# THE RELATIONS BETWEEN LABOUR MARKET INSTITUTIONS AND EMPLOYMENT OF MIGRANTS

**Domician Máté[1*], İmran Sarıhasan[2] and Krisztina Dajnoki[3]**
[1) 2) 3)]*University of Debrecen, Faculty of Economics, Hungary*

**Please cite this article as:**
Máté, D., Sarihasan, I. and Dajnoki, K., 2017. The Relations between Labour Market Institutions and Employment of Migrants. *Amfiteatru Economic*, 19(46), pp. 806-820

**Article History:**
Received: 16 March 2017
Revised: 26 May 2017
Accepted: 3 June 2017

**Abstract**
International migration is one the greatest challenges in the era of globalization and has become a focus of political debate in recent years. Although the economic effects of migration increase the efficiency of labour markets, some governments have rigorously rejected solutions proposed for the current refugee crisis. Meanwhile, immigration policies have recently become stricter in several OECD countries.
Based on this conceptual framework, several labour market institutions, such as a minimum wage, unemployment benefits, union density, and active labour market policies etc., are analysed in the context of enhancing the employment of immigrants. In order to support the findings of literature this paper concentrates on the determinants of immigration tendencies and dynamic regression models analysed to clarify how these institutions can affect native- and foreign-born migrants. Hence, our results also highlight that various reforms need to enhance the efficiency of labour market migration policies.

**Keywords:** panel analysis, migrant policies, labour institutions, employment growth

**JEL Classification:** K37, J21, J15

## Introduction

International migration is one the greatest challenges in the era of globalization. While the obstacles to international trade and capital mobility have been removed (Blanchflower and Oswald, 2004), the legal permanent migration to the OECD countries has increased to 4.3 million, with one million concentrated in the European Union, which is now equivalent to the figure recorded in the United States (OECD, 2015a). In nearly all of these countries, the majority of new arrivals are the result of family reunification, but the number of asylum seekers who come primarily in order to work has increased over the past decades (Kerr and Kerr, 2011).

* Corresponding author, **Domician Máté** – mate.domician@econ.unideb.hu

Nevertheless, many Europeans emigrated in the late 19th and early 20th centuries, nowadays the direction of migration has already changed and the reception and granting of asylum has become a relevant economic and social experiment in many previously sending countries. This phenomenon reveals that international migration has received increasing attention from policymakers since the fall of the 'Iron Curtain' and the increased economic effects of globalization (Coleman, 2009).

Although, economic theories have suggested that migration increases the efficiency of the labour market by reducing cross-country disparities, and increasing mobility, which results in higher productivity (Kwok and Leland, 1982), but migration is so rigorously restricted and rejected by some politicians. In most of the OECD countries, migration policy is highly controversial. On the one hand, there are those who are keen to host even more migrants to fill vacant positions or to provide tax revenue for their future pensions (Borjas, 2005). However, there are others, who fear that migrants will eventually steal their jobs, increase crime rates, and eliminate support for social transfers (Boeri and Van Ours, 2013). These theoretical discussions also emphasize that migration has the potential to increase wage and income inequalities among the immobile native workforce. Indeed, these effects can reduce the economic gains of migration and create political and social opposition (Becker, 1974). Thus, the increased illegal immigration of unskilled workers has resulted in higher costs of job protection and higher social security contributions (Pakurár et al., 2013). The measures influence public opinion against immigrants and encourage the governments to adopt unenforceable restrictions, and so a new vicious circle can start.

However, a political consensus seem to appear to have emerged by governments closing the door on welfare and introducing rewards only for skilled migrants, but several unanswered questions remain, i.e. how labour institutions can influence the employment of migrants. Throughout this paper, we also argue that, institutional theoretical perspective is relevant since it extends the achievements and existing frontiers of labour economics (North, 2000). From this perspective, our research questions are the following:

- What are the recent employment tendencies of native- and foreign-born immigrants in OECD countries? According to the OECD (2017e) definition, the foreign-born immigrants covers all people who have ever migrated from their country of birth to their current country of residence. Thus, a native-born citizen of a country is whose migrant parents' place of birth is the host country (OECD, 2015b).
- What characteristics are typical of native and foreign-born migrants?
- How can labour market institutions relate to these migrants?

The rest of this paper structured as follows. In the next sections we will briefly summarize the theoretical background to immigration policies. Then, we will focus on employment tendencies of native and foreign migrants in OECD countries. We will also carry out a dynamic regression analysis with panel data to investigate how the employment growth of migrants correlates with various labour market institutions. At the end of this paper we will also draw some conclusions and policy implications to support a better understanding of immigration policies, and highlight the importance of changes in current employment legislation systems.

## 1. The theoretical framework of migration policies

According to Smith (1776), the level of wages makes it possible to equalize supply and demand for every kind of job. This led him to explain the existing wage differentials among jobs and competition between employers and workers. In this competitive labour market, migration should negatively affect the wages and employment of natives (Borjas, 1994). At the end of the 19th, a marginal revolution laid the groundwork for modern economic theories. In the beginning, competitive models tended to conceal features that are essential to the labour market. Marshall (1890) was one of the first who was driven by realism to recognize the role of market imperfections and pointed out that the least skilled workers – those with low incomes and few savings – have to sell their labour quickly and are at a disadvantage in wage bargaining. Since then, labour economics has emerged as a discipline and its primary approach has been to take into account the institutional specifics of labour markets in order to understand in general all elements that can affect wage and employment relationships.

