Working Paper Series **585**
(ISSN 1211-3298)

Treatment-Related Naturalization Premiums in Two European Countries: Evaluation and Comparison

Vahan Sargsyan

CERGE-EI
Prague, April 2017

ISBN 978-80-7343-392-5 (Univerzita Karlova, Centrum pro ekonomický výzkum a doktorské studium)
ISBN 978-80-7344-421-1 (Národohospodářský ústav AV ČR, v. v. i.)

Treatment-Related Naturalization Premiums in Two European Countries: Evaluation and Comparison[1][2]

Vahan Sargsyan

CERGE-EI[3], Czech Republic

Abstract[4]

We conduct an empirical study in order to estimate the impact of naturalization on labor market integration of first generation immigrants in two European countries, France and Denmark. The study contributes to the existing literature by: (1) comparing the employment opportunities and incomes of naturalized and non-naturalized migrants in European labor markets to those of the native population, and (2) attempting to estimate the impact of characteristics of a country's citizenship policy on this relationship.

The results suggest the existence of high naturalization premiums and full socioeconomic integration of naturalized migrants in France, a country with relatively soft naturalization policies, but not for Denmark, which has strict naturalization policies.

Keywords: citizenship policy, naturalization, naturalization premium, socioeconomic integration.

JEL Classification: J08, J15, J78, O15

---

[1] Work for this paper was supported by the GAUK, grant number 310916.

[2] This paper was presented at the Economics and Social Development Conference (Belgrade, Serbia 13-14 May, 2016), and the Multidisciplinary Academic Conference on Economics, Management and Marketing in Prague 2016.

[3] CERGE-EI, a joint workplace of Charles University and the Economics Institute of the Czech Academy of Sciences, Politickych veznu 7, 111 21 Prague, Czech Republic. Vahan.Sargsyan@cerge-ei.cz

[4] We thank Jan Hanousek for assistance with the methodology design, and Randall K. Filer, Štěpán Jurajda, Nikolas Mittag, Daniel Münich, Mariola Pytliková and Andreas Menzal (CERGE-EI) for comments that greatly improved the manuscript.

1. Introduction and Literature Review

In recent decades, studies of the determinants, causes and benefits of naturalization have created a well-developed body of research for many countries (Brtsberg, Ragan and Nasir, 2002; DeVoretz and Pivenko, 2004). Some of these studies focus on the impact of various individual characteristics, as well as origin and destination country characteristics, on the obtainment of citizenship in destination countries. Others attempt to estimate the socio-economic benefits of naturalization via testing for the impact of destination country citizenship on employment probabilities and labor incomes.

In economic literature, citizenship is defined as a legal status that expresses the state-individual relationship, and grants some rights to those who hold it, which include, among others, physical and political protection and the right to vote. These rights clearly promote the popularity of naturalization, which is defined as citizenship acquisition for immigrants in the countries of destination. Moreover, the act of naturalization also serves as a signal for potential employers that the applicant intends to stay and work in the country of destination. This signal, together with the reduced administrative costs from the employer's perspective, may increase both the chances of employment for naturalized immigrants and their labor incomes once employed (Vink, Prokic-Breuer and Dronkers, 2013; Steinhardt, 2012).

Many studies of the benefits of naturalization have been conducted for countries that serve as the most popular destinations for immigration, like the US (Brtsberg, Ragan and Nasir, 2002), Canada (DeVoretz and Pivenko, 2004), and many European countries including Germany (Steinhardt, 2012), Sweden (Engdahl, 2011), France (Fougere and Safi, 2008) and the Netherlands (Bevelander and Veenman, 2008). Most of the literature shows strong and significant positive naturalization premiums in the observed countries, even after controlling for individual characteristics (Brtsberg, Ragan and Nasir, 2002; DeVoretz and Pivenko, 2004; Fougere and Safi, 2008). Another important common conclusion in most literature is that the naturalization premiums are generally greater for males (Steinhardt, 2012), and for immigrants from less-developed countries who have lower employment probabilities (Brtsberg, Ragan and Nasir, 2002; Fougere and Safi, 2008).

Other studies of the determinants of naturalization mostly conclude that naturalization rates are positively influenced by the softness of citizenship policies in the countries of destination. In particular, the literature looks at two important characteristics of citizenship policies i.e., the tolerance towards dual citizenship and the minimal required duration of residency in the destination countries. There is some empirical evidence of the negative relationship between the minimal required duration of residency and the rates of naturalization, whereas other empirical evidence suggests a positive relationship between the tolerance towards dual citizenship and naturalization rates (Vink, Prokic-Breuer and Dronkers, 2013).

While there is sufficient evidence of a positive relationship between naturalization and economic outcomes, there is still only a very limited literature that conducts cross-county comparisons in order to determine the effect of citizenship policies on this relationship. One example of a cross-country comparison study is that conducted by Bevelander and Pedakur (2012) for Canada and Sweden, where the authors showed that naturalization has a positive impact on both the employment probabilities and relative incomes of immigrants, and that this impact is stronger in Sweden, which has very low barriers to naturalization. On the other hand, in their comparison of Denmark and Sweden Helgertz, Bevelander and Tegunimataka (2014) again considered Sweden as the country with lower barriers to naturalization and obtained very similar naturalization premiums for both countries. A more comprehensive study of the relationship between citizenship policies and naturalization was done by Vink, Prokic-Breuer and Dronkers (2013) for 16 European countries. The authors showed that more accessible citizenship policies increase the naturalization rates, but this finding was significant only for immigrants from less developed countries.

To our knowledge, there is no empirical comparison of the returns to personal characteristics of both naturalized and non-naturalized immigrants with those of the native population in labor markets at destination countries. In this paper, we conduct such a study, in order to determine the impact of naturalization on the socioeconomic integration of migrants through the treatment in the labor markets, rather than simply estimate the employment and wage premiums of naturalization. Moreover, the analyses are conducted for two European countries, France and Denmark, which have different policies for obtaining citizenship, which allows us to

attempt to obtain an estimate of the impact of citizenship policies on the treatment in labor markets after naturalization.

