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Migration and Unemployment Duration: The Case of the OECD Countries

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***Abstract*—** This paper examines whether or not immigration has a positive influence on the duration of unemployment, in a macroeconomic perspective. We analyse also whether the degree of labor market integration can influence migration. The integration of immigrants into the labor market is a recurrence theme in the work on the economic consequences of immigration. However, to our knowledge, no researchers have studied the impact of immigration on unemployment duration, and vice versa. With two methodology of research (panel estimations (OLS and 2SLS) and panel cointegration techniques), we show that migration seems to influence positively the short-term unemployment and negatively long-term unemployment, for 14 OECD destination countries. In addition, immigration seems to be conditioned by the structural and institutional characteristics of the labour market.

***Keywords*—**international migration, unemployment duration, OECD countries, panel data

I. Introduction

DURING the last years, economists have analyse the effects of migration on the labour market of developed countries, especially on unemployment. The results of these studies show that the impact of immigration on the labor market is limited and it may be different from one country to another. The economic impacts of immigration will vary by time and by place, and can be either beneficial or harmful [6].The effect of immigration on unemployment may be conditional on institutional frameworks [3-17]. [24] show that the employment impact is more pronounced in Europe than in the United States. This conclusion could partly be explained by the fact that European local labour markets are less open and flexible than those in the United States. The structural and institutional factors, including structural unemployment are then important elements to consider [22]. However, very few studies take into account the importance of these factors to analyze the relationship between immigration and labor market [28]. Nevertheless, migration can influence local labor market conditions, and especially unemployment duration. The integration of immigrant workers on the labor market is more or less quickly, and can influence the job search activities and the longer search period of all workers in the host country. Do migrations lead to longer unemployment spells?

Similarly, several studies have examined the determinants of immigration [26-14]. Immigration is conditioned by the characteristics of the labour market, including unemployment and wages [12]. It would be interesting to see how the structural characteristics of the labor market may influence migration.

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The duration of unemployment and the degree of flexibility in the labor market may condition the international migration. Do conditions of the labor market influence immigration flows?

The length of waiting time for immigrants to find a new job in an unknown labour market can to affect the level of unemployment duration in the developed countries. But, it's also possible that immigrants integrate quickly into the labour market by taking available jobs or jobs that are neglected by native workers. At the same time, migration may depend on the degree of labor market integration. Following the intuition above, labor market integration is defined in terms of the employment. This paper contributes to the empirical literature by analysing the impact of migration on unemployment duration of OECD countries. Meanwhile, this paper examines the influence of the labor market conditions, in terms of employment and flexibility, on migration.

To our knowledge, no researchers have studied the impact of immigration on unemployment duration, and vice versa. However, the integration of immigrants into the labor market is a recurrence theme in the work on the economic consequences of immigration [13] and the debate about the economic effects of immigration has attracted renewed interest. The present study aims at filling this gap in the literature through investigating the impact of migrations (and structural macroeconomic variables) on unemployment duration in developed countries. We study whether or not immigration has a positive influence on the duration of unemployment, in a macroeconomic perspective. We analyse also whether the degree of labor market integration can influence migration. We can think that immigrants are attracted to strong labor markets, especially those where they might be more easily absorbed.

With econometric models, we find evidence of an impact of migration on unemployment duration and vice versa. In particular, migration seems to influence positively the short-term unemployment and negatively long-term unemployment, for 14 OECD destination countries from 1985 to 2005. We retain two methodology of research for test the robustness of the results: panel estimations (OLS and 2SLS) and panel cointegration techniques.

The paper is organized as follows: Section 2 outlines the empirical model, the data and the results. Section 3 present and discusses the results. Section 4 concludes. Procedure for Paper Submission

II. Empirical Model, Data and methodology

The purpose of this paper is to analyze both the effects of migration on unemployment duration (with the equation (1)) and the influence of labor market characteristics (including the

duration of unemployment) on migration (with the equation (2)). The general framework used for analysis is the following models:

$$duration_{i,t,d} = c + \beta_1 migr_{i,t} + \beta_2 gdp_{i,t} + \beta_3 wages_{i,t} + \beta_4 pty_{i,t} + \beta_5 repla_{i,t} + \beta_6 notice_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$migr_{i,t} = c + \beta_1 duration_{i,t,d} + \beta_2 gdp_{i,t} + \beta_3 wages_{i,t} + \beta_4 pty_{i,t} + \beta_5 repla_{i,t} + \beta_6 notice_{i,t} + \beta_7 propimmi + \beta_8 politic + \varepsilon_{i,t} \quad (2)$$

$\varepsilon_{i,t} \sim i.i.d(0, \sigma_\varepsilon^2)$. Let i be the subscript over countries, let t be annual time and let d be process time (d represent five time interval).