Since the neoclassical labour economics has evolved, as have many other economic fields, emerging theories have made great strides, for example, in the analysis of informational asymmetries, dynamic behaviour and the application of modern econometric techniques (Boettke et al., 2008). Moreover, labour market imperfection has played a great role in macroeconomic research since the causes of unduly low employment, durable involuntary unemployment; immigration crises, etc. have recently been primarily economic and social challenges (Cahuc and Zylbelberg, 2010).

The migration problems most frequently occur in those countries that enforce some form of wage rigidities (Carens, 1987). However, the role of wage-setting institutions depends on the market penetration of migrant workers (Borjas, 1995). In these cases, native workers lose their jobs and unemployment increases among them if more migrants come to look for work. As a result, the total income of natives in the immigration country declines, and unemployment appears among them (Card and DiNardo, 2000). Controversially, there is also an increase in national income as regards an immigration surplus, which is encouraged by changes in native wages and the size of migration flows (Kopczuk et al., 2005). The consensus regarding the disparities in returns to skills between migrants and natives highlights the fact that immigrants have lower returns to education and labour market experience than natives and, in particular, lower returns to human capital accumulated abroad (OECD, 2014). At the same time, there is a conflict of interest between native- and foreign-born employers over migration policy. Consequently, some of the migrants are not interested in working and integrating into the labour market, reducing output per capita in the host country (Borjas, 2006). In order to solve this crisis, Hans-Werner (2004) proposed a temporary reduction in the benefits provided by the welfare systems to migrants. Although this can reduce migration flows, it also affects adversely the employment of foreign-born migrants by pushing them into illegal activities. However, Dustmann and Gitz (2005) revealed that many people are concerned about welfare exploitation of immigrants, so closing the door may not be a credible policy in those countries where immigration is high. In 1996, in California, the reform of a decentralized welfare system that strongly discriminated against immigrants failed due to political and judicial resistance, and ultimately reverted to the previous system (Boeri et al., 2002).

Introducing a points system is another solution that rewards skilled migration by ranking applications for residence and work permits. Australia, Canada, New Zealand, the United Kingdom, and other OECD countries in the process of registering migrants have already

implemented this system. Each migrant allocated a score based on criteria, which typically incentivize educational attainment, job experience and language skills etc. They can also specify some bonus points in occupations and regions where there is a shortage of workers. An operational points system can encompass the entire range of regulation policies and seems to be quite effective in selecting highly skilled migrants (Hatton, 2004). Although the immigration of skilled workers may reduce income inequalities in the recipient country, these legislation systems may also discriminate against certain countries of origin rather than simply based on skill levels (Antecol et al., 2003).

The immigration policy is one of the outcomes of a complex interaction of economic, political systems, social structures and basic human behaviour (Bodvarsson and Van den Berg, 2013). Thus, migration policies have relevant interactions with other institutions, as discussed in this paper. In particular, the employment of migrants affected by, for example, the minimum wage, legislation and unemployment benefits etc., via the wage compression, fiscal distribution and skill composition of migration (Boeri and Van Ours, 2013). However, labour market institutions never operate in isolation and their employment effects usually interact with each other, so we needed to examine each of them in the following sections.

## 2. Employment trends of migrants by birth of origin in OECD countries

In this section we briefly overview the labour market performance trends of native- and foreign-born immigrants in the OECD countries. Overall, the average employment rate of foreign-born migrants in this area increased by 1.3 percentage points between 2011 and 2014, compared with 0.5% for the native-born migrants, while unemployment was steady in the same period (OECD, 2016). However, in the rest of these countries the labour outcomes of foreign- and native-born employees have been either stable or improving in recent years. The employment trends of foreign- and native-born migrants have followed different paths in the examined period. However, the growth in employment was higher for foreign than native-born workers (Figure no. 1); in almost all of the OECD countries the foreign-born share in employment has increased due to the demographic trends of ageing natives and new arrivals of immigrants (OECD, 2012).

Analysing the trends in the employment rates of native-born and foreign migrants in 2007, 2010 and 2014, we found differ patterns in the OECD countries (Figure no. 2). Only four countries (Greece, Portugal, Spain and Slovenia) saw a decline in the employment rates of both native- and foreign-born migrants in this period. Thus, these countries have not yet recovered from the crisis and have a better employment performance among the native-born. Even within countries, the circumstances differ among migrant groups. For instance, Estonia had better employment rate outcomes for native-born migrants, while in Denmark the proportion of foreign-born workers was higher than the native-born ones. Within other countries, such as in the US, specific older-age migrant groups have managed better than young foreign-born workers have in the recovery period (OECD, 2015a).