2. Methodology

The theoretical model employed in the analyses is that proposed by Oaxaca and Ransom (1994), which is a model heavily employed in the empirical literature to evaluate treatment towards workers in labor markets (Beblo, Beninger, Heinze and Laisney, 2003). This model has several advantages compared to a simple OLS model with citizenship status-related dummy variables. First of all, the Oaxaca-Ransom model allows the estimation of the impact of the specific group-belonging factor, not only through the effect on the constant variable but also through the direct or indirect influence of all other individual characteristics. In other words, instead of having just one dummy variable for group-belonging, this model is similar to having a whole set of dummy variables interacted with the entire set of explanatory, as well as the constant variables. Secondly, this model not only shows the advantage or disadvantage of the group-belonging factor, but it is also able to decompose that gap into two parts compared to a chosen threshold (in our analyses, this threshold is the "fair" income structure). By such a decomposition, if the threshold is chosen properly, this model allows us to distinguish between the advantage of the advantaged group and the disadvantage of the disadvantaged group, providing more insights into the story and allowing more robust conclusions[5].

The data from each country (described in the next section) was divided into three sub-samples (natives, naturalized and non-naturalized migrants), and the analyses were conducted separately for each gender[6]. The most appropriate procedure of the employed model may be summarized in 3 steps. In the first step, the labor income structures for individuals belonging to each of the three groups, based on the type of their citizenship and naturalization status (i.e. naturalized immigrants, non-naturalized immigrants and native population), was separately estimated for each gender and country of interest. In the second step, a "country-equalized" income structure (one income structure for each gender and country) was constructed, which is

[5] For more detailed description of the advantages of this model see Beblo, Beninger, Heinze and Laisney, 2003.
[6] Through such differentiation every individual was categorized into one of the 12 groups or sub-samples based on the country (France and Denmark), gender and citizenship status.

the income structure that would have been applicable for all three groups in a particular country in the absence of any sort of treatment or benefit differences. In the final steps the decomposition analysis was conducted, in order to measure the unexplainable component in the income differences that is caused by unequal returns to personal characteristics.

In our analyses, for each country we use a version of Mincer's (1958) general capital earnings equation in order to estimate the income structures for individuals belonging to each of three groups based on the type of their citizenship and naturalization status. This identification model is heavily used in the empirical literature in earnings decomposition analyses and may be specified by the following equation:

$$\ln(Y_{cj}) = \beta_0^{cj} + \beta_1^{cj} E + \beta_2^{cj} T + \beta_3^{cj} O + \beta_4^{cj} I + \beta_{5k}^{cj} Ot\square er_k + e_{cj}, \quad (1)$$

where c represents the country, j=c, n, or m represents the sample groups of the native population, naturalized immigrants and non-naturalized immigrants respectively; Y is the hourly employment income of individuals; E is the years of education; T is the current job tenure (the age of individuals is used as a proxy); O is the type of occupation (managers, skilled workers and laborers); I is other job information (size of the firm, or number of subordinates); Other is a vector of other individual personal characteristics (k) including marital status, and the number of children; and e is the error term.

The main concern with this regression model is the possibility of selection bias, especially for naturalized immigrants may be non-random. Such bias may arise if naturalized and non-naturalized migrants pass through some selection processes based on some unobservable characteristics, which later influence their employment incomes or employment probabilities. Unfortunately, we were not able to correct for such selection issues because of the restrictions of our data, which give rise to some concerns regarding the interpretations of the results. However, our analyses rely on the conditional independence assumption (CIA)[7], which amounts to the assumption that, conditional on the observable characteristics, the selection bias disappears. These selection issues, their possible impacts on the findings and some explanations why we can neglect them are discussed in more detail later in the result section.

[7] See Rubin, 1991: "Practical Implications of Modes of Statistical Inference for Causal Effects and the Critical Role of the Assignment Mechanism"

The decomposition analysis cannot become operational without some assumptions about the structure of an "equalized", or in this case "country-equalized", estimate of income structure (β^*). This income structure is generally assumed to be something inbetween the structures of advantaged and disadvantaged groups, and it may be represented by the following weighted equation:

$$\beta_C^* = \theta\hat{\beta}_{Cc} + \delta\hat{\beta}_{Cn} + (1-\theta-\delta)\hat{\beta}_{Cm}, \quad \text{with} \quad \theta, \delta \geq 0, \text{and } \theta + \delta \leq 1, \qquad (2)$$

where θ and δ are the weights, and any assumption about β_C^* may be reduced to an assumption about θ and δ. In our decomposition analysis we use the method based on Neumark (1987) and Oaxaca and Ransom's (1994) suggestion that this estimate should be obtained from the pooled sample of all groups.

Finally, the logarithmic decompositions of the labor income differentials at the means for each country have the following forms:

$$\ln\overline{Y}_c - \ln\overline{Y}_m = (\overline{X}_c - \overline{X}_m)'\beta^* + \overline{X}_c'(\hat{\beta}_c - \beta^*) + \overline{X}_m'(\beta^* - \hat{\beta}_m), \qquad (3)$$

$$\ln\overline{Y}_c - \ln\overline{Y}_n = (\overline{X}_c - \overline{X}_n)'\beta^* + \overline{X}_c'(\hat{\beta}_c - \beta^*) + \overline{X}_n'(\beta^* - \hat{\beta}_n), \qquad (4)$$

$$\ln\overline{Y}_n - \ln\overline{Y}_m = (\overline{X}_n - \overline{X}_m)'\beta^* + \overline{X}_n'(\hat{\beta}_n - \beta^*) + \overline{X}_m'(\beta^* - \hat{\beta}_m), \qquad (5)$$

where $\overline{Y}_c, \overline{Y}_n$ and $\overline{Y}_m$ are the mean hourly employment incomes of the native population, naturalized immigrants, and non-naturalized immigrants respectively; β^* is the "country-equalized" employment income structure estimated by equation (2) for each country; $\overline{X}_c', \overline{X}_n'$ and $\overline{X}_m'$ are the vectors of mean values of the overall regressors from equation (1) respectively for the native population, naturalized immigrants, and non-naturalized immigrants; and $\hat{\beta}_c, \hat{\beta}_n$ and $\hat{\beta}_m$ are the conforming vectors of coefficients estimated by equation (1) for the corresponding data samples.