The variable duration is interpreted as the unemployment duration (< 1 month; between 1 and 3 months; between 3 and 6 months; between 6 months and 1 year; > 1 year) (source: OECD); migr is represented by the net migration rate per 1 000 inhabitants (source: OECD International Migration Statistics); gdp is represented by per capita GDP, current prices measured in purchasing power parity (PPP) (source: OECD); wages are expressed as the real hourly compensation in manufacturing that is deflated by the consumer price index (CPI) (source: US Department of Labor, Bureau of Labor Statistics), pty is interpreted as the productivity, output per employed person in manufacturing (source: BLS); repla is represented by the replacement rate, gross replacement rate, year 1 (source: IMF project and Fondazione Rodolfo DeBenedetti (fRDB) described in Aleksynska and Schindler (2011)) and notice is expressed as the advance Notice (maximum in months) (source: International Monetary Fund, Labor Market Institutions in Advanced and Developing Countries: A New Panel Database, WP 11/154).

In the equation (2), we integrate also other structural variables that influence choice of immigration: propimmi, the proportion of foreign in the host country (expressed in percentage) to assess the network effect (source: OECD and The World Bank) and politic, migration policy, immigration reforms and entry law (source: Ortega and Peri (2009) completed by the database of the fRDB (2007) for Italy and Spain).

To take into account the differences among OECD countries in terms of local market conditions, we included institutional or structural characteristics with selected variables, including duration, pty, repla, notice, propimmi and politic. We can consider that repla and notice allow us to appreciate the flexibility of the labor market. We also think that these structural variables influence the duration of unemployment. The variable propimmi takes into account the existence (or not) of a network effect. It is possible that new immigrants are attracted to areas with large immigrant populations indicating that network effects dominate. Through the "networks" the news migrants receive information about the possibility of getting a job, about economic and social systems and immigration policy. Migration policy may also play an important role because migration flows may be highly influenced by differences in migration policy in developed countries. (Pedersena, Pytlikovab and Smith; 2008).

Our analysis is confined to the period 1985-2005 due to annual data availability. The database consists of 14 OECD countries: Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, the Netherland, Norway, Spain, Sweden, United Kingdom and the United States. Our empirical implementation uses a panel data set for up to 14 OECD countries for 1985-2005.

Concerning the methodology, we begin by using linear regressions estimated via Panel Ordinary Least Squares (Panel OLS) to examine the effects of migration on unemployment duration. As discussed in Brücker and Siliverstovs (2006), differences in estimation methodologies can lead to broadly divergent estimates of the migration models' parameters. Therefore, for each specification, we adopt Fixed Effects (FE) and Random Effects (RE) to treat the country-specific effects in the data. We test the validity of the FE treatment through Cross-section F. In the model with fixed-effects panel data model, the distribution of the individual effect is left unrestricted and allowed to be correlated with the explanatory variables. The conditional distribution of the individual effects does not play any role in identifying the parameters of interest. We also test if the random effects are uncorrelated with the explanatory variables with the Hausman Test (for discussion see, for example Baltagi (2005)). The null hypothesis of the test is that the instrumental variables of each equation are uncorrelated with the disturbance terms of all other equations. The use of instruments is required to deal with the possible endogeneity of the explanatory variables and the correlation between the error term and the lagged dependent variable.

We complete the estimation of the model with the two-stage least-squares (2SLS) estimator because the Panel OLS procedure can lead to biased coefficient estimates. This simultaneity bias can be corrected for by applying a 2SLS estimation (see Larcker and Rusticus, 2010). The 2SLS estimator is the most efficient IV estimator and the estimators have been shown to be consistent and asymptotically normally distributed (Kelejian and Prucha 1998). We also use the Hausman Test and we applied the Sargan test of over-identifying restrictions, suggesting that our instrumentation strategy is legitimate or not (see Stock and Yogo (2004) for more details). Sargan's test asks whether any of the instruments are invalid, but assumes, as in the intuitive two-stage least squares over-identification test, that at least enough are valid to identify the equation exactly (Murray, 2006).

In addition to the estimates OLS and 2SLS, this paper examines also the relationship between immigration and unemployment duration, by an econometric study using cointegration tests. We believe that the use of cointegration technique completes the analysis and strengthens the robustness of the results obtained with the estimations OLS and 2SLS.

