) pointed out through his research that there is a small impact of migration on natives within the main destination countries, due to the fact that the immigrants usually take jobs refused by the local workers. Zimmermann (2005) debated the positive and negative immigration effects, within the perspective of wages, working conditions or unemployment pressures, its concluding remarks revealing the fact that immigration has an important positive impact on host economies. More precisely, the immigration flows do not necessary lead to a reduction in natives wage levels or to an increase in unemployment, even though there are several adjusting phases.

3. Methodology and data

In order to assess the shaping factors of labour emigration and its effects upon the three New EU Member States considered within the panel (Romania, Bulgaria and Croatia), we developed a SEM model (Structural Equations Modelling), processed through the MLE (Maximum Likelihood) method of estimation.
The structural equations modelling is also called simultaneous equations modelling being and advanced technique of multivariate data analysis used for the design, test and estimation of causal relations between variables.

A multiple equations model is developed under a structural form, by formally transposing the economic theory for a certain analysed process into an equations system.
The general form of the simultaneous equations model has the following configuration:

$$\begin{cases} b_{11}y_{2t} + \ldots + b_{1m}y_{mt} + c_{11}x_{1t} + \ldots + c_{1n}x_{nt} = \varepsilon_{1t} \\ b_{21}y_{2t} + \ldots + b_{2m}y_{mt} + c_{21}x_{1t} + \ldots + c_{2n}x_{nt} = \varepsilon_{2t} \\ \ldots\ldots\ldots \\ b_{m1}y_{1t} + \ldots + b_{mm}y_{mt} + c_{m1}x_{nt} + \ldots + c_{mn}x_{nt} = \varepsilon_{mt} \end{cases}$$

where: t is the number of observed time periods; b_{ij} are the parameters associated to the endogen variable y_{ij}; c_{ij} are the parameters of the exogenous variable x_{ij}; i=1, … , m; j=1, …, n.

The structural form of a simultaneous equations model is in fact the initial design of the model resulting after the specification stage and represents the structure of the described economic process in terms of components and connexions.

We selected a series of specific indicators as proxy for the variables of developed models, ranging from the economic activity, labour market outcomes and education to the emigration process, thus comprising:
i) international migration specific indicators: the stock of emigrants, remittances (mil. USD);
ii) economic activity and labour market indicators: total GDP (mil. Euro); unemployment rates (%); earnings (monthly and annual) by two-earner married couple with two children (Euro) and earnings dispersion among employees (Decile 9/ Decile 5); the educational attainment (both general and vocational) through secondary and tertiary education levels (the highest ISCED - International Standard Classification of Education level successfully completed), as well as the participation rate in education covering participation in formal and non-formal education and training.

The main data sources for the indicators used are the statistical database of the European Commission - Eurostat, the international migration database of OECD, World Bank – World Development Indicators and United Nations Database – UNHCR (United Nations High Commissioner for Refugees), UNU WIDER World Income Inequality Database.

4. Results and discussion

Based on the relevant economic literature we developed a model which links the emigration shaping factors and main determinants to the emigration impact on economic growth within the three considered sending countries, both through exporting a large part of the labour force and by remittances. Thus, for identifying the main modellers of emigrant stock we considered the labour market performances of origin countries in terms of unemployment and level of earnings, the educational level of the labour force (secondary and tertiary – for the brain drain) and the general living standard through the life expectancy at birth as a socio-demographic indicator. Regarding this former aspect, we connected the impact of remittances (as the money sent by the emigrants to their remaining families and households) both upon the economic output/ GDP levels and living standards, health and welfare of the population, respectively life expectancy.

Moreover, we accounted the short-term impact generated by the loss of a significant part of the population through emigration on the total GDP of sending economies.

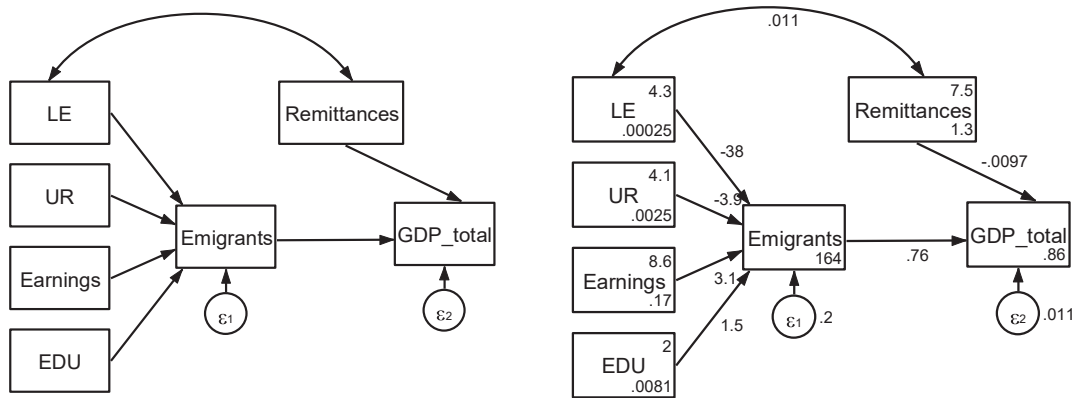The results obtained are synthesised and presented in Figure 4 and Table 1.

Figure 4: General form of the SEM model developed
for the emigration analysis
Source: own process of panel data through Stata 13 econometric package

The accuracy of estimated coefficients is extremely high, being validated through the high level of statistical significance, mostly at 0.1%, as well as through the level of Fisher and Wald tests.