The first terms in the right-hand side of equations (3), (4) and (5) present estimates of productivity differentials or the income gap caused by different average individual characteristics between the corresponding groups. The second and the third terms estimate the "unexplained" components of the difference which are caused by differentiated returns to individual

characteristics. These components are called “unexplained” because they are not caused by the difference in individual characteristics but are rather caused by the difference in returns to these characteristics. The estimation of the values and the significance of these “unexplained” components for each of the country-based (also gender-based) sub-samples is the main aim of the decomposition analysis.

3. Data

The main results of the paper were obtained using the 2010 data samples for France and Denmark from the Luxemburg Income Study (LIS) database. The LIS includes, among other things, personal-level micro-data on demographic characteristics, employment and individual incomes from countries in Europe, North America, Latin America, Africa, Asia, and Australasia.

The choice of France and Denmark for our analysis was based on the availability of the necessary characteristics in the data (the most important of which were the citizenship and the duration of residency in the country of destination for migrants), the similarities of the countries with regard to other country specific characteristics (their belonging to European Union, and geographical location), and the differences in their citizenship policies. Based on citizenship and naturalization policy requirements, Denmark can be considered as a country with strict citizenship policies, whereas France has softer policies[8]. The strictness of the citizenship policies was measured based on the tolerance towards dual citizenship, the minimal required duration of residency and other requirements[9].

As described in the methodology section, the data from each country is divided into three sub-samples based on their origins and naturalization status (natives, naturalized and non-naturalized migrants), and the analyses are conducted separately for each gender. The data was also limited to include only those individuals of appropriate working-age (25 to 54 years old) and those first generation immigrants who are eligible for naturalization (i.e. who have lived at least

[8] A more detailed description of the citizenship policies of both countries may be found in Appendix 2.
[9] The required duration of residency is 5 years in France and 9 years (8 years for refugees) in Denmark. The requirements in Denmark also include renouncement of previous citizenship, passing language and citizenship tests, and being self-supporting.

the minimal required durations in the countries of destination). The requirement of eligibility for naturalization is crucial for our analyses, since it leads to the samples of naturalized and non-naturalized migrants being similar in terms of some individual characteristics, which may be responsible for differences in treatment in the labor markets. The foremost of these is the experience and duration of residency at the countries of destination.

4. Results

We start our analyses by returning to the possible selectivity issues and the conditional independence assumption that were mentioned in the methodology section. Table 1 describes the composition of the data based on the employment status of individuals belonging to each group, based on their country, gender, and citizenship status.

Table 1: Employment Status of Individual of Working Age by Country, Gender and the Type of Citizenship Registration.

Denmark		Employed	Un-employed	Not in LF/ House-maker	N
Male	Eligible Migrant	62.65%	6.78%	30.57%	929
	Naturalized Migrant	64.55%	6.36%	29.09%	849
	Native	84.70%	2.99%	12.32%	29,367
Female	Eligible Migrant	51.94%	5.68%	42.38%	1,161
	Naturalized Migrant	61.12%	4.82%	34.06%	1,016
	Native	81.29%	2.56%	16.16%	30,031
France		Employed	Un-employed	Not in LF/ House-maker	N
Male	Eligible Migrant	61.25%	26.84%	11.91%	529
	Naturalized Migrant	83.51%	11.23%	5.26%	285
	Native	87.69%	8.91%	3.39%	5,475
Female	Eligible Migrant	27.08%	28.59%	44.33%	864
	Naturalized Migrant	59.95%	16.08%	23.98%	367
	Native	74.12%	13.02%	12.86%	6,398

The differences in employment rates suggest (but do not indicate) the presence of a possible employment selectivity (selection to employment) issue among migrants. Except for the group of male naturalized migrants in France, all other migrant groups seem to be positively selected into employment based on the low percentages of them being employed (compared to the samples of native population). Moreover, the groups of eligible migrants in all cases show lower

percentages of employed individuals compared to the groups of naturalized migrants, suggesting higher level of selection to employment for eligible migrants.

In terms of naturalization selectivity (selection to naturalization) in these countries, the data suggest (but again does not indicate) the presence of selection to naturalization with higher rates in France compared to Denmark. Based on the data, around 35% of male migrants and 30% of female migrants become naturalized in France, whereas in Denmark around half of migrants (belonging to either gender) who are eligible for naturalization become naturalized.

Both employment selection and naturalization selection issues may create problems for our analyses if we assume that the unobservable characteristics that affect either the work decision or the naturalization decision are correlated with the unobservable characteristics that affect the employment incomes. In particular, when estimating the returns to individual characteristics through income-related regression analysis, such selection biases may cause overestimation of the effects of individual characteristics that have a positive impact on employment or naturalization decisions, and underestimation of the effects of individual characteristics that have a negative impact on such decisions. However, there are several reasons to support the utilization of the conditional independence assumption (CIA) which allows us to neglect such selectivity biases.

First of all, the employment selectivity and naturalization selectivity work in opposite directions (since the data shows that non-naturalized migrants are more selected to employment) and optimistically they may offset each other. Secondly, both the possible employment selectivity and possible naturalization selectivity may create concerns only in estimations of naturalization premiums when comparing the naturalized migrants to non-naturalized migrants. In estimations of the levels of immigrant integration we compare both types of immigrants to the randomly sampled native population. This means that even in the presence of selectivity bias, it may only have a negative impact on the income gaps and, thus, we will obtain at least the lower bound of differential treatment. In other words, the presence of significant “unobservable” components in native-migrant income gaps will verify the presence of differential treatmen0,t even in the presence of any selection bias. Finally, the results of the Oaxaca-Ransom decomposition are almost identical to the results of OLS regressions with a set of control variables in robustness check analyses. This also speaks in favor of the CIA because

unobservable characteristics may impact the outcome variable only through their correlation with the observable characteristics and since the Oaxaca-Ransom model is identical to OLS regression with a set of dummy variables interacted with all explanatory (observable) variables, one would expect measurable differences in the results in the presence of a selection bias.

