



European  
University  
Institute

ROBERT  
SCHUMAN  
CENTRE FOR  
ADVANCED  
STUDIES

# WORKING PAPERS

RSCAS 2019/16  
Robert Schuman Centre for Advanced Studies  
Migration Policy Centre

Immigrant Naturalisation, Employment and  
Occupational Status in Western Europe

Rezart Hoxhaj, Maarten Vink and Tijana Prokic-Breuer



European University Institute

**Robert Schuman Centre for Advanced Studies**

Migration Policy Centre

**Immigrant Naturalisation, Employment and Occupational  
Status in Western Europe**

Rezart Hoxhaj, Maarten Vink and Tijana Prokic-Breuer

EUI Working Paper **RSCAS** 2019/16

This text may be downloaded only for personal research purposes. Additional reproduction for other purposes, whether in hard copies or electronically, requires the consent of the author(s), editor(s). If cited or quoted, reference should be made to the full name of the author(s), editor(s), the title, the working paper, or other series, the year and the publisher.

ISSN 1028-3625

© Rezart Hoxhaj, Maarten Vink and Tijana Prokic-Breuer, 2019

Printed in Italy, February 2019

European University Institute

Badia Fiesolana

I – 50014 San Domenico di Fiesole (FI)

Italy

[www.eui.eu/RSCAS/Publications/](http://www.eui.eu/RSCAS/Publications/)

[www.eui.eu](http://www.eui.eu)

[cadmus.eui.eu](http://cadmus.eui.eu)

## **Robert Schuman Centre for Advanced Studies**

The Robert Schuman Centre for Advanced Studies, created in 1992 and currently directed by Professor Brigid Laffan, aims to develop inter-disciplinary and comparative research on the major issues facing the process of European integration, European societies and Europe's place in 21<sup>st</sup> century global politics.

The Centre is home to a large post-doctoral programme and hosts major research programmes, projects and data sets, in addition to a range of working groups and *ad hoc* initiatives. The research agenda is organised around a set of core themes and is continuously evolving, reflecting the changing agenda of European integration, the expanding membership of the European Union, developments in Europe's neighbourhood and the wider world.

For more information: <http://eui.eu/rscas>

The EUI and the RSCAS are not responsible for the opinion expressed by the author(s).

## **Migration Policy Centre (MPC)**

The Migration Policy Centre (MPC) is part of the Robert Schuman Centre for Advanced Studies at the European University Institute in Florence. It conducts advanced policy-oriented research on global migration, asylum and mobility. It serves governance needs at European and global levels, from developing, implementing and monitoring migration-related policies to assessing their impact on the wider economy and society.

The MPC bridges research and policy by providing EU and Member States' institutions with policy advice and by fostering dialogue between academics and policy-makers. It seeks to contribute to major issues of migration policy and governance while building links with the other key global challenges and changes.

The MPC working paper series, published since April 2013, aims at disseminating high-quality research pertaining to migration and related issues. All EUI members are welcome to submit their work to the series. For further queries, please contact the Migration Policy Centre Secretariat at [migration@eui.eu](mailto:migration@eui.eu)

More information can be found on: <http://www.migrationpolicycentre.eu/>

Disclaimer: The EUI, RSCAS and MPC are not responsible for the opinion expressed by the author(s). Furthermore, the views expressed in this publication cannot in any circumstances be regarded as the official position of the European Union.

For more information: <http://eui.eu/rscas>



## **Abstract**

Does citizenship facilitate access to employment and higher status jobs? Existing case studies have produced mixed results across mostly single case studies in Europe and North America. To investigate whether this heterogeneity depends on varying institutional and socio-economic conditions, in this paper we analyse the labour market outcomes of immigrants who have naturalised in 13 West European countries. Our empirical analysis draws on data from the 2014 European Labour Force Survey Ad Hoc Module on immigrants. In order to cope with the selective nature of the naturalisation process, we employ a bivariate probit model that accounts for unobserved characteristics of naturalising immigrants. Our main results show a positive relationship across these destination countries between citizenship and the probability of employment for both immigrant men and women, as well as between citizenship and occupational status for men. Liberalising the access to citizenship does not diminish the positive returns on employment from naturalisation. For immigrant men there is evidence of a trade-off between easier access to citizenship and the returns on occupational status.

## **Keywords**

Citizenship, Employment, Job status, Western Europe.

**JEL:** J15, J61, K37





## 1. Introduction\*

Citizenship acquisition is often viewed as a vehicle for the labour market integration of migrants. Acquisition of citizenship is mainly associated with better employment chances, higher earnings and higher occupational positions (Liebig and von Haaren, 2011). Over the past fifteen years, various studies have been published drawing on data from surveys, census and population registers in Europe and North America (e.g. Bratsberg *et al.* 2002; DeVoretz and Pivnenko 2005; Scott 2008; Fougère and Safi 2009; Rallu 2011; Bevelander and Pendakur 2012; Steinhardt 2012; Helgertz *et al.* 2014).

Yet it is hard to draw general conclusions from these studies, given that there is considerable variation in terms of national context, the dependent variable and the type of data available (for overviews, see Steinhardt 2012, 815-816; Helgertz *et al.* 2014: 343). While the variability of the effect of citizenship acquisition on labour market outcomes has often been noted (eg Liebig and Von Haaren 2010, pp. 17-18), there has been surprisingly little systematic attention to the question to what extent this heterogeneity is due to differences in contexts of study.

In this paper we propose a comparative approach to the analysis of the so-called ‘citizenship premium’ in the labour market. We aim to answer the following question: to what extent does the often observed positive association between citizenship, on the one hand, and employment and occupation status, on the other, hold across a larger set of destination countries in Western Europe? More specifically, we investigate whether contextual factors like the citizenship policy conditions this relationship.

However, given the selective nature of the naturalization process, where an effect of citizenship can be identified, it may well be caused by characteristics inherent in the group of migrants that naturalizes rather than in the status of citizenship itself (for an early discussion, see Chiswick 1978). In order to cope with the selective nature of the naturalisation process, we employ in this paper a bivariate probit model that accounts for unobserved characteristics of naturalising immigrants.

We analyse this question by means of the 2014 Ad Hoc Module of the European Labour Force Survey on the labour market situation of migrants and their immediate descendants, which offers cross-national comparative information on citizenship status, labour market status, and a range of other characteristics of foreign-born residents in Europe. We focus exclusively on foreign-born residents in 13 West European countries and look at the probability of both having paid employment and having a higher-status job.

This paper is organised as follows. In *section 2* we outline the theoretical framework of our paper. *Section 3* describes the data and methodology employed in the analysis. The key findings are presented in *section 4* and some conclusive remarks are presented in *section 5*.

---

\* This paper builds on previous, unpublished work by Maarten Vink and Tijana Prokic-Breuer with Jaap Dronkers in the context of the project Access to Citizenship and its Impact on Immigrant Integration (ACIT), 2011-2013. The authors thank Martin Ruhs and the participants at the 2018 GLOBALCIT Annual Conference, 29-30 November 2018, EUI Florence for useful comments. Rezart Hoxhaj thanks Stiftung Mercator for financial support under project number PN 14-297. Maarten Vink thanks the European Research Council for financial support under grant agreement No 682626. The authors declare that they have no conflict of interest.