Table 1 Results of the SEM models developed for the assessment of emigration shaping factors and impacts on sending economies

| | Model 1 | | | Model 2 | | | Model 3 | | |
	b/se	p	t	b/se	p	t	b/se	p	t
log_emigr_stock									
log_life_exp	43.640**	0.008	2.655	49.102**	0.006	2.753	-38.371**	0.001	-3.283
	(16.44)			(17.84)			(11.69)		
log_unempl_rate	-1.417***	0.000	-4.922						
	(0.29)								
log_monthly_earn	-0.691*	0.034	-2.118	-0.884*	0.011	-2.530			
	(0.33)			(0.35)					
log_edu_tert	-2.725**	0.001	-3.243	-3.737***	0.000	-4.313			
	(0.84)			(0.87)					
log_empl_rate				6.389***	0.000	3.795	-3.931	0.219	-1.229
				(1.68)			(3.20)		
log_earnings_couple							3.116***	0.000	4.869
							(0.64)		
log_part_rate_edu							1.506	0.268	1.107
							(1.36)		
Constanta	-159.283*	0.017	-2.395	-207.797**	0.004	-2.905	164.283**	0.002	3.053
	(66.51)			(71.53)			(53.81)		
log_gdp_total									
log_emigr_stock	0.702***	0.000	18.200	0.702***	0.000	18.200	0.760***	0.000	29.307
	(0.04)			(0.04)			(0.03)		
log_remittances	0.014	0.643	0.463	0.014	0.643	0.463	-0.010	0.639	-0.470
	(0.03)			(0.03)			(0.02)		
Constanta	1.505***	0.001	3.427	1.505***	0.001	3.427	0.857**	0.005	2.787
	(0.44)			(0.44)			(0.31)		

Source: own process of panel data through Stata 13 econometric package

155

Our results comply with the economic literature highlighting that wage differentials between sending and receiving countries are one of the main factors for the migration decision, while the positive effects of remittances on economic growth are extremely significant. More precisely, the results show that a slight increase in monthly earnings tend to reduce the emigration stock (by 0.691% in Model 1 and 0.884% - Model 2). Still, when we considered the annual net earnings of a couple with two children, respectively a family, this type of increase could provide the necessary financial resource for moving and establishing into another country through emigration, thus being an incentive for this process.

In the case of the emigration effects on sending economies, there is evidence to attest that an increase in remittances lead to a slight increase in the total GDP, while an increase in the total emigrant stock also generated increases in GDP levels on then short-run, mainly through additional remittances, incentives for those remaining to participate in education and training and the labour market.
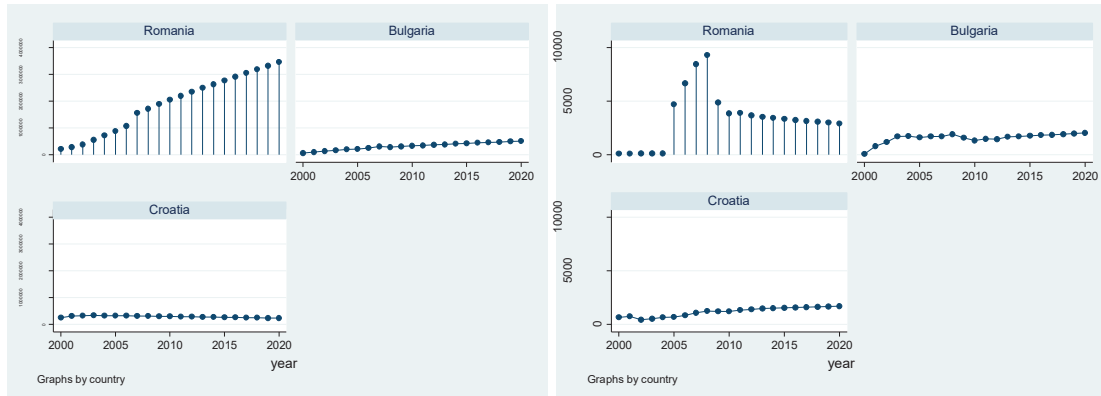

Figure 5: Within and out-of-sample forecasts for the emigrants stock (left) and remittances (right), 2000-2020
Source: own process of panel data through Stata 13 econometric package

We also performed some predictions regarding the future evolution of the emigrant stocks and remittances until 2020 based on the trends registered during 2000-2014, respectively in-sample and out-of-sample forecasts (figure 5), that reveal an increasing trend of emigration for Romania in the following period, meaning higher stocks of emigrants towards the main EU destination countries, however the remittances tend to decrease up to a constant level. On the other hand, in the case of Bulgaria and Croatia, the stock of emigrants has a constant evolution with a very slight increase until 2020, but the remittances levels tend to improve.

5. Concluding remarks

The study performed focused on the main evolutions and challenges faced by labour mobility (emigration) in the context of the European integration process and EU expansion, respectively the refugee crisis in Europe, and their economic consequences, mainly for the three New Member States in 2007 and 2013,

Romania, Bulgaria and Croatia (one of the main research limitations could imply the relatively small number of countries within the analysed panel).

To this respect, following the economic literature, our results reveal the importance of a focus on the main determinants and shaping factors of labour emigration, especially in the case of highly-skilled workers, as well as on the impact of emigration for sending economies, in order to adopt and implement accurate strategies and policies, at the European level and within the main EU origin and destination countries.

This would imply taking into consideration both labour and humanitarian migration (current challenges faced by the European Union in the context of the refugee crisis), as well as the emigration effects on sending economies and the immigration impact on natives and host countries, respectively their labour market integration and socio-economic inclusion. The most important measures highlight active and passive labour market policies along with flexicurity (flexibility and security) measures (Son and Carica, 2011), which focus on job creation for the unemployed, training for professional development and skills acquirement or wage incentives.

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