The logarithms of the hourly net employment income (adjusted for purchasing power parity)[10] was employed as the outcome variable in our main regression analyses. The average values of the hourly net employment income for each group are provided in Table 2 together with the average values of the main set of explanatory variables.

Table 2: Descriptive Statistics of Average Individual Characteristics of Workers in Paid-employment Sector by Country, Gender, and the type of citizenship status.

Country / Gender	Person Status	Annual Income	PPP-adjusted Hourly Income	Age	Number of Children	Married	Education (3-level rating)	N
Denmark / Male	Eligible Migrant	377,969	31.51	40.92	1.34	0.68	2.10	301
	Naturalized Migrant	360,493	30.05	39.34	1.32	0.64	2.26	320
	Native	441,349	36.79	40.63	1.11	0.57	2.23	16,047
Denmark / Female	Eligible Migrant	295,674	24.65	40.03	1.58	0.72	2.09	417
	Naturalized Migrant	292,602	24.39	39.31	1.44	0.64	2.29	422
	Native	331,570	27.64	40.73	1.25	0.60	2.35	17,469
France / Male	Eligible Migrant	17,988	14.15	40.47	1.80	0.51	1.58	235
	Naturalized Migrant	24,339	19.15	43.02	1.63	0.63	1.96	189
	Native	26,110	20.54	40.84	1.38	0.54	2.10	4,040
France / Female	Eligible Migrant	12,806	10.08	39.86	1.81	0.52	1.59	192
	Naturalized Migrant	17,785	13.99	42.48	1.69	0.64	1.96	188
	Native	19,862	15.63	40.75	1.32	0.49	2.22	4,297

[10] This adjustment was introduced in order for us to be able to make comparisons between the results from the two countries. The PPP conversion factors for France and Denmark were obtained from the World Bank official website. The average annual working hours was obtained from the economic research website of the federal reserve bank of St. Louis.

Unfortunately, when limiting the data to the samples of individuals employed in the paid employment sector[11] and with non-missing values for all explanatory variables that were used in the regression analysis, the numbers of observations for each group reduces significantly, but we are convinced that they are still enough to ensure the robustness of our results. We can notice some measurable differences in hourly incomes between the three citizenship-status groups (Table 2), which are especially high between the native population and eligible migrants. The native population groups have the highest hourly incomes among the three citizenship groups for both countries and genders, which may indicate citizenship-based differential treatment. However, some measurable differences are also observed in the variables that are generally considered (and proven) to have impact on the incomes, which brings uncertainty as to the source of this inequality. In particular, the groups of native population are prone, on average, to have higher level of education and fewer children. Both these variables are generally considered to have an impact on hourly incomes, which highlights the need for decomposition analysis.

We started our analyses with simple OLS regression models, the results of which may be found in Table 5 and Table 6 in Appendix 1. The odd numbers in these tables present the regression results conducted on the combined groups of naturalized and non-naturalized migrants, and are intended to illustrate the naturalization premiums. The even numbers present the regression results conducted on the combined groups of all three citizenship-based sub-samples and are intended to illustrate the differential treatment towards migrants (or migrant integration levels in the countries of destination). In the simple models we did not include any other explanatory variables except for the citizenship status of individuals, but we included the same control variables as we used in the decomposition analysis in the more complicated models in the further columns of the tables. The results from both simple and complicated models suggest no naturalization premiums in Denmark but the significant presence of such premiums in France which, however, decrease by around half when we include the set of all control variables. However, we must also remember that this may be a result of the possible naturalization selectivity in France rather than the naturalization itself.

[11] We study only the paid employment sector because of the low number of observations of naturalized individuals employed in the self-employment sector, and the possibility that the wage structure of self-employed individuals may be very different from that of individuals employed in paid employment jobs (Hamilton, 2000).

When compared to the native population (the even columns in the tables), the results suggest almost complete socioeconomic integration of naturalized migrants in France, but not in Denmark. However, based on the results, the non-naturalized migrants are still facing at least some degree of differential treatment in both countries compared to the treatment towards the native population at the destinations. It is worth mentioning again that because of the possible employment and naturalization selectivity among migrants, these levels of differential treatment may show only the lower bound of the actual differential treatment (or the higher bound of the socioeconomic integration).

Now we can continue to the determination of the same naturalization premiums and integration levels through the use of the income decomposition analysis as described in the methodology section. There are two main advantages of using decomposition analysis for our study compared to the models discussed above. Firstly, through decomposition analysis we are able to allow different income structures for each group and estimate the part of income differences caused by the differences in the returns to characteristics (thus, treatment related). Secondly, we use the income structures of the country and gender representative general population (described in Table 3) as the reference groups when estimating the group differences in income structures, which allows us to better control for the group characteristics.

Before proceeding to the decomposition analysis, we first estimated multinomial logit models [12] in order to separately determine occupational attainment probabilities for each citizenship group. We then used these model estimates to predict the occupational allocation probabilities for individuals with mean individual characteristics of each citizenship group, when treated similarly to individuals belonging to another citizenship group. The results of these analysis based on mean individual characteristics are presented in figures 1 and 2. We divided the occupations into three general groups: managers and professionals, other skilled workers, and laborers and unskilled workers. The latter became the reference groups whose coefficients are

[12] A multinomial logit model was preferred over an ordered probit model because of the absence of obvious hierarchical order among the occupations.

normalized to zero in the multinomial logit models. The independent variables in these models included age, education, marital status and the number of children[13].

The differences between the observed and predicted occupational distributions for each citizenship group may indicate occupational segregation in the labor market for the corresponding country and gender. It is visible from the figures that based on the observable individual characteristics mentioned earlier, the groups of migrants (both naturalized and eligible for naturalization) are mostly being disadvantageously treated in their occupational allocations. However, there are some specifications that can be highlighted.

Figure 1: Multinomial Logit Predictions of Occupational Attainment Models for Denmark for Individuals with Mean Individual Characteristics of Each Citizenship Group by Gender.