## 2. State of the art

### 2.1 Migrant disadvantage in the labour market and the citizenship premium

There is substantial evidence that employment levels, occupational status and wages significantly differ between first – and even second – generation migrants and natives in all of the western economies (Lancee, 2012; Fleischmann and Dronkers, 2010; Yann *et al.* 2007, Heath and Cheung 2007; Kogan, 2006; Borjas 1994). The current literature identifies a number of reasons why first generation migrants face disadvantages in the labour markets of the developed countries to which they have immigrated. In the first place, migrants are often endowed with lower levels and different kinds of human capital than those that are necessary to fare successfully in western labour markets (Heath and Cheung 2007). This is especially the case of migrants from less developed countries who have grown up in challenging socio-economic circumstances with limited educational opportunities. In the second place, the majority of first generation migrants in Western Europe lack mastery of the language of the country of destination (Van Tubergen and Kalmijn 2005; Heath and Cheung 2007). This lack of knowledge reduces their potential productivity and consequent employability in many segments of the labour market. Thirdly, migrants' educational credentials obtained in their country of origin may not have the same value in the labour markets in their countries of destination, as employers are often unable to evaluate foreign qualifications and therefore prefer domestic qualifications with known interpretations in terms of skills and productivity. Additionally, various restrictive practices and regulations exclude first generation migrants from performing certain types of jobs; a notable example of such a restriction is the requirement of citizenship for public sector job entry. Finally, labour market experience obtained in the country of origin is not easily transferable, nor equally valuable in the labour market in the country of destination (Heath and Cheung 2007, Chiswick and Miller 2009). While lack of human capital embodied in skills and labour market experience is seen as the major cause of the labour market disadvantage among the first generation of ethnic minorities in Europe, migrants are also affected by prejudice and discrimination (André, Dronkers and Fleischmann, 2009). A lack of knowledge of, or familiarity with, migrants' socio-economic background makes employers reluctant to hire them for both rational and irrational reasons. While it is indeed difficult to objectively judge migrants' potential productivity (rational discrimination), some employers often prefer one ethnic group over another even if the expected productivity of the two groups is the same (irrational discrimination) (Fougère and Safi 2009).

In this context of migrant disadvantage in labour markets, access to citizenship is seen as one of the focal points of public policy aimed at promoting migrant integration. Generally, literature has reached a consensus on the positive effect of citizenship on employment (Gathmann and Keller 2017, Engdahl 2014, Bevelander and Pendakur 2012, Corluy *et al.* 2011, Fougère and Safi 2009), though some studies observe no effect (Bevelander and Veenman 2006) or even a negative effect (Scott 2008). Three main mechanisms behind the assumed link between citizenship and successful labour market integration are identified (Liebig and von Haaren, 2011). First, citizenship eliminates barriers to public sector jobs and to a range of regulated high-skill professions or self-employment (Gathmann and Keller 2017 in the case of Germany). Moreover, naturalisation eliminates barriers to some other jobs that require unrestricted mobility of their employees without any bureaucratic hurdles. This aspect is particularly relevant for non-EU immigrants who need a visa to travel inside and outside of Europe (Steinhardt 2012, Poeschel 2016)<sup>1</sup>. More generally, it will be more attractive for employers to hire naturalised migrants as the administrative costs of hiring and retaining foreign-born workers will be lower in the case of those who hold destination citizenship.

---

<sup>1</sup> Highly-skilled workers (managers, technicians, consultants) of multinational enterprises, travelling between affiliates and headquarters are likely to be in this category. Visa costs and reduced flexibility may prevent firms from employing or assigning non-EU immigrants to these positions.

Second, it has been argued that the acquisition of citizenship increases the employability of first generation migrants by signalling successful integration to employers (the signalling argument). As outlined above, it is often difficult for employers to judge the potential productivity of foreign workers due to their unfamiliarity with the “standard” indicators of productivity, such as educational qualifications and work experience, but also their general commitment to a job. For this reason it has been argued that citizenship might serve as a device signalling “good” integration, leading employers to assume that those migrants who acquire citizenship have higher levels of productive skills, and also a commitment to invest in the country-specific human and social capital. Consequently, the signal of long-term commitment may induce employers to lower barriers to training (Von Harren and Sandner 2016) or to career mobility of immigrants within the firm.

Third, naturalisation may encourage long-term commitment to the destination country labour market and hence induce migrants’ human capital development (Bratsberg et al 2002: 572), for example by investment in mastery of the native language or obtaining country-specific diplomas (or going through often arduous processes of diploma recognition) that provide access to regulated professions. This human capital perspective relates to sociological literature in which a realistic perspective on naturalisation leads migrants to view naturalisation as a logical step in their trajectory of building up a life in the host country (Aptekar 2015: 65). Crucially, such a view implies that labour market effects may be observed not just *after* the moment of acquiring citizenship (as would be the case in the ‘signalling’ argument), but also *before* naturalisation, as employment propensity and wages are likely to increase in conjunction with human capital acquisition (Peters et al. 2018; Bratsberg et al. 2002).

While the citizenship premium in terms of access to employment is relatively well investigated by the literature, few studies exist on the relationship between citizenship and upward occupational mobility. Bratsberg et al. (2002) show that white-collar and public-sector employment rates are higher for those who naturalize in the U.S than for those who do not. They argue that this effect was not due to the increased human capital investment before naturalization but mainly because naturalisation increases access to preferred jobs. According to Jarreau (2015), naturalization enhances job mobility, both the change of occupations and employers, and reduces job mismatching. Euwals et al. (2010) on Turkish immigrants in Germany and Netherlands find a positive effect of citizenship on occupation status, whereas Kogan (2003) finds a negative effect of citizenship on ex-Yugoslav immigrants in Austria and a not significant effect in Sweden. Finally, using the EU-LFS (2008) ad hoc module, Zwysen (2018) studies whether the acquisition of citizenship – intended as a proxy for host country human capital – affects the labour market integration of immigrants. This study finds a slightly positive association of naturalisation with job quality but not with employment. However, this study does not take into account the selection of immigrants into citizenship.

## ***2.2 The citizenship premium across national contexts***

Given the heterogeneity in findings observed in the literature with respect to the citizenship premium in the labour market, not just with regard to migrant groups but also with regard to the context of study in various publications, the question arises to what extent migrants experience higher employment probability and have access to higher status jobs after naturalisation across various national contexts. We argue in this paper that at least one important contextual aspect – citizenship policies – could be expected to condition the relationship between naturalisation, on the one hand, and employment and occupational status, on the other.

Citizenship policies in Europe differ substantially, reflecting not only the fact that this is one of the last bastions of sovereignty, but also historically rooted approaches to membership and belonging (Vink and De Groot, 2010). Naturalization requirements in particular vary greatly, with for example 5 years of residence required in countries such as France, the Netherlands, Sweden and the United Kingdom and 8 to 10 years in others, such as Austria, Germany and Italy. As a consequence, we see large differences in citizenship take-up rates, with around 80 per cent of the foreign-born population

naturalized after at least ten years of residence in the Netherlands and Sweden, but only around 35 per cent of a comparable group in Germany and Switzerland (Liebig and Von Haaren, 2011).

There are contrasting theoretical arguments on how easier/faster access to citizenship might influence the citizenship premium. One perspective builds on the assumption that the extent to which citizenship functions as a signal of integration and commitment to the host society is largely determined by the way society in general, and employers in particular, perceive the value and meaning of citizenship. From this perspective, liberal citizenship policies might “devalue” citizenship in the eyes of employers and, thus, be less useful as a selection device between migrants, because the acquisition of citizenship is relatively easy in terms of naturalization conditions and procedure (see, notably, Koopmans 2010). In other words, if it is perceived to be ‘normal’ to have citizenship (i.e. the majority of the foreign-born population has citizenship of the country of destination), then having citizenship might not be perceived as a signal of integration, but merely a direct consequence of liberal policies. In this case, we do not expect employers to regard migrants with citizenship as being better integrated than those without. In line with our previous argument that citizenship is of most importance to the least integrated migrants, this should particularly affect those immigrants who need citizenship most.