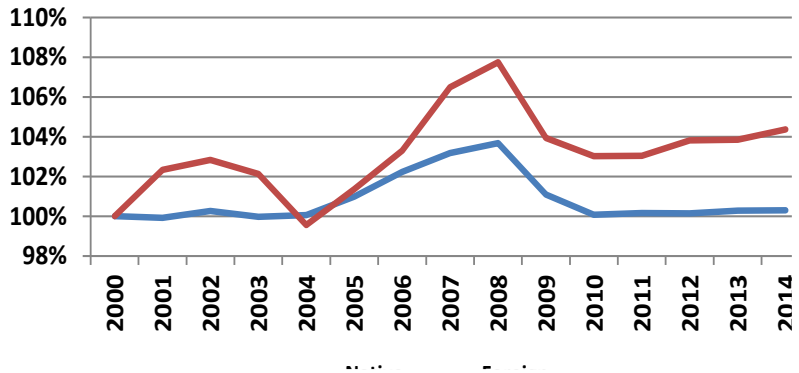


**Figure no. 1: Percentage of native and foreign employment growth in selected OECD countries (100%=2000)**

*Source*: *based on authors' own calculations and OECD, 2016a; OECD, 2016b*

Some characteristics of foreign and native-born migrants explained in part by the actual employment gap between these groups. In the OECD examined countries, the employment gap was higher if migrants had the same age and levels of education and skills. In Tables no. 3 and 4 (see Appendix) we also demonstrate that in our estimations, which are based on the most recent OECD census (2016c), there are statistically significant associations between the place of birth of migrants, their age and educational attainment. According to the chi-square ($\chi^2$) values and the proportions of the cross tables (Tables no. 3 and 4), native-born employees seem older than foreign-born. Thus, the proportion of less skilled foreign-born asylum seekers is higher (at 55.6%) than that of native migrants (52.3% at ISCED (0-4) levels). Thus, the proportion of the highest ISCED 6 educational attainment level for natives is 21.7%, but only 15.7% for foreign migrants. Hence, we can confirm that native-born migrants are older and have higher skills than the foreign migrants have.

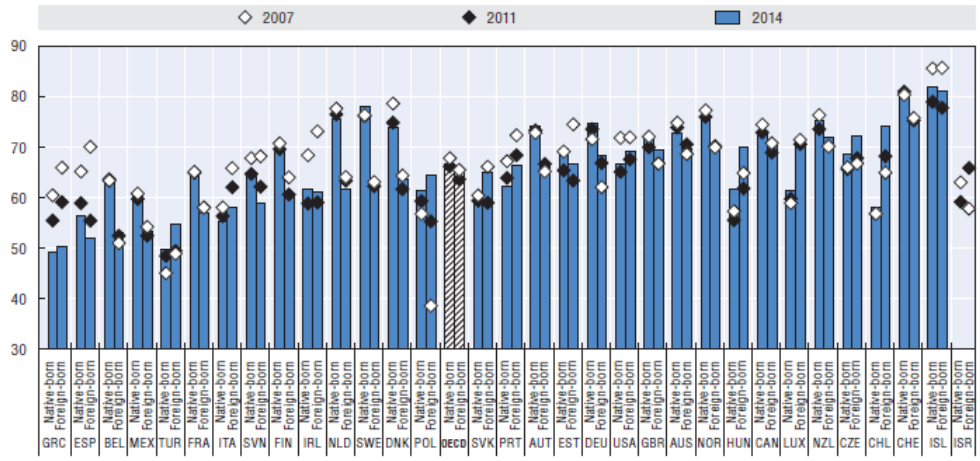


**Figure no. 2: Employment rates (%) by place of birth in selected OECD countries (1997, 2011, 2014)**

*Source: calculations based on OECD, 2015; p. 67*

**3. Analysing the impact of institutions on foreign- and native-born employment through a dynamic approach**

Most of the studies in the literature have focused on and estimated the effects of migration on the employment and/or wages of natives (Boeri et al., 2002; Borjas, 2003). Other examinations have concluded that the effect of immigration on the labour market outcomes of natives is small (Friedberg and Hunt, 1995) and the impact of immigration on the wages of competing native workers is also not high in the US data (Smith and Edmonston, 1997). The empirical evidence from European countries also points to minor influences of migration on the wages and employment of natives.

These empirical findings, reconciled with the effect of self-selection of immigrants into high-wage regions, stem from the fact that they are not randomly distributed across labour markets. Obviously, migrants decide to locate to a given region where better earnings and employment opportunities are available. On the regional level higher wages or lower unemployment are likely to attract more migrants, and generate a positive correlation between migration flows and native wages (Borjas, 1987). The changing patterns of international migration relate to the responses of native workers. As more migrants arrive in a given area, natives may respond by moving to other attractive regions or cities. This effect appears where interregional labour mobility is relatively high (Blanchard and Katz, 1992) and strongly responsive to market legislation. Others (Lewis, 2005) have also pointed out that open economies may adjust to migration by changing the composition of the output or production technologies to obtain the benefits from the increased labour supply. This adjustment in product specialization takes time and may explain the minor effects of migration on the wages and employment of natives.

The demand for efficient migration policies to increase their employment suggest that appropriate econometric methods required to analyse the employment of migrants by place of birth. The causality in this context is also important when examining the effects of other determinants, such as labour institutions, in terms of how they can enhance or decrease the employment of immigration by place of birth. However, no clear consensus has yet emerged, and several unanswered questions has remained, i.e. about whether protective or counter-productive alternative immigration policies needed in Europe (Angrist and Kugler, 2003). Based upon this research question, the following hypothesis is formed:

*H1: Labour market institutions related differently to the employment growth of foreign- and native-born migrants.*

Taking into account the needs of endogeneity, dynamic GMM estimations calculated, developed by Arellano and Bond (1991), to determine how institutions might have an impact on employment growth in long run. Our dynamic models include the lagged dependent variables among repressors. These model specifications require instrumentation to employ lagged levels of dependent and predetermined variables, as well as differences between the exogenous variables as instruments.

Using this elementary model of demand specification (Equation 1) we establish the impacts of some labour market institutions on employment growth and suspect that each of them

plays a different role in the case of foreign and native migrants. In this study, 26 OECD countries[1] are used and databases gathered from the period between 2000 and 2014.