Upper and lower bars represent 95% confidence interval

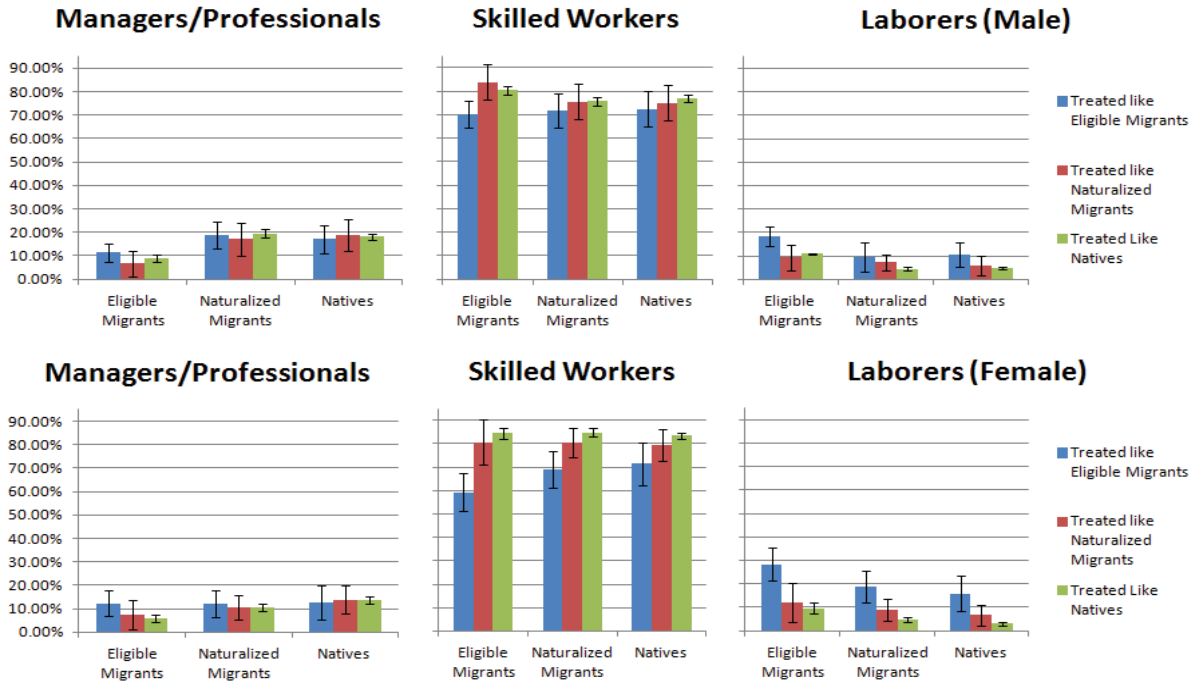
In Denmark, a country with stricter naturalization policies, occupational segregation is not only visible in the managerial levels but it also clearly doesn't limit itself to the type of citizenship status, since it persists and is mostly concentrated in the columns of natives-naturalized migrants' differences in occupational attainment probabilities. Interestingly, the graphs also show possible

[13] The regression results of the multinomial logit models for each group are presented in tables 7 and 8 in Appendix 1.

segregation in the skilled worker positions but this result is significant only for the female natives-eligible migrants' column.

On the other hand, in France, which has softer naturalization policies, there is almost no occupational segregation on the management level. Moreover, most of the segregation in the skilled positions compared to elementary positions is concentrated between the two types of migrants, suggesting that the occupational segregation in France at this occupational level is limited mostly to the citizenship status rather than nationality. However, this may also be a result of the possible high naturalization selectivity in France rather than the citizenship status itself.

Figure 2: Multinomial Logit Predictions of Occupational Attainment Models for France for Individuals with Mean Individual Characteristics of Each Citizenship Group by Gender.



Upper and lower bars represent 95% confidence interval

The first two steps of the decomposition analysis were the separate estimation of the income structures for each of the 12 groups and the estimation of the "fair" income structure for both countries and genders. In the interest of saving space we present only the "fair" income structures in the main text body in Table 3. However, the regression results for each of the 12 groups are presented in tables 9 and 10 in Appendix 1.

It is visible from Table 3 that the income structures of individuals are very different depending on their country and gender, which supports our choice of gender-based separation of individuals for the proposed analyses. The statistical significance of chosen independent variables and the corresponding R squared values suggest the robustness of our chosen income structure identification models.

Table 3. OLS Regression Results for the Joint Samples with All 3 Citizenship Status Possibilities by Country and Gender.

VARIABLES	(1)	(2)	(3)	(4)
	Male		Female	
	Denmark	France	Denmark	France
Age	0.088***	0.060***	0.13***	0.043***
	(0.005)	(0.010)	(0.005)	(0.013)
Age Squared	-0.00091***	-0.00058***	-0.0014***	-0.00035*
	(0.000)	(0.000)	(0.000)	(0.000)
Number of Children	0.040***	-0.011	-0.025***	-0.074***
	(0.004)	(0.006)	(0.004)	(0.009)
Married	0.081***	0.11***	0.024**	-0.021
	(0.009)	(0.017)	(0.007)	(0.020)
Firm Size_Middle	0.066***	-	0.11***	-
	(0.011)	-	(0.010)	-
Firm Size_Large	0.17***	-	0.17***	-
	(0.008)	-	(0.008)	-
Supervisor	-	0.17***	-	0.28***
	-	(0.016)	-	(0.022)
Education_Middle	0.13***	0.18***	0.10***	0.22***
	(0.011)	(0.019)	(0.011)	(0.027)
Education_High	0.23***	0.40***	0.17***	0.52***
	(0.013)	(0.024)	(0.013)	(0.032)
Occupation_Manager	0.45***	0.55***	0.47***	0.62***
	(0.016)	(0.033)	(0.016)	(0.050)
Occupation_Skilled	0.20***	0.22***	0.26***	0.26***
	(0.014)	(0.026)	(0.014)	(0.043)
Constant	0.85***	0.97***	-0.16	1.06***
	(0.097)	(0.200)	(0.090)	(0.250)
Observations	17313	4606	19077	4779
R Squered	0.254	0.299	0.219	0.24

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

Finally, the decomposition results of the average income differences to the two components that may and may not be explained through the differences in observable characteristics (respectively

"explained" and "unexplained" components) are presented in Table 4. It is important to highlight at this point that all the regression models for income structures include the occupational statuses of individuals in the same way as presented in Table 3. This means that the differences in average group incomes as a result of occupational segregations suggested earlier are being captured in the "explained" components of the income differences.