An alternative perspective on the relationship between citizenship policy and the citizenship premium argues that if citizenship is easily accessible in a country and consequently observed as such by employers, then the implicit expectation is that long-term resident immigrants should have citizenship. In this case, employers could assume that immigrants who have resided in a country for a number of years, but have not naturalized, hold unobservable negative characteristics. For example, employers could assume that those who have not naturalized do not have the necessary language skills to pass a citizenship test or that they are not committed to staying and integrating in the country of destination. Hence, in countries with liberal policies this would be ‘negative signalling’. If this is the case, then migrants without citizenship will be negatively selected in countries with liberal citizenship policies.

In contrast, easier/faster access to citizenship might incentivise immigrants to invest in education and in country-specific human capital in order to reap the benefits of naturalisation for a longer period (Gathmann and Keller 2017). This is mostly true when citizenship gives access to a category of jobs that require specific skills and training and in contexts where severe labour market segregation of immigrants exist. Moreover, Hainmueller et al. (2016) also point to a psychological component according to which a faster naturalisation process makes immigrants feel more welcome and have them identify with the culture of the destination country. This could be a catalyst for a faster integration in the labour market and society. According to these arguments, in countries with liberal citizenship policies the positive effect of citizenship on the labour market outcomes of immigrants will be higher.

In sum, given the contrasting findings in the literature, the way citizenship policy may condition the citizenship premium becomes an empirical question that we will try to answer in this paper.

### **3. Data and Methodology**

#### **3.1 Data**

For our empirical analysis, we use a special version of the European Labour Force Survey (EU-LFS), namely the EU-LFS ad hoc module (AHM) for 2014 on the labour market situation of migrants and their immediate descendants. The EU-LFS provides standardized cross-sectional data on labour market status and core demographic and migration information. The AHM 2014 provides additional information on the possible explanatory factors of migrant integration in Europe, such as country of birth of both parents, reason for migration, timing of naturalization and an evaluation of migrants’

qualifications. From the 27 countries covered by the EU-LFS AHM 2014, we included in the analysis 13 Western European countries having information on crucial variables used in the analysis<sup>2</sup>

Our analysis focuses on foreign-born individuals between 18 and 64 years old residing in private households. We focus on ‘first generation’ migrants because in this paper we aim to theorize and measure the link between the explicit decision to naturalize and the labour market outcomes of immigrants. As shown elsewhere, the questions of the acquisition of citizenship by the immediate descendants of migrants and that of their socio-economic integration are essentially different (Vink, Prokic-Breuer and Dronkers, 2013; Dronkers and Vink, 2012). In order to exclude as much as possible migrants who may have acquired destination country citizenship by descent, we only include individuals who themselves *and* both of whose parents were born outside the survey country. In addition, to exclude cases where migrants arrive at a young age and acquire destination country citizenship by extension of the act of naturalization of their parents (rather than as an individual decision), we only include individuals who were at least 18 years old on arrival. Finally, we consider in our baseline analysis only those individuals who are entitled to naturalize, based on the years they have spent at destination at the time of the survey.

### **3.2 Estimation strategy**

The literature points out that the effect of naturalization on labour market outcomes could be biased because unobserved individual characteristics, such as inherent ability or commitment, may affect both naturalisation choice and the labour market outcomes. Consequently, it is difficult to disentangle the effect of naturalisation from pre-existing differences in these characteristics. To attenuate this typology of bias we estimate simultaneously each outcome equation (the probability of having employment and the occupational status) with the probability of being naturalised equation (equation 1 below, selection equation henceforth) (Fougère and Safi 2009). We use the bivariate probit method for the employment equation (equation 2 below) and the treatment effect method (Maddala 1983) for the occupational status equation (equation 3 below)<sup>3</sup>.

$$Citizenship_i = b_0 + b_1 Z_i + b_2 AreaOrigin_i + b_3 Mig Reason_i + \bar{f}_{ic} + e_i \quad (1)$$

$$Employed_i = \beta_0 + \theta_1 Citizenship_i + \theta_2 Z_i + \theta_3 AreaOrigin_i + \theta_4 Mig Reason_i + \phi_{ic} + \varepsilon_i \quad (2)$$

$$OccupationalStatus_i = \beta_0 + \theta_1 Citizenship_i + \theta_2 Z_i + \theta_3 AreaOrigin_i + \theta_4 Mig Reason_i + \phi_{ic} + \varepsilon_i \quad (3)$$

The dependent variable in selection equation (1) is citizenship status, equal to 1 if the individual is a citizen of the country of destination and 0 otherwise. In the outcome equation (2) the dependent variable is dichotomous indicating whether the respondent is currently employed or not<sup>4</sup>. The dependent variable in the outcome equation (3) is a continuous variable (ISEI scale by Ganzeboom and Treiman 1996) measuring the occupational status of individuals. A higher occupational status score is associated to a

---

<sup>2</sup> Austria, Belgium, Finland, France, Greece, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

<sup>3</sup> The treatment effect model is used because occupational status is a continuous variable. Both methods assume that standard errors of the simultaneously estimated equations are jointly normally distributed. The score test (Murphy 2007, Chiburis et al. 2012) rejects misspecification of the bivariate probit model at 5 percent. The joint normality of error terms makes possible the identification of the model through the functional form (Wilde 2000).

<sup>4</sup> Employed individuals are categorised following the definition of ILO.

higher prestige of the job. Note that our explanatory variable is *Citizenship<sub>i</sub>*, which enters as a dummy variable in the outcome equations.

**Table 1. Descriptive statistics**

VARIABLES	Total		Female		Male	
	Mean	S.D	Mean	S.D	Mean	S.D
Citizenship	0.25	0.43	0.27	0.44	0.22	0.42
Occupational status (ranges 11-89)	34.7	21	34.1	21	35.3	20.3
Employed	0.66	0.47	0.58	0.49	0.76	0.43
Developing Country	0.55	0.49	0.56	0.5	0.54	0.49
Female	0.42	0.49				
Age (years)	42.3	8.3	42.3	8.5	42.3	8.1
Years of residence (years)	12.4	3.5	12.4	3.5	12.4	3.5
Married	0.7	0.45	0.68	0.47	0.74	0.43
Single	0.17	0.37	0.15	0.36	0.18	0.39
Divorced/separated	0.13	0.33	0.17	0.37	0.07	0.26
<b><u>Education level</u></b>						
Low education	0.35	0.47	0.34	0.47	0.37	0.48
Medium education	0.35	0.48	0.36	0.48	0.35	0.48
High education	0.30	0.29	0.3	0.46	0.28	0.45
<b><u>Migration reason</u></b>						
Labour	0.41	0.49	0.31	0.46	0.52	0.49
Family	0.39	0.48	0.50	0.50	0.23	0.41
Study	0.06	0.24	0.05	0.23	0.08	0.25
International protection	0.06	0.24	0.05	0.22	0.08	0.27
Other reason	0.08	0.27	0.07	0.49	0.09	0.28
<b><u>Language proficiency</u></b>						
Beginner	0.11	0.31	0.12	0.32	0.10	0.30
Intermediate	0.29	0.45	0.28	0.45	0.31	0.46
Advanced	0.37	0.48	0.36	0.48	0.37	0.48
Mother tongue	0.23	0.41	0.24	0.42	0.19	0.40
<b>Total number</b>	<b>12834</b>		<b>7396</b>		<b>5438</b>	

Population weights are used. Source: EU-LFS (2014) Ad Hoc Module.

The vector  $Z_i$  includes the following individual-level variables: *Age* and *Age squared* measured in years; 3 dummies for marital status (*Single*, *Married*, *Divorced/Separated*); *Years of residence* and *Years of residence squared* measured as number of years in the destination country; 3 dummies measuring the level of educational attainment (*High education*, *Medium education*, *Low education*); 4 dummies capturing language proficiency (*Mother tongue*, *Advanced*, *Intermediate*, *Beginner*).