After taking the first difference and log of the dependent variable[2], the following regression formula tested in employment of migrants by place of birth:

$$\Delta \ln y_{it} = \beta_o + \beta_1 \Delta \ln y_{it-1} + \beta_2 \ln(wages)_{it} + \beta_3 \ln(UBs)_{it} + \beta_4 \ln(Unions)_{it} + \beta_5 \ln(EPL)_{it} + \\ + \beta_5 \ln(ALMPs)_{it} + e_{it} \quad (1)$$

Where we used the following abbreviations:

Δvar – variable in first difference.

$\Delta var_{t-1}$ – lagged differences of variables.

ln – in natural logarithm.

$y_{i,t}$ – ratio of native- and foreign-born employment of country i for the period t. According to the OECD (2016a and 2016b) definition of native-born employment, this rate covers the share of employed native-born individuals aged 15-64 in the total native-born population (active and inactive persons) of that same age. The foreign-born employment rate calculated as the share of employed foreign-born individuals aged 15-64 in the total foreign-born population of that same age. Employed people are those who worked at least one hour, or who had a job but were absent from work during the reference week.

$y_{i,t-1}$ – lagged employment growth rates.

$(wages)_{i,t}$ – real minimum wages in constant (USD, 2014) prices (OECD, 2017a). The minimum wage is a labour market institution that sets a wage floor, as a lower limit to the wage paid to individual workers. Since Stigler (1947), there have been various empirical studies analysing the features of minimum wages (Gramlich, 1976; Mincer, 1976; Flinn, 2007) etc. Neumark and Wascher (2007) found at almost 2/3 of these studies, a negative employment effect of minimum wages.

$(UBs)_{i,t}$ – unemployment benefits as a percentage of output (OECD, 2017b). Unemployment benefits (UBs) protect against uninsurable labour market risks and offer replacement income to workers after having lost their jobs (Cahuc and Zylbelberg, 2010). Nowadays, many OECD countries have UBs (Boeri and Macis, 2010) and providing more and more protection against income fluctuations and job loss. In our estimates we tested the ratio of UBs divided by GDP to confirm whether they increase or decrease employment of migrants.

$(Unions)_{i,t}$ – trade union density corresponds to the ratio of wage and salary earners who are trade union members, as included in OECD (2017c). Labour (or trade) unions are primarily voluntary membership organizations that represent the interests of their members (Máté, 2014). At the beginning of the 20th, they became national organizations aiming to include all employees and to take place in a greater political role (Dolado et al., 1996).

[1] Australia, Belgium, Canada, Chile, the Czech Republic, Estonia, France, Germany, Greece, Hungary, Ireland, Israel, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Turkey, the United Kingdom, the United States.

[2] We tested our unbalanced data with IPS (Im–Pesaran–Shin) panel unit root tests (Im et al., 2003). In each of the dependent variables we can reject the null hypothesis of containing unit roots. In the case of native- and foreign-born employment the z-stats are 6.09, and 6.93 at the $p<0.01$ level.

Nevertheless, there are two research directions in the empirical literature on the effects of unions on the labour market. Some researchers have estimated their relationship between members' wages and non-members i.e. Checchi and Lucifora (2002) etc., while others have concentrated on union density and their bargaining coordination effects on (un)employment (Nickell and Andrews, 1983; Ebbinghaus and Wisser, 2000).

$EPL_{i,t}$ – employment protection legislation measures the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts (OECD, 2017d). Employment protection legislation (EPL) is a set of mandatory restrictions governing the dismissal of employees. Although the purpose of EPL is to increase the volume and stability of employment, there is an intense debate on its effects because of mixed empirical evidence (Piore, 1986). Essentially, EPL may affect the equilibrium level of employment in different ways. By reinforcing job security, EPL enhances performance, as workers will be more willing to cooperate with other employers in the production process. Better skilled workforces also increase flexibility and finally lead to a better functioning of their activity (Akerlof, 1984). However, if the labour market regulation is strict, as in many EU countries, firms may become more cautious about adjusting their workforce with the ultimate effect of reducing labour turnover, e.g. flows from employment to unemployment and vice to versa (Bertola, 2004).

$ALMPs_{i,t}$ – public expenditure on active labour market programs, as a percentage of GDP (OECD, 2017b). Active labour market programmes include all social expenditure, which is aimed at improving the search for gainful employment, or otherwise increasing peoples earning capacity. This institutional category includes, for example, spending on public employment services and administration; training and special programmes for the young when in transition from school to work; programmes to promote (un)employment and special programmes for the disabled. ALMPs aim to improve the functionalities of the labour market by enhancing the mobility and adjustment of employment (Calmfors, 1995).

$e_{i,t}$ – error term.

In our empirical results significant interactions were found in the case of minimum wages, union density, unemployment benefits (UBs), and EPL and ALMPs in the case of the native-born migrants. From the point of view of foreign-born workers, only UBs and unions correlated significantly. Tables no. 1 and 2 below present the results of our estimations.