Table 4: Hourly Employment Income Decomposition Results by Country and Gender.

	Denmark Paid-employment (Male)			Denmark Paid-employment (Female)		
VARIABLES	Native - Eligible Migrant	Native - Naturalized Migrant	Naturalized - Eligible Migrant	Native - Eligible Migrant	Native - Naturalized Migrant	Naturalized - Eligible Migrant
	(1)	(2)	(3)	(4)	(5)	(6)
Prediction_1	3.46	3.46	3.23	3.22	3.22	3.06
	(0.00)	(0.00)	(0.04)	(0.00)	(0.00)	(0.03)
Prediction_2	3.31	3.23	3.31	3.03	3.06	3.03
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)
Difference	0.15***	0.24***	-0.087	0.19***	0.16***	0.031
	(0.03)	(0.04)	(0.05)	(0.03)	(0.03)	(0.05)
Explained	0.011	0.012	-0.00071	0.097***	0.059***	0.038*
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)
Unexplained	0.14***	0.22***	-0.086	0.092**	0.100***	-0.0076
	(0.03)	(0.04)	(0.05)	(0.03)	(0.03)	(0.04)
Observations	16,348	16,367	621	17,886	17,891	839

	France Paid-employment (Male)			France Paid-employment (Female)		
VARIABLES	Native - Eligible Migrant	Native - Naturalized Migrant	Naturalized - Eligible Migrant	Native - Eligible Migrant	Native - Naturalized Migrant	Naturalized - Eligible Migrant
	(1)	(2)	(3)	(4)	(5)	(6)
Prediction_1	2.87	2.87	2.79	2.55	2.55	2.35
	(0.01)	(0.01)	(0.04)	(0.01)	(0.01)	(0.07)
Prediction_2	2.44	2.79	2.44	1.94	2.35	1.94
	(0.05)	(0.04)	(0.05)	(0.07)	(0.07)	(0.07)
Difference	0.43***	0.074	0.35***	0.62***	0.20**	0.42***
	(0.05)	(0.04)	(0.06)	(0.07)	(0.07)	(0.10)
Explained	0.21***	0.014	0.20***	0.34***	0.11***	0.23***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.04)
Unexplained	0.21***	0.061	0.15**	0.28***	0.095	0.19*
	(0.04)	(0.04)	(0.06)	(0.06)	(0.06)	(0.09)
Observations	4,275	4,229	424	4,489	4,485	380

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

It is also important to notice that the “Difference” rows in Table 4 understandably show the same values as the results of the simple regression models in tables 5 and 6 in Appendix 1, while the rows of the “Unexplained” income differences in Table 4 show values very similar to the corresponding results of the regression models with controls in tables 5 and 6 in Appendix 1. However, there are some slight differences both in the obtained values and in the levels of statistical significance of the results. In case of any mismatch in the results, the values from the decomposition analysis are considered more reliable due to the reasons mentioned earlier.

It is clear from Table 4 that the native - eligible migrants’ income differences are measurably higher in France compared to Denmark. However, it is also visible that very large portions of these differences in France are captured in the explainable component of the columns indicating that the eligible migrants in France differ highly from the native population in terms of their observable characteristics.

When looking at the decomposition results for Denmark (first part of Table 4), we can see that the native-migrant differences in employment incomes that are not attributable to individual characteristics (“unexplained” components) are not bound only to the citizenship status of migrants, since such income differences are not only present but entirely concentrated in the columns of natives-naturalized migrants’ income differences for both genders. In contrast to the past empirical literature (Helgertz, Bevelander and Tegunimataka 2014), the results suggest that there are no significant naturalization premiums in Denmark for both genders working in the paid employment sector once we compare the migrants to the native population, controlling for the differences in observable characteristics.

On the other hand, the decomposition results for France (second part of Table 4) show that the natives – migrants’ differences in hourly incomes not attributable to individual characteristics almost entirely depend on citizenship acquisition and mostly disappear after naturalization. Around 70% of the “unexplained” natives - eligible migrants’ income gaps for both genders are concentrated in the naturalized migrants - eligible migrants’ columns, with the remaining 30% being statistically insignificant (the “unexplained” components in the natives – naturalized migrants’ columns). These results not only suggest the existence of high naturalization premiums for both genders in France, but also indicate these naturalization

premiums to be enough for the complete socioeconomic integration of migrants in the labor markets, making them equable to the native population.

We must mention again that all these results are robust in the presence of a conditional independence assumption, which was introduced and supported in the beginning of this section. Moreover, when we further decompose the "unexplained" components of the income differences to the advantages of the first group and the disadvantages of the second group (Table 11 in Appendix 1), it becomes more evident that the "unexplained" components obtained in the naturalized migrants - eligible migrants' columns for France are less the result of selection to naturalization but rather the naturalization itself, since the groups of naturalized migrants do not have any significant unexplained advantage over the general population.

5. Conclusion

In this paper we conduct labor income decomposition analysis for naturalized and non-naturalized immigrants and the native population at destination for two countries with different citizenship registration policies, and compare the returns to average personal characteristics of individuals belonging to each of the three groups.

The results suggest the existence of high naturalization premiums in France but do not show any naturalization premiums in Denmark. Moreover, based on the "unexplained" components in the native-migrant employment wage differences, we can conclude that after naturalization migrants become fully integrated in the French labor market and are treated similar to natives, but this is not the case in Denmark. It is also important to mention that because of the possible employment selectivity issue for migrants as well as other possible selectivity issues for naturalization, which we did not control for in our analyses, the results obtained only reveal the lower bound of the income differences, meaning that the "unexplained" components in income differences may be even higher if we generalize the results to the entire samples of migrants. Considering the fact that Denmark has stricter naturalization policies, these findings question the assumption that these policies result in better socioeconomic integration of migrants, and suggest that it may be the socio-cultural attitude to immigrants that results in the formation and strictness level of naturalization policies.