The vector  $AreaOrigin_i$  includes dummies for the area of origin of the individual specified as follows: *EU-28*, *EEA* (EEA countries), *MENA* (Middle East and North Africa), *Other Europe*, *NAAO* (North America, Australia and Oceania), *Other Africa*, *Latin America*, *ESA* (East and South Asia countries). When running separate analyses on the basis of subsamples, we distinguish between immigrants from “developed” countries, including those from the *EU/EEA*, *NAAO*, and immigrants from “developing” countries, including the remaining areas of origin. We recognise that this is a crude distinction and that, had we had better quality information on the precise country of origin of individual respondents (rather than her or his region of origin), we would have been able to make a more finely-grained origin country variable measuring development level on a continuous scale. The vector  $Mig Reason_i$  includes 6 dummy variables specifying the reason for migration immigrants provide in the survey. It contains the following categories: (1) those who declare to have migrated for employment reasons but had not a prearranged job at destination before moving (*Labour*); (2) those who migrated for study reasons (*Study*); (3) those who migrated to join a family or to form a family (*Family*); (4) those who migrated for the purpose of international protection (*International protection*); and (5) those who migrated for other reasons (*Other reason*). We exclude from the analysis immigrants who declare to

have secured employment in the destination country prior to migration. This typology of immigrants are mainly intra-corporate transfers and/or employees recruited through employment agencies and usually do not rely on the classical employment channel and have different career/occupational prospects<sup>5</sup>.

Throughout the baseline estimations we use destination country dummies ( $\phi_{ic}$ ) to filter out the effect of all unobserved country-specific factors influencing the labour market outcomes of immigrants.

In alternative to this specification, we use several contextual variables to control for the influence of specific destination country characteristics. We include the citizenship policy indicator ‘The Migrant Integration Policy Index (MIPEX) Access to Nationality’ measuring the level of legal openness of destination countries regarding access to citizenship. MIPEX is a measure of different policies towards the integration of migrants, where higher scores on a scale from 0 to 100 represent more inclusive migrant integration policies (Niessen et al., 2007). We use an adapted version of the MIPEX subscale for ‘access to nationality’ from the 2013 edition of MIPEX, which only includes those naturalization criteria which are relevant for first generation migrants. The scores on this subscale are based on the following criteria: eligibility, conditions for acquisition, security of status, and dual nationality. Other destination country variables we use are: *Labour market mobility* measuring the extent legislation and practices support the labour market integration of immigrants; *Unemployment Rate* to account for the labour market structure and situation; *Migrants share* which influences the probability of being employed and the typology of jobs available to immigrants. For more details on the definition of variables and sources of the data, see Table A1 in Appendix.

Table 1 presents some descriptive statistics of the sample we use for the empirical analysis by gender. The mean immigrant in the sample is 42 years old and has been residing at destination for 12 years. Immigrants having citizenship represent around 25 percent of the sample. The percentage of female immigrants holding citizenship is 5 point higher than male immigrants (27 and 22 respectively). Men are more likely to be employed and have a slightly higher occupational status than women. Immigrants declaring to be labour migrants represent 41 percent of the sample. This figure is driven by men while, as expected, women generally migrate for family reasons (50 percent). Education attainment and language proficiency is quite comparable between men and women.

#### **4. Results**

This section summarises the results of the empirical analysis which is conducted separately for men and women and for immigrants coming from developing and developed countries. The choice to estimate separate models by gender is standard in the economic literature as the question of labour market status is generally gender-biased. Instead, the choice to estimate separate models by the development level of the country of origin is less standard in the literature. It is motivated by the different structural obstacles immigrants from developed countries face in the labour market, e.g. less discrimination, few administrative obstacles (free movement for EU/EEA citizens), compared to immigrants from developing countries. The former typology of immigrants is less relevant for the purpose of this analysis also because the reasons to naturalise are often unrelated to the labour market (Vink et. al 2013). Hence, we focus our analysis on immigrants from developing countries.

---

<sup>5</sup> Results, including immigrants with a prearranged job before migrating are not qualitatively different. Results are available upon request.

**Table 2. The effect of naturalisation on employment status**

VARIABLES	Model (1a)	(1b)	Model (2a)	(2b)	Model (3a)	(3b)	Model (4a)	(4b)
	Employment	Citizenship	Employment	Citizenship	Employment	Citizenship	Employment	Citizenship
	Male Developing countries		Female Developing countries		Male Developed		Female Developed	
Citizenship (ATE)	0.195**		0.206**		-0.0133		0.01	
Citizenship	0.726** (0.295)		0.660** (0.272)		-0.0556 (0.483)		0.0305 (0.418)	
Age	0.0511* (0.0312)	0.0360 (0.0363)	0.121*** (0.0247)	0.0431 (0.0265)	0.0961*** (0.0351)	0.0706 (0.0457)	0.160*** (0.0264)	0.0126 (0.0339)
Age squared	-0.000885** (0.000345)	-0.000339 (0.000400)	-0.00138*** (0.000273)	-0.000454 (0.000292)	-0.00140*** (0.000384)	-0.000856* (0.000512)	-0.00184*** (0.000294)	-0.000104 (0.000376)
Married	0.195** (0.0799)	0.346*** (0.0844)	-0.316*** (0.0678)	0.379*** (0.0689)	0.195** (0.0852)	0.434*** (0.120)	-0.266*** (0.0791)	0.535*** (0.107)
Divorced	0.362*** (0.118)	0.179 (0.124)	-0.0906 (0.0775)	0.212** (0.0824)	0.0184 (0.136)	0.303* (0.182)	-0.124 (0.0980)	0.507*** (0.128)
Years of residence	0.0620 (0.0607)	0.260*** (0.0598)	0.130** (0.0518)	0.242*** (0.0499)	0.00347 (0.0678)	0.169** (0.0741)	0.0683 (0.0518)	0.185*** (0.0612)
Years residence2	-0.00261 (0.00222)	-0.00637*** (0.00234)	-0.00585*** (0.00189)	-0.00567*** (0.00194)	0.000460 (0.00267)	-0.00321 (0.00298)	-0.00280 (0.00201)	-0.00323 (0.00243)
Medium edu. class	0.0901 (0.0596)	0.118* (0.0684)	0.0812 (0.0502)	0.131** (0.0550)	0.137* (0.0797)	0.0751 (0.102)	0.148** (0.0643)	0.191** (0.0824)
High edu. class	0.113* (0.0593)	0.243*** (0.0809)	0.186*** (0.0670)	0.307*** (0.0625)	0.408*** (0.0963)	0.0502 (0.109)	0.444*** (0.0710)	0.115 (0.0886)
Labour	0.136* (0.0771)	-0.257*** (0.0825)	0.603*** (0.0529)	-0.229*** (0.0604)	0.201** (0.0936)	-0.348*** (0.0976)	0.546*** (0.0653)	-0.409*** (0.0779)
Study	0.375*** (0.131)	-0.252** (0.123)	0.225** (0.0996)	-0.111 (0.105)	0.238 (0.195)	-0.567*** (0.147)	0.217* (0.122)	-0.205 (0.140)
International protection	-0.248*** (0.0952)	0.0960 (0.102)	-0.108 (0.0858)	0.187** (0.0916)	-0.641*** (0.185)	0.0662 (0.174)	-0.246 (0.194)	0.243 (0.194)
Other reason	0.146 (0.115)	-0.184 (0.122)	0.144* (0.0844)	-0.0161 (0.0882)	0.125 (0.119)	-0.281** (0.139)	0.168* (0.0954)	-0.215* (0.119)
Other Africa	0.0107 (0.0864)	0.0502 (0.0969)	0.0299 (0.0762)	0.230*** (0.0806)				
MENA	-0.299*** (0.0693)	0.261*** (0.0809)	-0.515*** (0.0643)	0.287*** (0.0701)				
ESA	0.533*** (0.191)	0.0226 (0.215)	0.432*** (0.118)	-0.191 (0.138)				
NAAO					-0.238 (0.209)	-0.426* (0.236)	-0.143 (0.154)	0.0954 (0.165)
EEA					-0.321 (0.373)	-0.698 (0.499)	-0.323 (0.266)	-0.849** (0.351)
Latin America	0.00845 (0.114)	0.559*** (0.111)	-0.00425 (0.0754)					
Intermediate	0.278*** (0.089)	0.102 (0.108)	0.363*** (0.075)	0.177** (0.082)	.246*** (0.1)	0.233* (0.137)	0.345*** (0.089)	0.361*** (0.110)
Advanced	0.318*** (0.098)	0.341*** (0.108)	0.571*** (0.084)	0.333*** (0.083)	0.351*** (0.106)	0.450*** (0.139)	0.463*** (0.105)	0.712*** (0.114)
Mother tongue	0.269*** (0.132)	0.631*** (0.126)	0.386*** (0.110)	0.647*** (0.094)	0.334*** (0.122)	0.764*** (0.158)	0.523*** (0.115)	0.805*** (0.126)
Constant	-0.380 (0.746)	-4.016*** (0.838)	-2.970*** (0.647)	-4.186*** (0.633)	-0.836 (0.853)	-4.718*** (1.045)	-3.060*** (0.636)	-4.117*** (0.788)
Wald test (Rho=0)	Rejected		Rejected		Not rejected		Not rejected	
Observations	2,933	2,933	4,130	4,130	2,505	2,505	3,266	3,266