**Table no. 1: Results of dynamic panel regressions of Equation (1) in the OECD countries examined in the case of native-born immigrants**

**Dependent variable: employment growth rate of native-born migrants**

| Independent variables | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| constant | 6.752 | 8.641 | 15.358 | 17.315 | 19.449 |
| | (4.21)*** | (4.21)*** | (7.37)*** | (7.64)*** | (8.72)*** |
| $\ln(y)_{i,t-1}$ | 0.354 | 0.231 | 0.207 | 0.323 | 0.234 |
| | (7.04)*** | (4.88)*** | (6.95)*** | (7.29)*** | (8.45)*** |
| $\ln(wages)_{i,t}$ | -0.0005 | -0.0004 | -0.0006 | -0.0006 | -0.0009 |
| | (-5.68)*** | (-4.51)*** | (-6.15)*** | (-7.16)*** | (-12.68)*** |
| $\ln(UBs)_{i,t}$ | | -3.621 | -3.457 | | -5.435 |
| | | (-18.94)*** | (-17.03)*** | | (-8.36)*** |

| Independent variables | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| $ln(Unions)_{i,t}$ | | | -0.207 | -0.274 | -0.209 |
| | | | (-17.03)*** | (-9.85)*** | (-10.04)*** |
| $ln(EPL)_{i,t}$ | | | | -0.354 | |
| | | | | (-2.35)** | |
| $ln(ALMPs)_{i,t}$ | | | | | 1.975 |
| | | | | | (8.72)*** |
| Number of Observations | 185 | 175 | 176 | 185 | 159 |
| Number of Countries | 26 | 26 | 26 | 26 | 26 |
| Number of Instruments | 19 | 13 | 14 | 19 | 15 |
| Wald test | 65.19*** | 1009.1*** | 1321.4*** | 371.19*** | 1517.2*** |
| AR test | (-2.47)** | (-2.43)** | (-2.62)*** | (-2.03)** | (-2.41)** |
| Sargan test | 12.16 | 8.74 | 9.01 | 6.54 | 11.43 |

*Source: our estimations based on OECD, 2016a, 2016b, 2017a, 2017b, 2017c, 2017d*
*Notes: * Heteroscedasticity robust z-statistics are in parentheses.*
**** significant at 1%, ** 5%, * 10%, respectively. P-values without an index mean that the coefficient is not significant even at the 10% level.*

The long run effects of some labour institutions on employment growth reported here. In our estimation, the two-step GMM estimators are preferred, as Windmeijer (2005) suggests, in order to handle the proposition of downward biased standard errors. In other words, it is not only the institutions examined which can affect the employment of migrants; other country specific determinants (output, social inclusion and job satisfaction etc.) might also correlate with employment growth in the long run. The limited amount or lack of cross-country data restricts our models.

**Table no. 2: Results of dynamic panel regressions of Equation (1) in the OECD countries examined in the case of foreign-born immigrants**

**Dependent variable: employment growth rate of foreign-born migrants**

| Independent variables | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| constant | -4.793 | 0.005 | 6.514 | 15.226 | 8.331 |
| | (9.86)*** | 0.01 | 0.88 | (1.83)* | 0.99 |
| $ln(y)_{i,t-1}$ | 0.178 | 0.202 | 0.197 | 0.143 | 0.234 |
| | (9.86)*** | (6.28)*** | (6.61)*** | (6.03)*** | (8.45)*** |
| $ln(wages)_{i,t}$ | 0.0006 | 0.0002 | 0.0001 | 0.0001 | 0.0001 |
| | 1.87 | 0.58 | 0.29 | 0.07 | 0.17 |
| $ln(UBs)_{i,t}$ | | -5.468 | -5.262 | | -5.236 |
| | | (-10.76)*** | (-10.03)*** | | (-2.51)** |
| $ln(Unions)_{i,t}$ | | | -0.201 | -0.211 | -0.209 |
| | | | (-2.31)*** | (-2.98)*** | (-1.67)* |
| $ln(EPL)_{i,t}$ | | | | -0.465 | |
| | | | | -0.92 | |
| $ln(ALMPs)_{i,t}$ | | | | | -0.162 |
| | | | | | -0.09 |
| Number of Observations | 189 | 176 | 176 | 185 | 159 |
| Number of Countries | 26 | 26 | 26 | 26 | 26 |
| Number of Instruments | 19 | 13 | 14 | 19 | 15 |
| Wald test | 142.22*** | 258.47*** | 334.4*** | 254.8*** | 472.1*** |

| Independent variables | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| AR test | (-1.71)* | (-2.41)** | (-2.41)*** | (-1.73)* | (-2.35)** |
| Sargan test | 13.21 | 12.22 | 11.92 | 13.04 | 10.34 |

*Source:* our estimations based on OECD (2016a and 2016b), OECD (2017a, 2017b, 2017c and 2017d).

*Notes: * Heteroscedasticity robust z-statistics are in parentheses. *** significant at 1%, ** 5%, * 10%, respectively. P-values without an index mean that the coefficient is not significant even at the 10% level.*

At the bottom section of the tables, the significant Wald tests suggest that the dynamic specification should be preferred in all cases and in our models (1)-(5). Thus, the significant p-levels of AR(1) tests, derived firstly by Arellano and Bond (1991), indicate the lack of autocorrelation in the first differenced errors. According to the Sargan tests, restricted later by Hansen (1982), the null-hypothesis of the validity of over-identifying restrictions in our models can be rejected, as well.

The impacts of the minimum wages (wages) are robust in all native-born models and the real minimum wages at constant prices have significant negative z-statistics. As our results indicate, their effects on employment growth seem not to be large. The coefficients range from circa -0.0005% to -0.0009%. Meanwhile, in the case of foreign employment, we cannot find significant results. The lack of significance, in these cases, could only mean that changes in minimum wages do not indicate employment growth in foreign employment at a given level of other determinants in our models.

Nevertheless, according to labour economics theories, unemployment benefits (UBs) attainment and union density (Unions) negatively relate to employment growth in both models. There are no substantial disparities among places of birth, because union density correlated with employment growth negatively to the same degree. Although, in the case of UBs we also found that if there is an increase in the ratio of benefits this may affect foreign employment growth more negatively. In other words, if continuous time is assumed in these cases, foreign-born employment decreased more than native-born employment.