Further studies are still necessary in order to determine the impact of citizenship policies on the level of socioeconomic integration of migrants. The findings of such studies may help policymakers in the sphere of migration to draft appropriate citizenship polices in order to attain the desired level of immigrant integration in labor markets.

References

Beblo, M., Beninger, D., Heinze, A., and Laisney, F. (2003), Methodological Issues Related to the Analysis of Gender Gaps in Employment, Earnings and Career Progression. European Commission Report.

Bertossi, C. (2010), Research for the EUDO Citizenship Observatory Country Reports. Report on France. European University Institute.

Bevelander, P., and Pendakur, R. (2012), Citizenship Acquisition, Employment Prospects and Earnings: Comparing Two Cool Countries. Working paper, Robert Schuman Centre, Florence.

Bevelander, P, and Veenman, J. (2008), Naturalization and Socioeconomic Integration: The Case of the Netherlands. In: P. Bevelander & D. DeVoretz (Eds.) The Economics of Citizenship. Holmbergs, Malmo¨: MIM/Malmo¨ University.

Borjas, G. J. 2008. Labor Outflows and Labor Inflows in Puerto Rico. *Journal of Human Capital 2:32–68.*

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, no. 3:568-597.*

DeVoretz, D. J., and Pivnenko, S. (2004), The Economic Causes and Consequences of Canadian Citizenship. *Journal of International Migration and Integration 6:435–468.*

Dronkers, J., and Vink, M.P. (2012), Explaining Access to Citizenship in Europe: How Citizenship Policies Affect Naturalization Rates. *European Union Politics 13, no. 3:390-412*.

Engdahl, M. (2011), The Impact of Naturalization on Labor Market Outcomes in Sweden, in OECD, Naturalization: A Passport for the Better Integration of Immigrants? OECD Publishing.

Ersboll, E. (2010), Research for the EUDO Citizenship Observatory Country Reports. Report on Denmark. European University Institute.

Fougère, D., & Safi, M. (2008), The Effects of Naturalization on Immigrants' Employment Probability. Discussion Paper no. 3372, IZA, Bonn.

Heckman, J.J. 1979. Sample Selection Bias as a Specification Error. *Econometrica 47:153-163.*

Helgertz, J., Bevelander, P., and Tegunimataka, A. (2014), Naturalization and Earnings: A Denmark–Sweden Comparison. *European Journal of Population 30:337–359.*

Kovacs, M. M., and Toth, J. (2010), Research for the EUDO Citizenship Observatory Country Reports. Report on Hungary. European University Institute.

Mincer, J. (1958),. Investment in Human Capital and Personal Income Distribution. *Journal of Political Economy 66, no. 4:281-302.*

McKenzie, D., and Rapoport, H. (2010), Self-selection patterns in Mexico-U.S. migration: the role of migration networks. *The Review of Economics and Statistics 92:811–821.*

Neumark, D. (1987), Employers' Discriminatory Behavior and the Estimation of Wage Discrimination. *The Journal of Human Resources*, 13 (3): 279-295.

Oaxaca, R., L., and Ransom, M., R. (1994), On Discrimination and Decomposition of Wage Differentials. *Journal of Econometrics 61:5-21.*

Rubin, D.B. (1977), Assignment to Treatment Group on the Basis of a Covariate, Journal of Educational Statistics,2, 1-26.

Steinhardt, M. F. (2012), Does Citizenship Matter? The Economic Impact of Naturalizations in Germany. Labor Economics *19:813–823.*

Vink, M. P., Prokic-Breuer, T., and Dronkers, J. (2013), Immigrant Naturalization in the Context of Institutional Diversity: Policy Matters, but to Whom? *International Migration 51, no. 5.*

Appendix 1

Table 5. OLS Regression Results for Denmark by the type of Citizenship Status and Gender.

Denmark	**Male**				**Female**			
VARIABLES	Naturalization Premium	Integration	Naturalization Premium	Integration	Naturalization Premium	Integration	Naturalization Premium	Integration
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Naturalized Migrant	-0.087*	-0.24***	-0.10**	-0.23***	0.031	-0.16***	0.0019	-0.10***
	(0.037)	(0.022)	(0.035)	(0.019)	(0.032)	(0.018)	(0.030)	(0.016)
Eligible Migrant	-	-0.15***	-	-0.14***	-	-0.19***	-	-0.098***
	-	(0.023)	-	(0.020)	-	(0.018)	-	(0.016)
Age	-	-	0.057*	0.086***	-	-	0.094***	0.13***
	-	-	(0.023)	(0.004)	-	-	(0.022)	(0.003)
Age Squared	-	-	-0.00061*	-0.00089***	-	-	-0.0010***	-0.0014***
	-	-	(0.000)	(0.000)	-	-	(0.000)	(0.000)
Number of Children	-	-	0.038*	0.040***	-	-	-0.015	-0.024***
	-	-	(0.015)	(0.003)	-	-	(0.014)	(0.003)
Married	-	-	0.14***	0.086***	-	-	0.069*	0.029***
	-	-	(0.040)	(0.006)	-	-	(0.034)	(0.005)
Firm Size_Middle	-	-	0.15**	0.070***	-	-	0.14**	0.11***
	-	-	(0.054)	(0.008)	-	-	(0.047)	(0.007)
Firm Size_Large	-	-	0.19***	0.17***	-	-	0.18***	0.17***
	-	-	(0.041)	(0.006)	-	-	(0.037)	(0.006)
Education_Middle	-	-	0.084	0.13***	-	-	0.23***	0.11***
	-	-	(0.047)	(0.008)	-	-	(0.043)	(0.008)
Education_High	-	-	0.23***	0.23***	-	-	0.31***	0.18***
	-	-	(0.054)	(0.009)	-	-	(0.050)	(0.009)
Occupation_Manager	-	-	0.46***	0.43***	-	-	0.32***	0.44***
	-	-	(0.060)	(0.011)	-	-	(0.053)	(0.012)
Occupation_Skilled	-	-	0.20***	0.19***	-	-	0.045	0.24***
	-	-	(0.049)	(0.010)	-	-	(0.041)	(0.011)
Constant	3.31***	3.46***	1.41**	0.91***	3.03***	3.22***	0.49	-0.12
	(0.027)	(0.003)	(0.440)	(0.069)	(0.023)	(0.003)	(0.410)	(0.064)
Observations	621	16668	621	16668	839	18308	839	18308
R Squared	0.00436	0.00463	0.193	0.258	0.000547	0.00524	0.159	0.221

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

Table 6. OLS Regression Results for France by the type of Citizenship Status and Gender.