To examine the possible existence of one or more cointegrating relationships among the series considered (in the long term), we use the now well-known test of Pedroni (1999; 2004) and the test of Kao (1999). The tests verifying null hypothesis of no cointegration consist in testing the presence of a unit root of the residuals. The tests proposed by Kao examine the cross-sectional cointegration vectors in the

homogeneity case, while Pedroni allows for heterogeneity under the alternative hypothesis. The Pedroni (1999, 2004) method is analogous to the Engle and Granger (1987) test, which is usually computed in time series studies and tests the presence of a unit root of the residuals from the following data generating processes:

$$y_{it} = \alpha_i + x'_{it}\beta_i + u_{it}, N = 1, \dots, 14, T = 1, \dots, 20$$

where y_{it} denotes the endogenous variable (the unemployment duration in this case), α_i is a fixed effect dealing with the unobserved heterogeneity between the 14 OECD countries considered and x'_{it} and β_i are $k \times 1$ vectors of covariates.

However, before analysing the relationship between the variables, it's necessary to test the order of integration of the series on the basis of a series of panel unit root tests. We first apply the unit root tests in order to find the stationary or non-stationary of the variables. We conduct three panel unit root tests: Levin, Lin and Chu (2002) (LLC), PP-Fisher and Maddala and Wu (ADF-Fisher). The null hypothesis for all tests is that the series contains a unit root. These are based on the null hypothesis of an homogeneous unit root for all individuals $(\rho_i = 0 \; \forall i)$.

After acceptance of stationnarity and cointegration, we can estimate a long-run relationship between the variables. We estimate the models with the Dynamic OLS (DOLS) estimator proposed by Kao and Chiang (2000), which outperforms both the OLS and FMOLS (Fully Modified OLS) estimators (Mark and Sul (2003)). The aim is to examine the interaction between four variables: unemployment duration, migration, GDP and productivity. With DOLS estimator, the following relationship is estimated in the equation (3):

$$\begin{aligned} duration_{i,t,d} = {} & \alpha_i + \beta^{migr} migr_{i,t} + \beta^{gdp} gdp_{i,t} \\ & + \beta^{pty} pty_{i,t} \\ & + \sum_{k=-q}^{q} v_k^{migr} migr_{i,t+k} \\ & + \sum_{k=-q}^{q} v_k^{gdp} gdp_{i,t+k} \\ & + \sum_{k=-q}^{q} v_k^{pty} pty_{i,t+k} + \varepsilon_{i,t} \end{aligned} \quad (3)$$

Where *i* = 1,…,14 depending on the country concerned and t = 1985,…,2005. $\alpha_i \in R$ allows to take into account the heterogeneity of panel data. We suggest using the DOLS estimation method to account for endogeneity, where we assume that the number of leads and lags is fixed as in Stock and Watson (1993), although they can be chosen using a BIC information criterion.

III. Results and Discussion

Firstly, we estimate the model with Panel OLS and 2SLS methodology to study the impact of migrations on unemployment duration in developed countries between 1985 and 2005. In parallel, we analyze the influence of the duration of unemployment on migration flows with the same methodology. The results are presented in the Table 1 and 2.

In this section, we report the estimates from the different models described in the previous section. Table 1 presents the estimations of the equation (1) where the unemployment duration (< 1 month; 1-3 months; 3-6 months; 6 months-1 year; > 1 year) is the dependent variable. We retain four different methods of estimating: Panel OLS FE, Panel OLS RE, Panel 2SLS FE and Panel 2SLS RE.

The short-term unemployment (< 1 month; 1-3 months) is positively influenced by migration and GDP. The length of waiting time for immigrants to find a new job in a unknown labour market does not seem to affect negatively the labour market of the host countries. On the contrary, the migrations seem to favor the short-term unemployment. It seems that immigrants integrate quickly into the labour market by taking available jobs or jobs that are neglected by native workers. This transitory effect could partly be explained by the lack of local human capital in the developed countries. Foreign workers can fill labour and/or skills shortages (European Commission (2006)). These results are consistent with those of Chiswick (1978, 1980). Immigrants adapt quite rapidly and quite well to the labor market.

In addition, the GDP has a positive influence on the short-term unemployment. This fact is consistent with the economic theory. The results show also finds a negative relationship between productivity and short-term unemployment. The advance of technology seems to destroy jobs and to reduce the short-term unemployment. The jobs cannot be replaced because productivity is already too high and rapidly (see for example, Blanchard et al. (1995), Pissarides and Vallanti (2007)). The relationship between the replacement rate, the advance notice and the unemployment duration is more difficult to comment since some coefficients are not significant and all signs of the coefficients may vary.

Regarding the unemployment duration of 3-6 months and 6 months-1 year, migration seem not influence the dependent variable. However, a coefficient (-0.217) is statistically significant at 5% level and shows the existence of a negative relationship between migration and unemployment duration. The relationship between GDP and unemployment duration is negative in the two cases. It seems consistent that the GDP tends to reduce medium-term unemployment. The structural variables (repla and notice) influence also the duration of unemployment.