In Tables no. 1 and 2 we also show a valid representation of the relationship between EPL, ALMPs and employment growth in the long run. The effect of a 1% increase in the strictness of employment legislation resulted in a decrease in employment growth of 0.35 percentage points. Nevertheless, the significant positive (1.97) coefficient of active labour programmes reveals that these contributions increase employment growth in all cases. Unfortunately, we cannot compare the effects of these institutions on foreign employment growth, because of the lack of significance.

## Conclusions

The main contribution of our research is to provide new empirical evidence from immigration to enhance their employment in several OECD countries. This paper also relies on the determinants of employment growth tendencies by place of birth. Anyway, the growth in employment was higher for foreign- than native-born migrants. Consequently, in almost all OECD countries examined, the foreign-born share in employment has increased due to demographic trends of ageing natives and new arrivals of immigrants.

Thus, we found significant associations between the place of birth of migrants, their ageing and educational attainment. Native-born migrants seem to be older and better skilled than those were born abroad. These phenomena derive from the fact that immigrants bring their abilities from their home countries, which are often different from those of natives. The importance of developing their existing educational and language skills are one of the challenges of migration policies in the future. A better knowledge of immigrants for host countries is essential to ensure their labour potential.

According to the theoretical background of our research it must note that labour institutions can explain a large element of the unexplained characteristics of migration (Williamson, 2000). Indeed, we can accept our hypothesis (H1), by the effects of examined labour institutions on the employment growth of migrants. In our empirical results significant interactions founded between minimum wages, union density, and unemployment benefits (UBs), EPL and ALMPs in the case of native-born migrants' employment. From the point of view of foreign-born workers, only UBs and unions correlated significantly.

Overall, we can conclude from these results that the decrease in unemployment benefits (UBs), and the reduced power of (trade) unions could be a fruitful way to enhance employment growth for both types of migrants. Indeed, the main responsibility for welfare payments, especially UBs, generally considered to labour unions, rather than governments, i.e. as a feature of the 'Ghent' system. Nevertheless, in the results of our dynamic models, an increase in unemployment benefits resulted in a greater decrease in the employment growth of foreign-born migrants. In other words, the less skilled and ageing foreign-born migrants tend to leave the labour market for inactivity if the benefits are more generous.

Furthermore, less strict employment protect legislation (EPL), lower minimum wages and more supported active labour market programmes (ALMPs) seem to increase the employment growth of native-born migrants. These interpretations lead to different policy recommendations. In practice, the first is to allow for contracts that are more flexible where the risk of bad job decisions would be lower. The second is to emphasize the crowding out effects of minimum wages on employability and, finally, to point out those ALMPs should focus on immigrant trainings in the first years.

We should also emphasize the limitations of our estimations. These empirical findings were able to demonstrate only one aspect of the effects of labour institutions on the employment growth of migrants. Evidently, other determinants are also correlate with the employment. Hence, the validity of our conclusions limited by the bias caused by the exclusion of these variables. Moreover, we believe that a better understanding of the employment features of immigrants than is currently typical is a potentially important element in the success of policies to resolve the forthcoming labour crisis. Hence, further research directions, such as the role of social inclusion, active citizenship and living conditions etc., in this migration approach could be fruitful and worth future analysis.

**References**

Akerlof, G., 1984. *An Economist's Book of Tales*. Cambridge: Cambridge University Press.

Angrist, J. D. and Kugler, A. D., 2003. *Protective or Counter-productive?* Labour Market Institutions and the Effect of Immigration on EU Natives. *The Economic Journal,* 113, pp. 302–F331.

Antecol, H., Cobb-Clark, D. and Trejo, S., 2003. Immigration Policy and the Skills of Immigrants to Australia, Canada and the United States. *Journal of Human Resources*, 38(1), pp. 192-218.

Arellano, M. and Bond, S., 1991. Some Tests of Specification for Panel Data: Monte Carlo Evidence and an application to Employment Equations. *Review of Economic Studies,* 58, pp. 277-297.

Becker, G., 1974. A Theory of Social Interaction. *Journal of Political Economy*. 82, pp. 1063-1093.

Bertola, G., 2004. A Pure Theory of Job Security and Labour Income Risk. *Review of Economic Studies*, 71, pp 43-61.

Blanchard, O. and Katz, L. H., 1992. Regional Evolutions. *Brookings Papers on Economic Activity*, pp. 1-75.

Blanchflower, D. G. and Oswald, A. J., 2004. Well-Being Over Time In Britain and the USA. *Journal of Public Economics*, 88(7-8), pp. 1359-1386.

Bodvarsson, Ö. B. and Van den Berg, H., 2013. *The Economics of Migration: Theory and Policy*. New York, Heidelberg, Dordrecht, London: Springer.

Boeri, T., Hanson, G. and McCormick, B., 2002. *Immigration Policy and the Welfare System*. Oxford: Oxford University Press.

Boeri, T. and Macis, M., 2010. Do Unemployment Benefits Promote or Hinder Structural Change? *Journal of Development Economics*, 93, pp. 109-125.

Boeri, T. and Van Ours, J., 2013. *The Economics of Imperfect Labour Markets*. 2nd Ed. s.l: Princeton University Press.

Boettke, P. J., Coyne, C. J. and Leeson, P. T., 2008. Institutional Stickiness and the New Development Economics. *American Journal of Economics and Sociology*, 67(2), pp. 331-358.