Dependent variables: Employment status. Reference categories are: for developing origin country area is Other Euro; for developed origin country area is EU 28; for reason to migrate is family reason; for marital status is single; for education is low education class; for language is beginner. Destination country dummies are included. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 2 reports the results of the bivariate probit models, estimating the relationship between naturalisation and the probability of being employed. Throughout this table, the first column shows the result of the outcome equation (2) while the second column the result of the selection equation (1). The coefficients of the explanatory variable (*Citizenship<sub>i</sub>*) in Model 1a and Model 2a show that



naturalisation is positively associated with being employed. The probability of being employed for male citizens is on average 19.5 percent<sup>6</sup> higher than that for non-citizens (Model 1a) and the probability is around 20,6 percent higher for female citizens than for non-citizens (Model 2a). As expected, in Model 3a and Model 4a we do not find evidence of a significant relationship between citizenship and employment for immigrants coming from developed countries. One explanation of these results could be the strong signalling effect of citizenship for immigrants from developing countries. By contrast, for immigrants from developed countries, who face a less precarious situation in the labour market, given their presumed higher human capital, as well as a lower chance of statistical discrimination, the effect of signalling is not relevant. As regards the other covariates, they mainly show the expected effect on our dependent variables. Human capital variables like education, language proficiency and age (proxy for experience) have a positive effect on the probability of being employed. As expected, economic migrants and those migrating to follow their studies show a higher propensity of being employed than those migrating for family reasons show (Models with (a) suffix). Generally, having been longer at destination has a positive (non linear) effect on naturalisation, like being more educated and being more proficient in the destination country language (Models with (b) suffix). Economic migrants and those intending to study show a lower probability of naturalisation than individuals migrating for family reasons do, while those seeking international protection are more likely to naturalise. We also find that areas of origin explain a good part of the variation of citizenship acquisition and employment prospects of immigrants.

Finally, we use the Wald statistic to test for selection bias. The Wald test rejects the null hypothesis of no correlation ( $\rho$ ) between the error terms in models including only immigrants from developing countries. In models including only immigrants from developed countries the null hypothesis is not rejected at conventional significance levels, meaning that selection is less likely<sup>7</sup>. As argued before, the motivations to naturalise of immigrants from developed countries, and especially of those from EU-27, are often unrelated to the labour market outcomes<sup>8</sup>.

---

<sup>6</sup> It is measured as the average treatment effect (ATE) and corresponds to the marginal effect of citizenship (dichotomous variable) on the probability of being employed across the 13 countries considered in the analysis. The magnitude of this effect may depend on the number of observations for each country in our sample. As the magnitude of the cross-country effect is not a primary interest of this study and given that population weighting could artificially increase the standard errors, we do not use population weights in our estimations.

<sup>7</sup> We estimate these models using the probit model. Results do not change significantly from those reported in Table 2. Results are available upon request.

<sup>8</sup> Selection is absent when unobserved characteristics influencing the propensity to naturalise are not correlated to employment.

**Table 3. The effect of naturalisation on occupational status**

VARIABLES	Model (1a)	(1b)	Model (2a)	(2b)	Model 3a (OLS)	Model 3b (Probit)
	Occ. status	Selection	Occ. status	Selection	Occ. status	Citizenship
	Male		Female		Female	
	Developing countries		Developing countries		Developing countries	
Citizenship	5.628*** (1.826)		2.477 (2.509)		1.409* (0.818)	
Age	-0.0846 (0.406)	0.0453 (0.0471)	-0.736** (0.374)	0.0410 (0.0407)	-0.709* (0.378)	0.0440* (0.0264)
Age squared	0.000851 (0.00456)	-0.000412 (0.000525)	0.00645 (0.00414)	-0.000440 (0.000452)	0.00615 (0.00413)	-0.000466 (0.000292)
Married	-1.033 (0.924)	0.403*** (0.110)	1.242 (0.900)	0.339*** (0.0900)	1.435 (0.879)	0.379*** (0.0693)
Divorced	-2.048 (1.391)	0.305** (0.155)	-0.708 (1.030)	0.148 (0.108)	-0.652 (0.983)	0.217*** (0.0823)
Years of residence	-0.647 (0.688)	0.272*** (0.0768)	0.719 (0.728)	0.230*** (0.0756)	0.748 (0.819)	0.249*** (0.0494)
Years residence2	0.0307 (0.0264)	-0.00695** (0.00300)	-0.0260 (0.0277)	-0.00451 (0.00292)	-0.0259 (0.0311)	-0.00592*** (0.00192)
Medium edu. class	2.897*** (0.725)	0.0875 (0.0865)	1.901** (0.748)	0.181** (0.0802)	1.927*** (0.590)	0.133** (0.0547)
High edu. class	16.14*** (0.928)	0.153 (0.100)	17.07*** (0.879)	0.335*** (0.0898)	17.00*** (0.963)	0.314*** (0.0636)
Labour	-1.669* (0.973)	-0.357*** (0.102)	-0.393 (0.815)	-0.328*** (0.0835)	-0.518 (0.729)	-0.214*** (0.0592)
Study	5.339*** (1.405)	-0.258* (0.141)	7.509*** (1.360)	-0.00825 (0.134)	7.473*** (1.752)	-0.0879 (0.107)
International protection	-4.721*** (1.265)	0.0592 (0.132)	-2.232 (1.362)	0.290** (0.140)	-2.027 (1.505)	0.211** (0.0927)
Other reason	-0.374 (1.421)	-0.237 (0.147)	0.810 (1.262)	-0.0584 (0.121)	0.907 (1.361)	0.00216 (0.0931)
Other Africa	1.273 (1.019)	-0.0545 (0.118)	-1.294 (1.086)	0.135 (0.112)	-1.564 (1.180)	0.218*** (0.0820)
MENA	2.762*** (0.868)	0.251** (0.103)	0.294 (1.121)	0.265** (0.118)	0.312 (1.257)	0.275*** (0.0725)
ESA	7.659*** (1.809)	0.0318 (0.238)	7.991*** (1.626)	-0.452** (0.178)	8.005*** (1.651)	-0.196 (0.134)
Latin America	2.432** (1.180)	0.430*** (0.132)	0.139 (0.965)	0.213** (0.101)	-0.109 (1.004)	0.368*** (0.0752)
Intermediate	-0.889 (1.222)	0.130 (0.150)	0.595 (1.318)	0.195 (0.152)	0.627 (1.179)	0.176** (0.0802)
Advanced	1.925 (1.234)	0.406*** (0.147)	6.057*** (1.323)	0.327** (0.151)	6.113*** (1.212)	0.330*** (0.0835)
Mother tongue	3.565*** (1.473)	0.707*** (0.166)	8.71*** (1.492)	0.546*** (0.162)	8.825*** (1.412)	0.646*** (0.0943)
Constant	33.44*** (9.105)	-4.203*** (1.072)	41.75*** (9.012)	-4.389*** (0.966)	32.49*** (9.439)	-4.930*** (0.615)
R-squared					0.438	
Wald test (Rho=0)		Rejected		Not Rejected		
Observations	2,030	2,030	2,219	2,219	2219	4130