Concerning the long-term unemployment, we observe a negative relationship between migration and the unemployment duration more than a year. This result is coherent with the previous findings. Immigrants integrate quickly into the labour market and reduce the long-term unemployment. Migrations seem to participate at the reduction of the long-term unemployment. The negative effect of

immigration on long-term unemployment is consistent with Simon (1989) and Altonji and Card (1991). As well as occupying jobs, immigrants create jobs through their demand for goods and services. Also related to previous results, the variation of the productivity have a positive impact on unemployment duration. However, it should be noted that the Hausman tests are not significant for the RE treatment. But the results of the FE models (with Cross-Section F is statistically significant at 1% level) are consistent with the findings of the RE estimations. Overall, we can nevertheless admit the existence of relationship between the variables. Note that the estimations present a J-statistic where the p.value is significantly up to 5% level significance. Consequently, it's not possible to reject the null hypothesis that the instruments are exogenous and thus uncorrelated with the error term.

The table II presents the estimation results of the equation (2) where migration is the dependent variable. We want to see if immigration is conditioned by the characteristics of the labour market, including unemployment duration. Immigration seems to be conditioned by the structural and institutionnal caracteristics in the host country. Unemployment duration of labour market and the degree of replacement rate seem to influence migration flows. Our results show that immigration is partly conditioned by the state of the labour market in the host country. We observe a positive relationship between migration and the short-term unemployment (UD<1 month; UD 1-3 months) and also the replacement rate. The degree of integration of the labour market in the developed countries is probably a determinant of immigration. The immigrants are attracted by labour market with a good degree of integration. This conclusion is confirmed by the significance of the medium and long-term unemployment variables, with the expected negative. Finally, the unemployment duration can be regarded as a regulator of the flows of migrant workers.

We can see also that migration depends not only on labor market conditions when the immigrants arrive but also the selection mechanisms that determine which immigrants come to OECD countries. The significance and the sign of propimmi can support the existence of network effects. The presence of foreigners facilitates easier immigration and further easier adaptation of newly coming immigrants into the new labour market (Hatton and Williamson (2002)). Our results confirm that network effects and classical migration factors are still important for OECD immigration. Note also migration policy does not seem to really affect migration flows, since only one coefficient 0,214 is significant at 10% level. In view of Cross-Section F test, Hausman test and J-statistic, the models are fairly well specified.

Secondly, we decided to complete the analysis and to study the robustness of the results by estimating cointegration relationships, highlighting the relationship between migration and duration of unemployment. The possible existence of a cointegrating relationship between the series allows assuming a potential long run relationship (or convergence) between them. Finally, we check whether the results obtained with the estimates panel OLS and 2SLS are the same (or not) with a different methodology of research.

Before estimating equation (3), it is required that the order of integration of the variables be determined by using panel unit root tests. Three usual panel unit root tests are implemented: Levin, Lin and Chu (LLC), Maddala and Wu (ADF Fisher) and PP-Fisher Test. The table 3 displays the results and show that the series exhibit a unit root process (excepted the series UD 6months-1year).

The series are non stationary in levels (except UD 6 months - 1 year). The results show that all the variables are stationary after differencing once. We can presume that the series UD < 1 month, UD 1-3 months, UD 3-6 months, UD 6 months-1 year, UD > 1 year, MIGR, GDP and PTY are integrated of order 1 I(1). Hence, it is possible to investigate the existence of a cointegrating relationship. The variable UD 6 months-1 year is excluded because it is also stationary in level. We consider the seven cointegration tests proposed by Pedroni (1999, 2004) and the Kao (1999)'s test. Table 4 displays our results.

Table 4 points out the Pedroni and Kao results and shows that four or five statistics lead to clearly reject the null hypothesis of no cointegration. However, the v-Statistic Panel, the rho-Statistic Panel, the PP-Statistic Panel and the rho-Statistic Group are in favour of the null hypothesis. Overall, we can nevertheless admit the existence of a cointegrating relationship. The two tests of Pedroni applying the ADF principle outperform the others (Wagner and Hlouskova (2007)) and those statistic lead clearly to reject the null hypothesis in the present study. In addition, Karaman Örsal (2008) argued that the the panel ADF test has the best size and size-adjusted power properties among all the Pedroni statistics. Finally, the Kao's test concludes also in the existence of cointegration and that is a good result for a small-T number of observations (Gutierrez, 2003).

Having established a cointegration relationship, we can then assume the existence of a long-run equilibrium relationship between unemployment duration, migration, GDP and productivity. The long-run parameters can be estimated efficiently using the DOLS estimation method. The results of the DOLS estimator (with fixed effects) are given in Table 5.