Borjas, G. J., 1987. Self-selection and the Earnings of Immigrants. *American Economic Review*, 77(4), pp. 531-53.

Borjas, G. J., 1994. The Economics of Immigration. *Journal of Economic Literature*, 32, pp. 1668-1717.

Borjas, G. J., 1995. The Economic Benefits from Immigration. *The Journal of Economic Perspectives*, 9(2), pp. 3-22.

Borjas, G. J., 2003. The Labour Demand Curve is Downward-sloping: Re-examining the Impact of Immigration on the Labor Market. *Quarterly Journal of Economics*, 18(4), pp. 1335-1174.

Borjas, G. J., 2006. *Labor Economics*. 4th ed. Cambridge: McGraw Hill.

Cahuc, P. and Zylberberg, A., 2010. *Labour Economics.* Cambridge, London: MIT Press.

Calmfors, L., 1995. What can we Expect from Active Labour Market Policy? *Konjunkturpolitik*, 43, pp. 11-30.

Card, D. and DiNardo, J., 2000. Do Immigrant Inflows Lead to Native Outflows? The *American Economic Review*, 90(2), pp. 360-367.

Card, D., 2005. Is the New Immigration Really so Bad? *Economic Journal*, 115(507), pp. 300-324.

Carens, J., 1987. Aliens and Citizens: The Case for Open Borders. *The Review of Politics*, 49(2), pp. 251-273.

Checchi, D. and Lucifora, C., 2002. Unions and Labour Market Institutions in Europe. *Economic Policy*, 35, pp. 363-408.

Coleman, D., 2009. Migration and Its Consequences in 21st Century Europe. Vienna *Yearbook of Population Research*, 7, pp. 1-18.

Dolado, J., Kramarz, F., Machin, S., Manning, A., Margolis, D. and Teuling, C., 1996. The Economic Impact of Minimum Wages in Europe. *Economic Policy*, 23, pp. 317-372.

Dustmann, C. and Gitz, A., 2005. *Immigration, Jobs and Wages: Theory, Evidence and Opinion*. London: CREAM-CEPR.

Ebbinghaus, B. and Visser, J., 2000. *Trade Unions in Western Europe since 1945*. London, UK: Palgrave-Macmillan.

Flinn, C., 2007. Minimum Wage Effects on Labour Market Outcomes under Search, Matching and Endogenous Contact Rates. *Econometrica*, 74(4), pp. 1013-1062.

Friedberg, R. M. and Hunt, J., 1995. The Impact of Immigrants on Host Countries Wages, Employment and Growth. *Journal of Economic Perspectives*, 9, pp. 23-44.

Gramlich, E., 1976. Impact of Minimum Wages on other Wages, Employment and Family Incomes. *Brooking Papers on Economic Activity*, 2, pp. 409-451.

Hans-Werner, S., 2005. Migration and Social Replacement Incomes: How to Protect Low-Income Workers in the Industrialized Countries against the Forces of Globalization and Market Integration. *International Tax and Public Finance*, 12(4), pp. 375-393.

Hansen, L. P., 1982. Large Sample Properties of Generalized Method of Moments Estimators. *Econometrica*, 50(4), pp. 29-1054.

Hatton, T. J., 2004. Seeking Asylum in Europe. *Economic Policy*, 19, pp. 5-62.

Im, K. S. , Pesaran, M. H. and Shin, Y., 2003. Testing for Unit Roots in Heterogeneous Panels. *Journal of Econometrics*, 11(5), pp. 53-74.

Kerr, S. K. and Kerr, W. R., 2011. Economic Impacts of Immigration: A Survey. *Finnish Economic Papers*, 24(1), pp. 1-32.

Kopczuk, W., Slemrod, J. and Yitzhaki, S., 2005. The Limitations of Decentralized World Redistribution: An optimal taxation approach. *European Economic Review*, 49(4), pp. 1051-1079.

Kwok, V. and Leland, H., 1982. An Economic Model of the Brain Drain. *The American Economic Review*, 72(1), pp. 91-100.

Lewis, E., 2005. Immigration, Skill Mix, and the Choice of Technique, *NBER Working Papers 05-04*, Center for Economic Studies, U.S. Census Bureau.

Marshall, A., 1890. *Principles of Economics*, London: Macmillan and Co., Ltd.

Máté, D., 2014. Human Capital, Unions and Productivity in a Labour-skilled Sectoral Approach. *Society and Economy*, 36(3), pp. 369-385.

Mincer, J., 1976. Unemployment Effects of Minimum Wages. *Journal of Political Economy*, 84, pp. 87–104.

Neumark, D. and Wascher, W., 2007. Minimum Wages and Employment, IZA Discussion Paper. No. 2570.

Nickell, S. and Andrews, M., 1983. Unions, Real Wages and Employment in Britain, 1951–79. *Oxford Economic Papers*, 35(1), pp. 183-206.

North, D. C., 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

OECD, 2012. *International Migration Outlook 2012*. Paris: OECD Publishing.

OECD, 2014. *Matching Economic Migration with Labour Market Needs*. Paris: OECD Publishing.

OECD, 2015a. *International Migration Outlook 2015*. Paris: OECD Publishing.

OECD, 2015b. *Indicators of Immigrant Integration 2015: Settling In*. Paris: OECD Publishing

OECD, 2016a. *Foreign-born Employment*. [online] Available at: <https://data.oecd.org/migration/foreign-born-employment.htm> [Accessed 28 December 2016].

OECD, 2016b. *Native-born Employment*. [online] Available at: <https://data.oecd.org/migration/native-born-employment.htm> [Accessed 28 December 2016].