Dependent variables: Occupational status. Reference categories are: for developing origin country area is Other Euro; for developed origin country area is EU 28; for reason to migrate is family reason; for marital status is single; for education is low education class; for language is beginner. Destination country dummies are included. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 3 explores the relationship between citizenship and occupational status. In these estimations we control for the same individual characteristics as in the case when the dependent variable was employment status. The results show that being a citizen is associated with a higher job status for male immigrants (Model 1a) but not for female immigrants (Model 2a). In figures, on average, a naturalised man ranks 5.6 points higher in the ISEI scale than a non-citizen does. It corresponds to a 7 percent increase on average if we consider that the ISEI index ranges between 11 and 90 (Ganzeboom and

Treiman 2003). As the result of the Wald test in Model 2a is not in favour of selection, we estimate separately the same specification using OLS method for the outcome equation (Model 3a) and a probit method for the selection equation (Model 3b). Now, the coefficient of citizenship turns positive and slightly significant at the 10 percent level. It is interesting to note that age, as a proxy for experience, does not affect significantly the job status of immigrants. This finding could be related to the skill waste phenomenon. The other variables measuring the human capital endowment of respondents such as education and language proficiency are positively associated with better jobs. Having advanced skills of the destination country language, is more than twice valuable for women than is for men.

## **5. Specification check: institutional context**

Throughout our analysis, we used country dummies to control for all country characteristics that might affect the relationship between citizenship and employment. However, the institutional context, especially the level of accessibility of citizenship, might be one of the factors that influence the relationship between citizenship and employment outcomes among foreign-born residents. In Table 4<sup>9</sup>, we present estimations including the *MIPEX* variable and its interaction with the variable *Citizenship* to test if the relationship between citizenship and employment outcomes is conditioned by access to citizenship. Results show that in countries with a less restrictive citizenship policy, the propensity of immigrants to naturalise is higher (Models with (b) suffix). The effect of citizenship policy is heterogeneous across labour market outcomes and varies by gender. In general, our results suggest that easier access to citizenship increases the positive returns to citizenship in terms of employment. For both men (Model 1a) and women (Model 2a), the interaction coefficient is positive but statistically significant only for women. This indicates that the positive relationship between citizenship acquisition and employment propensity tends to be stronger under the condition of a less restrictive citizenship policy, but only for women. One explanation could be the higher investment in specific human capital and language skills in countries where naturalisation is faster, and that immigrants expect to reap these higher returns for a longer period of time. According to Gathmann and Keller (2017), the access to citizenship effect might be less relevant for male immigrants who are more likely to have a permanent work permit and a continuous work history. Indeed, they show that faster access to citizenship more strongly benefited women with no work history who entered the labour market for the first time.

Results are robust after controlling for labour market integration opportunities each country offers to immigrants (*Labour market mobility*)<sup>10</sup>, the general labour market situation (*Unemployment rate*) and the effect of immigrant's population (*Share Migrants*)<sup>11</sup>.

Model 3a and Model 4a subsequently present the estimations having as a dependent variable the occupational status of male and female respondents, respectively. Model 3a shows that, for men, the positive relationship between citizenship and having a better job status is weaker under the condition of having easier access to citizenship. This result is consistent with the “devaluation hypothesis” according to which liberal citizenship policies might “devalue” citizenship as a selection device that signals immigrants' integration in the labour market. In Model 4a and Model 5a (OLS estimation) however, the coefficient of the interaction is negative but not significant. This suggests that access to citizenship does not condition the returns to citizenship in terms of better jobs for women.

---

<sup>9</sup> Only immigrants from developing countries are included in the analysis.

<sup>10</sup> This policy strand of the index also measures the extent to which countries have specific programs to address the labour market situation of immigrant women.

<sup>11</sup> The correlation between these contextual variables is available in Table 2A in the Appendix.

**Table 4. Does the institutional context condition the effect of naturalisation on the labour market outcomes?**

VARIABLES	Model (1a)	(1b)	Model (2a)	(2b)	Model (3a)	(3b)	Model (4a)	(4b)
	Employment Male	Citizenship	Employment Female	Citizenship	Occ. status Male	Citizenship	Occ. status Female	Citizenship
Citizenship (ATE)	0.304**		0.084**					
Citizenship	1.040*** (0.319)		0.275 (0.395)		15.66*** (4.433)		5.740 (3.744)	
MIPEX	-0.0149*** (0.00393)	0.0303*** (0.00319)	-0.00250 (0.00361)	0.0223*** (0.00256)	0.101** (0.0486)	0.0303*** (0.00383)	0.0136 (0.0417)	0.0229*** (0.00323)
Citizenship*MIPEX	0.000758 (0.00442)		0.00939** (0.00409)		-0.167** (0.0737)		-0.0207 (0.0610)	
Labour market mobility	-0.00327 (0.00203)	-0.007*** (0.0024)	0.00482*** (0.00182)	-0.0086*** (0.002)	-0.0660* (0.0338)	-0.00816*** (0.00295)	-0.0816** (0.0323)	-0.00692*** (0.00268)
Unemployment	-0.0239*** (0.00457)	-0.00981** (0.00490)	-0.0117*** (0.00364)	-0.00113 (0.00377)	-0.265*** (0.0495)	-0.0163*** (0.00633)	-0.536*** (0.0538)	0.0128** (0.00530)
Migrants share	-0.0118* (0.00706)	0.0103 (0.00782)	0.0193*** (0.00557)	-0.00292 (0.00516)	0.226* (0.128)	0.00798 (0.0106)	0.349*** (0.0918)	-0.0120 (0.00735)
Constant	0.380 (0.759)	-4.662*** (0.809)	-3.683*** (0.747)	-4.104*** (0.604)	28.51*** (10.68)	-4.378*** (1.072)	40.03*** (10.01)	-4.190*** (0.902)
R-squared	Rejected		Rejected		Rejected		Not rejected	
Wald test (Rho=0)	Rejected		Rejected		Rejected		Not rejected	
Observations	2,933	2,933	4,130	4,130	2,030	2,030	2,219	2,219

Dependent variables: Employment and occupational status. All baseline variables are included in the estimations. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 6. Endogeneity concerns

In order to naturalise, in some countries, immigrants have to demonstrate that they are economically self-sufficient. Indeed, being employed and/or earning a given threshold level of income is a precondition for naturalisation. For example, in Italy, a candidate should demonstrate to have earned in each of 3 years preceding the naturalisation application at least an income of around 8300 Euros. Clearly, explicit requirements on economic self-sufficiency give rise to endogeneity bias if the aim is to estimate the effect of citizenship on labour market outcomes. This may imply reverse causality in our analyses if income - and therefore employment - is both a precondition for naturalisation and an expected result of citizenship status. In order to confirm that our baseline results are not affected by endogeneity, we exclude from the analysis those countries that have explicit economic requirements in order to apply for citizenship.