The results confirm the conclusions of the Panel OLS and 2SLS estimations. We find some evidence that the migration and the short-term unemployment are positively correlated, while the immigration rate and the long-term unemployment are negatively correlated. Note also that the relationship between GDP and unemployment duration are consistent with the economic theory. The productivity has a positive influence on the long-term unemployment and a negative influence on the short-term unemployment. Finally, the cointegration relationships of long-term corroborate the results obtained previously. The two estimation methodologies lead to similar results.

IV. Concluding Remarks

In this paper, we have investigated the relationship between migration and labor market, and especially the duration of unemployment, in developed countries between 1985 and 2005. We retain several methods of estimation to analyze the

TABLE I

MIGRATION AND UNEMPLOYMENT DURATION (DEPENDENT VARIABLE: UNEMPLOYMENT DURATION; PANEL OLS AND 2SLS REGRESSIONS WITH FIXED EFFECTS (FE) AND RANDOM EFFECTS (RE))

Dependent variable: Unemployment duration																		
	< 1 month				1 - 3 months				3 - 6 months				6 months - 1 year				> 1 year			
	Panel OLS		*2SLS*		*Panel OLS*		*2SLS*		*Panel OLS*		*2SLS*		*Panel OLS*		*2SLS*		*Panel OLS*		*2SLS*	
	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE
C	-9.514**	-3.48	-16.702***	-4.375	1.793	3.776	-5.683	2.819	31.359***	23.495***	35.907***	25.776***	19.822***	17.561**	25.445***	16.53***	63.025***	63.198***	68.236***	64.529***
M	0.337***	0.35***	0.318*	0.281*	0.361***	0.379***	0.581***	0.582***	0.032	0.003	0.134	0.125	-0.134	-0.217**	-0.112975	-0.194	-0.542***	-0.541***	-0.858***	-0.839***
GDP	0.001***	0.001***	0.001***	0.001***	0.0005***	0.0005***	0.0005***	0.0005***	-0.0003***	-0.0002***	-0.0004***	-0.0003***	-0.0002**	-0.0002***	-0.0002**	-0.0003***	-0.001***	-0.001***	-0.001***	-0.001***
W	0.034	0.023	0.088	0.044	0.030	0.029	0.059	0.039	0.003	-0.015	-0.025	-0.033	0.055	0.033	0.056	0.045	-0.145	-0.139	-0.210*	-0.189*
PTY	-0.249***	-0.258***	-0.281***	-0.281***	-0.080**	-0.083**	-0.105***	-0.097***	0.039	0.032	0.062*	0.044	0.014	0.041	0.039	0.055*	0.338***	0.342***	0.359***	0.358***
REPLA	-7.975**	-7.820**	-10.160**	-9.043**	5.628	5.505*	2.852	2.817	6.397**	7.284***	6.409*	6.907**	1.704	3.692*	1.958	4.190*	-5.583	-6.172	-0.326	-1.215
NOTICE	1.697***	0.206	3.090***	0.149	-0.201	-0.683*	1.937***	0.046	-2.578	-0.816***	-2.923***	-0.703***	-0.859*	-0.03	-2.383***	-0.073	1.731**	1.79***	0.049	1.012
Adj. R^2	0.893	0.341	0.890	0.324	0.83	0.16	0.86	0.15	0.55	0.08	0.56	0.08	0.55	0.04	0.56	0.05	0.89	0.30	0.90	0.25
F-stat.	120.26	24.43	107.40	20.61	75.78	10.02	89.10	9.72	18.69	5.42	18.44	5.49	18.71	3.31	17.82	3.04	127.17	20.63	135.51	18.11
Cross-section F	37.48***				48.13***				19.86***				11.41***				69.49***			
Hausman Test		18.27***		27.46***		3.04		13.35**		22.46***		18.10***		18.38***		26.83***		1.44		2.77
Sargan Test – J-stat (GMM)			6.04	8.58			36.55	36.91			34.56	29.96			27.00	27.19			53.64	55.14

Notes: *,** and *** are significant at the 10%, 5% et 1% level. Our specification includes the lagged migration, GDP, wages, productivity, replacement rate and advance notice, as instruments (2SLS specification). We interpret the Sargan statistic with the J-statistic.