OECD 2016c. *Database on Immigrants in OECD and non-OECD Countries: DIOC*. [online] Available at: <http://www.oecd.org/els/mig/dioc.htm> [Accessed 28 December 2016].

OECD, 2017a. *Minimum Wages at Current prices in NCU*. [online] Available at: <http://stats.oecd.org/Index.aspx?DatasetCode=MW_CURP#> [Accessed 2 January 2017].

OECD, 2017b. *Public Expenditure and Participant stocks on LMP*. [online] Available at: <http://stats.oecd.org//Index.aspx?QueryId=49447#> [Accessed 2 January 2017].

OECD, 2017c. *Trade Union Density*. [online] Available at: <http://stats.oecd.org//Index.aspx?QueryId=49447#> [Accessed 2 January 2017].

OECD, 2017d. *Strictness of employment protection*. [online] Available at: <http://stats.oecd.org//Index.aspx?QueryId=49447#> [Accessed 2 January 2017].

OECD, 2017e. *Glossary of Statistical Terms: Definition of Foreign-born Migrants.* [online] Available at: <https://stats.oecd.org/glossary/detail.asp?ID=1022> [Accessed 2 January 2017].

Pakurár, M., Cehla, B., Oláh, J. and Nábrádi, A., 2013. Employment Characteristics of Ukrainian Citizens in Hungary, *Apstract – Applied Studies in Agribusiness and Commerce*, 7(4-5), pp. 113-120.

Piore, M., 1986. *Labour Market Flexibility*. Berkeley, CA: University of California.

Smith, A., 1776. *An Inquiry into the Nature and Causes of the Wealth of Nations.* London: W. Strahan.

Smith, J. P. and Edmonston, G., 1997. *The New Americans: Demographic and Fiscal Effects of Immigration*. Washington, DC: National Academy Press.

Stigler, G., 1946. Economics of Minimum Wage Legislation. *American Economic Review*, 36, pp. 535-543.

Windmeijer, F., 2005. A Finite Sample Correction for the Variance of Linear Efficient Two-Step GMM Estimators. *Journal of Econometrics*, 126(1), pp. 25-51.

Williamson, O. E., 2000. The New Institutional Economics: Taking Stock, Looking Ahead. *Journal of Economic Literature,* 38(9), pp. 595-613.

**APPENDIX**

**Table no. 3: Cross table of immigrants by age and place of birth**

| | | Age | | | Total |
|---|---|---|---|---|---|
| | | 15-24 | 24-65 | 65+ | |
| Native | Count | 848 | 915 | 839 | 2602 |
| | % within native | 32.6% | 35.2% | 32.2% | 100% |
| | % of Total | 0.3% | 0.3% | 0.3% | 1.0% |
| Foreign | Count | 82651 | 105270 | 72824 | 260745 |
| | % within foreign | 31.7% | 40.4% | 27.9% | 100% |
| | % of Total | 31.4% | 40.0% | 27.7% | 99.0% |
| Total | Count | 83499 | 106185 | 73663 | 263347 |
| | % of Total | 31.7% | 40.3% | 28.0% | 100% |

*Source:* estimations based on OECD, 2016c

Notes: Pearson Chi-Square = 35.125 at p<0.01 level.

**Table no. 4: Cross table of immigrants by educational attainment and place of birth**

| | | Educational attainment | | | | Total |
|---|---|---|---|---|---|---|
| | | ISCED 0/1/2 | ISCED 3/4 | ISCED 5a/5b | ISCED 6 | |
| Native | Count | 572 | 570 | 567 | 473 | 2182 |
| | % within native | 26.2% | 26.1% | 26.0% | 21.7% | 100% |
| | % of Total | 0.3% | 0.3% | 0.3% | 0.2% | 1.0% |
| Foreign | Count | 58469 | 60119 | 56765 | 37759 | 213112 |
| | % within foreign | 27.4% | 28.2% | 26.6% | 17.7% | 100% |
| | % of Total | 27.2% | 27.9% | 26.4% | 17.5% | 99.0% |
| Total | Count | 59041 | 60689 | 57332 | 38232 | 215294 |
| | % of Total | 27.4% | 28.2% | 26.6% | 17.8% | 100% |

*Source:* estimations based on OECD, 2016c

Notes: ISCED 0/1/2 Pre-primary/Primary/Lower secondary education, ISCED 3/4 (Upper) secondary/Post-secondary non-tertiary education, ISCED 5A/5B First stage of tertiary education (Bachelor and Master), ISCED 6 Second stage of tertiary education,
Pearson Chi-Square =23.924 at p<0.01 level.

**Table no. 5: The correlation matrix of the independent variables of Equation (1)**

| Variables | $ln(wages)_{it}$ | $ln(UBs)_{it}$ | $ln(Unions)_{it}$ | $ln(EPL)_{it}$ | $ln(ALMPs)_{it}$ |
|---|---|---|---|---|---|
| $ln(wages)_{it-1}$ | 1.000 | | | | |
| $ln(UBs)_{it}$ | 0.047 | 1.000 | | | |
| $ln(Unions)_{it}$ | 0.765 | -0.158 | 1.000 | | |
| $ln(EPL)_{it}$ | 0.696 | -0.228 | 0.483 | 1.000 | |
| $ln(ALMPs)_{it}$ | -0.669 | -0.395 | -0.636 | -0.413 | 1.000 |

*Source:* our estimations based on OECD, 2016a, 2016b, 2017a, 2017b, 2017c, 2017d