**Table 5. Testing the citizenship premium for countries with low probability of endogeneity**

VARIABLES	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
	Employed Men	Employed Women	Occ. status Men	Occ. status Women	Employed Women	Occ. status Men
Citizenship (ATE)	0.26*** (0.089)	0.094* (0.048)			0.18 (0.234)	
Citizenship			6.08** (3.02)	-0.84 (4.755)		14.29*** (5.549)
Citizenship*MIPEX					0.0067 (0.004)	-0.161* (0.0876)
Country dummies	yes	yes	yes	yes	no	no
Macro variables	no	No	no	no	yes	yes
Constant	-1.035 (0.817)	-4.35*** (0.65)	28.37** (12.09)	24.39** (10.97)	-4.18 (1.01)	34.70*** (13.18)
Wald test (Rho=0)	Rejected	Not rejected	Not rejected	Not rejected	Not rejected	Rejected
Observations	1,960	2,720	1,296	1,467	2,720	1,296

Dependent variables: Employment and occupational status. Italy, Austria and Finland are excluded from the analysis. Only individuals from developing countries are included in the analysis. Only outcome estimations are presented. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5 shows the results of the baseline estimations where countries that have explicit economic requirements such as Austria, Italy and Finland are excluded. Model 1 and Model 2 in this table replicate Model 1a and Model 2a of Table 2. The results of Table 2 are confirmed for both men and women with slight changes in the magnitude of the effect possibly due to the exclusion of three countries. Model 3 and Model 4 in this table replicate Model 1a and Model 2a in Table 3. The results of Table 3 measuring the effect of citizenship are fully confirmed for men while for women the coefficient turns negative but remains insignificant. Lastly, Model 5 and Model 6 replicate Model 2a and Model 3a in Table 4. The coefficient of the interaction in Model 5 remains positive but becomes insignificant<sup>12</sup> while the coefficient of the interaction in Model 6 has the same sign and magnitude as in Table 4. In sum, we conclude that the baseline results are robust to reverse causality.

## 7. Conclusion

This paper explores the relationship between citizenship and labour market outcomes for foreign-born residents in 13 West European countries. The analysis uses the ad hoc module of the European Labour force Survey for the year 2014. In order to cope with the selective nature of the naturalisation process, we employ a treatment effect method and a bivariate probit method that account for unobserved characteristics of naturalising immigrants.

<sup>12</sup> Note that one reason why the coefficients become not significant could be the decrease in the degrees of freedom in the estimations that exclude the 3 countries.

Our main finding is that of a positive relationship across these destination countries between citizenship and the probability of employment for both immigrant men and women, as well as between citizenship and occupational status for men. In line with previous findings, we argue that these citizenship premiums only apply to immigrants from developing countries. Though this analysis is not able to shed light on the specific mechanisms that bring about these results, we believe that the most plausible is signalling of a successful integration of naturalised immigrants.

We find that the effect of citizenship policy is heterogeneous across labour market outcomes and varies by gender. Our analyses show that liberalising the access to citizenship does not diminish the positive returns on employment from naturalisation. By contrast, in countries where citizenship is relatively easily accessible, the relationship between citizenship and paid employment is stronger, in particular for female migrants. However, easier access to citizenship is related with lower returns of naturalization on occupational status for male immigrants. A tentative explanation for this result may be that a liberal citizenship policy “devalues” the acquisition of citizenship in the eyes of employers and thus serves less as a selection device between immigrants. Further research is needed to better understand why, if at all, such a devaluation hypothesis only seems to hold for occupational status (and not for employment as such) and why only for men (and not for women).

Overall, our analysis suggests that more liberal citizenship policy produce positive effects on employability of the more disadvantaged groups such as female immigrants. Most importantly, this effect likely comes through investment in human capital and language skills that facilitate a durable inclusion in the host society.

## References

- André, S., Dronkers, J and Fleischmann, F (2009). “Verschillen in groepsdiscriminatie, zoals waargenomen door immigranten uit verschillende herkomstlanden in veertien lidstaten van de Europese Unie.” *Mens en Maatschappij* (84): 448-482
- Aptekar, S (2015). *The road to citizenship: what naturalization means for immigrants and the United States*: Rutgers University Press.
- Bevelander, P. and DeVoretz, D.J (Eds) (2008). *The Economics of Citizenship*. Malmö University, Holmbergs, Malmö.
- Bevelander, P. and Veenman, J (2008). “Naturalisation and Socioeconomic Integration: The Case of the Netherlands”, in P. Bevelander and D.J. DeVoretz (eds.): *The Economics of Citizenship*, Malmö University, Malmö: 65-88.
- Borjas, G. J (1994). “The economics of integration”, *Journal of Economic Literature*, 32 (4): 1667-1717.
- Bratsberg, B., Ragan J.F and Nasir Z.M (2002). “The effect of naturalization on wage growth: A panel study of young male immigrants”, *Journal of Labor Economics*, 20 (3): 568–597.
- Chiburis, R.C, Das, J and Lokshin, M (2012). “A practical comparison of the bivariate probit and linear IV estimators”, *Economics Letters*, 117 (3): 762 – 766.
- Chiswick, B (1978). “The effect of Americanization on the earnings of foreign-born men”, *The Journal of Political Economy*, 86 (5): 897–921.
- Chiswick, B and Miller, P (2009). “The international transferability of immigrants’ human capital”, *Economics of Education Review*, 28 (2): 162–169
- DeVoretz, D (2008). “The Economics of Citizenship: A Common Intellectual Ground for Social Scientists?”, *Journal of Ethnic and Migration Studies* 34 (4): 679-693.
- DeVoretz, D. and Pivnenko P (2005). “The Economic Causes and Consequences of Canadian Citizenship”. *Journal of International Migration and Integration*, 6 (3–4): 435–468.
- De Vroome, T. and van Tubergen F (2010). “The Employment Experience of Refugees in the Netherlands”, *International Migration Review*, 44 (2): 376-403.
- Dronkers, J. and Vink M.P (2012). “Explaining Access to Citizenship in Europe: How Policies Affect Naturalisation Rates”, *European Union Politics*, 13 (3): 390–412.
- Euwals, R., Dagevos, L., Gijsberts, M and Roodenburg H (2010). “Citizenship and Labor Market Position: Turkish Immigrants in Germany and the Netherlands”, *International Migration Review*, 44 (3): 513–38
- Fleischmann, F. and Dronkers, J (2010). "Unemployment among immigrants in European labour markets: an analysis of origin and destination effects", *Work, Employment & Society*, 24 (2): 337-354.
- Fougère, D. and Safi, M (2009). “Naturalization and Employment of Immigrants in France (1968-1999)”, *International Journal of Manpower*, 30 (1-2): 83-96.
- Gathmann, Ch and Keller, N (2017). “Access to citizenship and the economic assimilation of immigrants”, *The Economic Journal*, Doi: 10.1111/econj.12546.
- Ganzeboom, H.B.G. and Treiman, D.J (1996). “Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations”, *Social Science Research*, 25(3): 201 – 39