TABLE II

MIGRATION AND UNEMPLOYMENT DURATION (DEPENDENT VARIABLE: MIGRATION; PANEL OLS AND 2SLS REGRESSIONS WITH FIXED EFFECTS (FE) AND RANDOM EFFECTS (RE))

Dependent variable: Migration																				
	Panel OLS		*2SLS*		*Panel OLS*		*2SLS*		*Panel OLS*		*2SLS*		*Panel OLS*		*2SLS*		*Panel OLS*		*2SLS*	
	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE
C	-2.700**	1.012	-6.631**	2.053	-1.992	0.451	-4.782	0.559	-3.291**	1.233	-6.211**	1.728	-2.975**	2.008	-9.464**	3.275	-0.203	3.381	0.163	5.914**
UD < 1 month	0.0535***	0.078***	0.117***	0.088***																
UD 1 - 3 months					0.073***	0.081***	0.135***	0.137***												
UD 3 - 6 months									0.005	-0.012	0.013	0.005								
UD 6 months - 1 year													-0.039*	-0.083**	-0.183**	-0.099*				
UD > 1 year																	-0.033***	-0.038**	-0.064***	-0.069***
GDP	4.55E-05	-1.81E-05	-0.0001	-1.03E-05	7.07E-05	4.53E-05	2.76E-05	4.09E-05	0.0001***	8.77E-05*	0.0001*	0.0001**	0.0001**	7.29E-05	-7.66E-05	8.20E-05	9.10E-05*	3.16E-05	3.65E-05	2.31E-05
W	0.013	-0.031	0.022	-0.060*	0.001	-0.032	0.011	-0.054	0.0128	-0.033	0.025	-0.058*	0.018	-0.026	0.066*	-0.051	0.001	-0.035	0.003	-0.063*
PTY	-0.004	0.008	0.025	0.022	-0.006	-0.005	-0.005	0.008	-0.022**	-0.014	-0.025	-0.007	-0.025**	-0.012	-0.02	-0.0006	-0.006	-0.0009	0.002	0.02
REPLA	3.671***	3.513***	12.776***	4.357***	2.338***	2.721**	7.618*	2.959**	3.013**	3.528***	7.486*	4.132***	3.403***	3.524***	18.818**	4.306***	2.723**	2.833**	9.377***	3.342**
NOTICE	0.0879	0.105344	-0.041	0.095	0.111	0.154	-0.064	0.189*	0.243	0.065	0.269	0.056	0.229	0.075	0.240	0.056	0.141	0.141	-0.175	0.153
PROPIMMI	0.0252	0.150**	0.142273	0.129**	-0.011	0.106*	0.032	0.065	0.023	0.141**	0.064	0.111	0.064	0.146**	0.443*	0.127*	-0.042	0.120*	-0.06	0.064
POL	0.0178	0.124913	0.051	0.214*	0.033	0.082	-0.021	0.184	-0.029	0.062	-0.075	0.116	-0.023	0.112	-0.113	0.2	0.003	0.067	-0.113	0.115
Adj. R^2	0.77	0.06	0.76	0.06	0.77	0.06	0.79	0.07	0.77	0.03	0.78	0.04	0.78	0.05	0.65	0.05	0.77	0.05	0.80	0.05
F-stat.	44.99	3.42	46.52	3.32	45.31	3.44	51.03	4.14	45.89	2.28	46.80	2.35	46.29	3.01	47.16	2.82	43.62	2.92	51.29	3.73
Cross-section F	6.59***				6.68***				6.52***				6.31***				6.67***			
Hausman Test		28.63***		35.62***		27.93***		34.03***		27.71***		33.42***		24.20***		51.61***		32.19***		45.15***
Sargan Test – J-stat (GMM)			8.16	9.77			4.21	3.56			10.31	9.52			4.51	9.19			64.04	105.29

Notes: *,** and *** are significant at the 10%, 5% et 1% level. Our specification includes the lagged unemployment duration, GDP, wages, productivity, replacement rate, advance notice, proportion of foreign-bom population and migration politics, as instruments (2SLS specification). We interpret the Sargan statistic with the J-statistic.

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TABLE III
PANEL UNIT ROOT TESTS RESULTS

	LLC		ADF		PP	
	Level	1st dif.	Level	1st dif.	Level	1st dif.
UD < 1 month	-0.74	-9.21***	32.42	133.02***	22.91	197.82***
UD 1 - 3 months	0.62	-17.67***	17.46	278.39***	19.89	283.31***
UD 3 - 6 months	-1.23	-19.79***	21.88	312.74***	28.30	330.14***
UD 6 months - 1 year	-2.81***	-18.04***	29.88	280.23***	34.93	293.64***
UD > 1 year	-1.19	-10.73***	21.86	143.08***	23.77	210.64***
MIGR	-0.13	-14.00***	32.25	207.40***	32.03	200.10***
GDP	11.55	-5.33***	0.39	62.94***	0.01	60.61***
PTY	15.34	-2.20**	0.07	49.56***	0.02	99.45***

Notes: *,** and *** : significant at the 10%, 5% and 1% level.