- Goodman, S (2010). “Naturalisation policies in Europe: Exploring patterns of inclusion and exclusion”, *European Union Direct Observatory (EUDO) Comparative Reports*. Florence: Robert Schuman Centre for Advanced Studies, European University Institute, RSCAS 2010/7.
- Hainmueller, J., Hangartner, D and Lawrence, D (2016). “When lives are put on hold: lengthy asylum processes decrease employment among refugees”, *Science Advances*, 2(8): 1–7.
- Heath, A. and Cheung, S.Y (eds.) (2007). *Unequal chances: Ethnic minorities in western labour markets*. Oxford: Oxford University Press.
- Heath, A., Rethon, C and Kilpi, E (2008). “The second generation in Western Europe: Education, unemployment, and occupational attainment”, *Annual Review of Sociology*, 34: 211 – 235.
- Heath, A. and Yu, S (2005), “Explaining ethnic minority disadvantage”, in A. Heath, J. Ermish and D. Gallie (eds.), *Understanding social change*, 187-224. Oxford: Oxford University Press.
- Helgertz, J., Bevelander, P and Tegunimataka, A (2014). “Naturalization and Earnings: A Denmark–Sweden Comparison”, *European Journal of Population*, 30 (3): 337-359.
- Kogan, I (2003). “Ex-Yugoslavs in the Austrian and Swedish labour markets: The significance of the period of migration and the effect of citizenship acquisition”, *Journal of Ethnic and Migration Studies*, 29 (4): 595-622
- Kogan, I (2006). “Labor Markets and Economic Incorporation among Recent Immigrants in Europe”, *Social Forces*, 85 (2):697-721.
- Koopmans, R (2010). “Trade-offs between equality and difference: Immigrant integration, multiculturalism and the welfare state in cross-national perspective”, *Journal of Ethnic and Migration Studies*, 36 (1): 1-26.
- Lancee, B (2012). *Immigrant Performance in the Labour Market: Bonding and Bridging Social Capital*. Amsterdam: Amsterdam University Press.
- Liebig, T. and Von Haaren F (2011). “Citizenship and the Socioeconomic Integration of Immigrants and Their Children”, in *Naturalisation: A Passport for the Better Integration of Immigrants?* OECD, Paris: 23–57.
- Maddala, G. S (1983). *Limited-Dependent and Qualitative Variables in Econometrics*. Cambridge: Cambridge University Press
- Murphy, A (2007). “Score tests of normality in bivariate probit models”, *Economics Letters*, 95 (3): 374–379.
- Niessen, J., Huddleston, T and Citron, L (2007). *Migrant Integration Policy Index*. British Council and Migration Policy Group, Brussels.
- OECD (2004). “Employment protection legislation and labour market performance”, in OECD (ed.), *Employment outlook*, 61-125. Paris: OECD.
- Peters, F., Vink, M., and Schmeets, H (2018). “Anticipating the citizenship premium: before and after effects of immigrant naturalisation on employment”, *Journal of Ethnic and Migration Studies*, 44 (7): 1051-1080.
- Poeschel, F (2016). “Raising the mobility of third-country nationals in the EU. Effects from naturalisation and long-term resident”, *OECD Social, Employment and Migration Working Papers*, No. 187.Paris: OECD.
- Rallu, J.L (2011). “Naturalization Policies in France and the USA and Their Impact on Migrants’ Characteristics and Strategies”, *Population Review*, 50(1): 40–61.



- Scott, K (2008). "The Economics of Citizenship: Is there a Naturalisation Effect?", in P.Bevelander and D.J.DeVoretz (eds.), *The Economics of Citizenship*, Malmö University, Malmö, 107-126.
- Steinhardt, M. F (2012). "Does Citizenship Matter? The Economic Impact of Naturalizations in Germany", *Labour Economics*, 19 (6): 813-823.
- Van Tubergen, F. and Kalmijn, M (2005). "Destination-Language Proficiency in Cross-National Perspective: A Study of Immigrant Groups in Nine Western Countries", *American Journal of Sociology*, 110 (5):1412-57.
- Van Tubergen, F., Maas, I and Flap, H.D (2004). "The Economic Incorporation of Immigrants in 18 Western Societies: Origin, Destination and Community Effects", *American Sociological Review*, 69 (5): 704–727.
- Vink, M., Prokic-Breuer, T and Dronkers, J (2013). "Immigrant Naturalization in the Context of Institutional Diversity: Policy Matters, But to Whom?", *International Migration*, 51 (5): 1–20.
- Wilde, J (2000). "Identification of multiple equation probit models with endogenous dummy regressors", *Economics Letters*, 69 (3): 309–312.
- Zwysen, W (2018). "Different patterns of labour market integration by migration motivation in Europe: The role of host country human capital", *International Migration Review*, <https://doi.org/10.1177/0197918318767929>.
- Yang, P.Q (1994). "Explaining Immigrant Naturalisation", *International Migration Review*, 28 (3): 449-477.
- Yann, A., Dustmann, C., Glitz, A. and Manning, A (2010). "The Economic Situation of First and Second-Generation Immigrants in France, Germany and the United Kingdom", *Economic Journal, Royal Economic Society*, 120 (542): 4-30.

## Appendix

Table 1A. Description of the variables

<i>Variables</i>	<i>Definition</i>	<i>Source</i>
<b>Dependent variables</b>		
Citizenship	Dichotomous variable equal to 1 if the respondent is a citizen of the country and 0 otherwise.	EU-LFS (2014)
Occupational Status	ISEI scale based on ISCO08	Ganzeboom and Treiman (1996)
Employed	Dichotomous variable equal to 1 if the individual is employed and 0 otherwise (ILO definition)	EU-LFS (2014)
<b>Independent variables</b>		
Age	Age in years	EU-LFS (2014)
Age squared	Square of age	EU-LFS (2014)
Single; Married; Separated /Divorced	Dichotomous variables equal to 1 if the respondent has one of these marital statuses and 0 otherwise	EU-LFS (2014)
Years of residence	Years since the respondents resides at the destination country.	EU-LFS (2014)
Years of residence squared	Years since the respondents resides at the destination country squared	EU-LFS (2014)
<b>Education level</b>		
High education; Medium Education; Low education	Dichotomous variables equal to 1 if the respondent has tertiary education, and 0 upper secondary education or lower secondary education, respectively, and 0 otherwise	EU-LFS (2014)
<b>Language level</b>		
Mother tongue; Advanced; Intermediate; Beginner	Self-declared level of language proficiency of the destination country. Dichotomous variables equal to 1 if the respondent is a mother tongue, has an advanced level of language, an intermediate level of language or is a beginner, respectively, and 0 otherwise	EU-LFS (2014) Ad Hoc Module
<b>Reason to migrate</b>		
Labour; Study; Family; International protection; Other reason	Dichotomous variables equal to 1 if the respondent migrated to find a job and the job was not prearranged before departure, migrated to study, and 0 otherwise. migrated for family reasons, migrated to seek international or migrated for other reasons, respectively, and 0 otherwise.	EU-LFS (2014) Ad Hoc Module
<b>Area of origin dummies</b>		
EU-28; EEA; MENA NAAO; Other Europe; Other Africa; Latin America; ESA	EEA corresponds to European Economic Area countries, MENA to the Middle East and North African countries, NAAO to the North America and Oceania countries, ESA to East and South Asia countries.	EU-LFS (2014)
MIPEX	Continuous variable ranging from 0 to 100. Based only on the “access to nationality” subscale of Migrant Integration Policy Index for 2013.	Huddleston et al. (2015)
Labour market mobility	Continuous variable ranging from 0 to 100. Based only on the policy strand “Labour market mobility” of Migrant Integration Policy Index for 2013.	
Unemployment rate	ILO definition (people looking for employment over the active population)	World Bank (2013)
Migrants share	Number of migrants over the total population	World Bank Bilateral migration Database (2010)

Table 2A. Correlation matrix

	(1)	(2)	(3)	(4)
(1) Labour market mobility	1			
(2) MIPEX	-0.056	1		
(3) Unemployment share	0.072	-0.426	1	
(4) Share migrants	-0.35	-0.198	-0.074	1

**Author contacts:**

**Rezart Hoxhaj (corresponding author)**

Migration Policy Centre  
Robert Schuman Centre for Advanced Studies, EUI  
Villa Malafasca  
Via Boccaccio 151  
I-50133 Firenze (FI)

Email: Rezart.Hoxhaj@EUI.eu

**Maarten Vink**

Department of Political Science  
Maastricht University  
Grote Gracht 90-92  
6211 SZ Maastricht  
The Netherlands

Email: mvink@maastrichtuniversity.nl

**Tijana Prokic-Breuer**

Ministry of Education  
Culture and Science  
The Netherlands

Email: T.Breuer@owinsp.nl