TABLE IV
PEDRONI'S TEST AND KAO'S TEST RESULTS

Statistic	**Panel Standardized Values**			
	(1)	(2)	(3)	(4)
***v*-Statistic Panel**	-0.29	-1.92	-1.47	-0.40
***rho*-Statistic Panel**	2.09	-0.56	0.11	2.03
***PP*-Statistic Panel**	-0.18	-5.89***	-4.03***	-0.45
***ADF*-Statistic Panel**	-1.88**	-5.68***	-3.77***	-1.57**
***rho*-Statistic Group**	3.19	2.02	2.21	2.65
***PP*-Statistic Group**	-2.52***	-10.98***	-4.96***	-2.84***
***ADF*-Statistic Group**	-2.13***	-5.90***	-4.13***	-4.12***
***Kao ADF*-Statistic**	-4.57***	-2.02**	-1.48**	-4.24***

Notes: *,** and *** are significant at the 10%, 5% and 1% level respectively. A constant was included. Panel referred to the within dimension and Group referred to the between dimension. The groups of variables are: (1) UD < 1 month, MIGR, GDP, PTY ; (2) UD 1 - 3 months, MIGR, GDP, PTY ; (3) UD 3 - 6 months, MIGR, GDP, PTY and (4) UD > 1 year, MIGR, GDP, PTY

TABLE V
DOLS FIXED EFFECTS MODEL ESTIMATION RESULTS

Variables	***UD < 1 month***	***UD 1 - 3 months***	***UD 3 - 6 months***	***UD > 1 year***
C	-1.008	6.558***	23.255***	57.94***
MIGR	0.194*	0.212***	0.119	-0.39**
GDP	0.0009***	0.0005***	-0.0002**	-0.001***
PTY	-0.200***	-0.069**	0.01	0.316***
DMIGR(1)	-0.167	0.124	0.048	0.024
DMIGR(-1)	-0.140	0.262***	-0.171*	0.317
DPIB(1)	-0.0005	-0.002***	-0.001***	0.003***
DPIB(-1)	0.0005	0.0008**	-0.0006*	0.0008
DPTY(1)	0.074	0.094	0.271***	-0.418***
DPTY(-1)	0.0007	-0.292***	-0.056	0.316**
R^2	0.92	0.94	0.70	0.95
F-statistic	121.37***	166.60***	23.03***	208.69***
Cross-section F	79.59***	183.80***	29.00***	183.61***

Notes: *,** and *** : significant at the 10%, 5% and 1% level. The choice of the lags and leads is based on Westerlund method (2005)

impact of migration on unemployment duration and vice versa and to strengthen the conclusions of this study. Panel OLS estimator, 2SLS estimator and panel cointegration tests show that migration does not lead to an increase in short-term unemployment and even reduce long-term unemployment. One can also note that other structural variables (GDP, productivity, replacement rate and notice) influence the duration of unemployment. Meanwhile, we note that the degree of integration of the labor market influence migration. Finally, the study of the relationship between migration and unemployment duration (which is a subject not considered, to our knowledge) shows that immigration would not have a negative impact on the labor market of OECD countries, and the degree of integration of the labor market remains a determining factor of migration.

REFERENCES

[1] Aleksynska, M. and Schindler, M. (2011) Labor Market Institutions in Advanced and Developing Countries: A New Panel Database, IMF Working Paper 11/154.
[2] Altonji, J. G. and Card, D. (1991) The effects of immigration on the labor market outcomes of less-skilled natives, in Immigration, Trade, and the Labor Market (Eds) J. M. Abowd and R. B. Freeman, Chicago University Press, Chicago, pp. 210–34.
[3] Angrist, J. and Kugler, A. (2003) Protective or counter-productive? Labour market institutions and the effect of immigration on EU natives, The Economic Journal, 113, 302–331.
[4] Baltagi, B. H. (2005) A Hausman test based on the difference between fixed effects two-stage least squares and error components two-stage least squares – Solution, Econometric Theory, 21(2), 483–484.
[5] Blanchard, O., Commander, S. and Coricelli, F. (1995) Unemployment and restructuring in Eastern Europe and Russia, in Unemployment, Restruturing and the Labour Market in Eastern Europe and Russia, The World Bank, Washington DC.
[6] Borjas, G. J. (1994) The Economics of Immigration, Journal of Economic Literature, 32, 1667–1717.
[7] Chiswick, B. R. (1978) The Effect of Americanization on the Earnings of Foreign-born Men, Journal of Political Economy, 86(5), 897–921.
[8] Chiswick, B. R. (1980) An Analysis of the Economic Progress and Impact of Immigrants, Final Report to the U.S. Department of Labor, Washington: U.S. Department of Labor.
[9] Engle, R. F. and Granger, C. W. J. (1987) Co-integration and error correction: representation, estimation and testing, Econometrica, 55, 251–76.
[10] European Commission (2006) Efficiency and Equity in the European Education and Training Systems, European Commission, Brussels.
[11] Fondazione Rodolfo DeBenedetti (2007) Social reform database, http://www.frdb.org/ documentazione/scheda.php
[12] Fromentin, V. (2011) The Relationship between Immigration and Labour Market: The Cases of Germany, France and the United Kingdom, The Empirical Economics Letters, 10(11).
[13] Gross, D. M. (2002) Three million foreigners, three million unemployed? Immigration flows and the labour market in France, Applied Economics Letters, 34, 1969–83.
[14] Gross, D. M. and Schmitt, N. (2012) Low- and high-skill migration flows: free mobility versus other determinants, Applied Economics, 44(1), 1–20.
[15] Gutierrez, L. (2003) On the power of panel cointegration tests: A Monte Carlo comparison, Economics Letters, 80, 105–111.
[16] Hatton, T. J. and Williamson, J. G. (2002) What Fundamentals Drive World Migration? NBER Working Paper 9159, National Bureau of Economic Research, Cambridge.
[17] Jean, S. and Jiménez, M. (2011) The unemployment impact of immigration in OECD countries, European Journal of Political Economy, 27(2), 241–256.
[18] Kao, C. and Chiang, M. H. (2000) On the estimation and inference of a cointegrated regression in panel data, Advances in Econometrics, 15, 179–222.
[19] Kao, C., 1999, Spurious regression and residual-based tests for cointegration in panel data, Journal of Econometrics, 90, pp. 1–44.
[20] Kelejian, H.H. and Prucha, I.R. (1998) A generalized spatial two-stage least squares procedure for estimating a spatial autoregressive model with autoregressive disturbance, Journal of Real Estate Finance and Economics, 17, 99–121.
[21] Larcker, D. and Rusticus, T. (2010) On the use of instrumental variables in accounting research, Journal of Accounting and Economics, 49(3), 186–205.
[22] Layard, R., and S. Nickell (1999) Labor Market Institutions and Economic Performance, in Handbook of Labor Economics, vol. 3, ed. by O. Ashenfelter and D. Card, North Holland.
[23] Levin, A., Lin, C. F. and Chu, C. S. J. (2002) Unit root tests in panel data: asymptotic and finite sample properties, Journal of Econometrics, 108, 1–24.
[24] Longhi, S., Nijkamp, P. and Poot, J. (2010) Joint impacts of immigration on wages and employment: review and meta-analysis, Journal of Geographical Systems, 12(4), 355–387.
[25] Mark, N. C. and Sul, D. (2003) Cointegration vector estimation by panel DOLS and long-run money demand, Oxford Bulletin of Economics and Statistics, Department of Economics, University of Oxford, vol. 65(5), 655–680.
[26] Mayda, A. M. (2010) International migration: A panel data analysis of the determinants of bilateral flows, Journal of Population Economics, Springer, 23(4), 1249–1274.
[27] Murray, M. P. (2006) Avoiding Invalid Instruments and Coping with Weak Instruments, The Journal of Economic Perspectives, 20(4), 111–132.
[28] Okkerse, L. (2008) How to measure labour market effects of immigration: A review, Journal of Economic Surveys, 22(1), 1–30.
[29] Örsal, K. D. D. (2008) Comparison of Panel Cointegration Tests, Economics Bulletin, 3: 1–20.
[30] Ortega, F. and Peri, G. (2009) The Causes and Effects of International Migrations: Evidence of OECD Countries 1980–2005, NBER Working Paper No. 14833.
[31] Pedersen, P. J., Pytlikova, M. and Smith, N. (2008) Selection or Network Effects? Migration Flows into 27 OECD Countries, 1990-2000, European Economic Review, 52(7), 1160–1186.
[32] Pedroni, P. (1999) Critical values for cointegration tests in heterogeneous panels with multiple regressors, Oxford Bulletin of Economics and Statistics, 61, 631–52.
[33] Pedroni, P. (2004) Panel cointegration: asymptotic and finite sample properties of pooled time series tests with an application to the PPP hypothesis, Econometric Theory, 20(3), 597–625.
[34] Pissarides, C. A. and Vallanti, G. (2007) The Impact of TFP Growth on Steady-State Unemployment, International Economic Review, 48, 607–640.
[35] Simon, J. (1989) The Economic Consequences of Immigration, Basil Blackwell, New York and The Cato Institute, Washington.
[36] Stock, J. H. and Watson, M. W. (1993) A simple estimator of cointegrating vectors in higher order integrated systems, Econometrica, 61, 783–820.
[37] Stock, J. H., and Yogo, M. (2004) Testing for Weak Instrument in Linear IV Regression, NBER working paper 0284.
[38] Wagner, M. and Hlouskova, J. (2007) The Performance of Panel Cointegration Methods: Results from a Large Scale Simulation Study, IHS Economics Series, No. 210.