France	Male				Female			
VARIABLES	Naturalization Premium	Integration	Naturalization Premium	Integration	Naturalization Premium	Integration	Naturalization Premium	Integration
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Naturalized Migrant	0.35***	-0.074	0.14*	-0.064	0.42***	-0.20***	0.23*	-0.10*
	(0.064)	(0.044)	(0.060)	(0.038)	(0.096)	(0.056)	(0.096)	(0.050)
Eligible Migrant	-	-0.43***	-	-0.23***	-	-0.62***	-	-0.31***
	-	(0.040)	-	(0.035)	-	(0.055)	-	(0.051)
Age	-	-	0.066	0.060***	-	-	-0.044	0.040**
	-	-	(0.040)	(0.010)	-	-	(0.062)	(0.013)
Age Squared	-	-	-0.00063	-0.00059***	-	-	0.00065	-0.00032
	-	-	(0.000)	(0.000)	-	-	(0.001)	(0.000)
Number of Children	-	-	-0.058**	-0.0093	-	-	-0.094**	-0.069***
	-	-	(0.020)	(0.007)	-	-	(0.036)	(0.009)
Married	-	-	0.27***	0.11***	-	-	-0.047	-0.021
	-	-	(0.062)	(0.017)	-	-	(0.091)	(0.020)
Supervisor	-	-	0.14*	0.18***	-	-	0.31**	0.27***
	-	-	(0.063)	(0.016)	-	-	(0.110)	(0.022)
Education_Middle	-	-	0.14*	0.15***	-	-	0.24*	0.19***
	-	-	(0.069)	(0.020)	-	-	(0.110)	(0.028)
Education_High	-	-	0.25**	0.38***	-	-	0.43**	0.50***
	-	-	(0.089)	(0.025)	-	-	(0.140)	(0.032)
Occupation_Manager	-	-	0.58***	0.52***	-	-	0.57**	0.58***
	-	-	(0.120)	(0.034)	-	-	(0.200)	(0.051)
Occupation_Skilled	-	-	0.21**	0.20***	-	-	0.15	0.22***
	-	-	(0.076)	(0.027)	-	-	(0.120)	(0.044)
Constant	2.44***	2.87***	0.48	0.87***	1.94***	2.55***	2.48*	0.93***
	(0.043)	(0.009)	(0.790)	(0.200)	(0.068)	(0.011)	(1.210)	(0.260)
Observations	424	4464	424	4464	380	4677	380	4677
R Squared	0.0664	0.0255	0.289	0.3	0.0472	0.028	0.213	0.246

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

Table 7. Multinomial Logit Regression Results for Occupational Attainment Probabilities for Denmark by the type of Citizenship Status and Gender.

	(1)	(2)	(3)	(4)	(5)	(6)
	Male			**Female**		
VARIABLES	Eligible Migrant	Naturalized Migrant	Native	Eligible Migrant	Naturalized Migrant	Native
Managers						
Age	-0.066	-0.21	0.065	-0.21	0.19	-0.14**
	(0.26)	(0.26)	(0.04)	(0.26)	(0.22)	(0.05)
Age Square	0.00066	0.00	-0.00065	0.0027	-0.0027	0.0018**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Children	0.027	0.03	0.098**	-0.28*	-0.04	0.13***
	(0.15)	(0.16)	(0.03)	(0.14)	(0.17)	(0.04)
Married	0.19	-0.13	0.29***	-0.19	0.021	0.23**
	(0.40)	(0.47)	(0.07)	(0.37)	(0.37)	(0.08)
Middle Education	1.98**	0.66	1.72***	1.19*	0.82	1.64***
	(0.67)	(0.67)	(0.08)	(0.57)	(0.63)	(0.10)
High Education	3.94***	4.39***	4.89***	4.19***	4.19***	5.28***
	(0.68)	(0.68)	(0.12)	(0.52)	(0.61)	(0.13)
Constant	-1.08	3.72	-2.76***	1.75	-4.86	1.34
	(5.17)	(4.94)	(0.78)	(5.12)	(4.27)	(0.93)
Skilled Workers						
Age	-0.022	-0.16	-0.035	-0.36	-0.039	-0.074
	(0.18)	(0.21)	(0.04)	(0.19)	(0.18)	(0.04)
Age Square	0.0004	0.00	0.00043	0.0039	0.00011	0.00088
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Children	0.25*	0.06	0.041	-0.17	0.023	0.029
	(0.12)	(0.12)	(0.03)	(0.10)	(0.13)	(0.04)
Married	-0.29	-0.14	0.15*	-0.59*	0.003	0.18**
	(0.30)	(0.36)	(0.06)	(0.28)	(0.30)	(0.07)
Middle Education	0.54	0.35	1.16***	1.20***	1.05***	1.32***
	(0.29)	(0.33)	(0.06)	(0.25)	(0.31)	(0.07)
High Education	0.42	0.98*	2.09***	0.90**	1.05**	1.82***
	(0.37)	(0.46)	(0.11)	(0.31)	(0.39)	(0.12)
Constant	0.86	4.79	1.71*	8.31*	1.85	2.68**
	(3.56)	(3.98)	(0.67)	(3.73)	(3.37)	(0.84)
Observations	453	456	21859	523	549	22370

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

Table 8. Multinomial Logit Regression Results for Occupational Attainment Probabilities for France by the type of Citizenship Status and Gender.

	(1)	(2)	(3)	(4)	(5)	(6)
	Male			**Female**		
VARIABLES	Eligible Migrant	Naturalized Migrant	Native	Eligible Migrant	Naturalized Migrant	Native
Managers						
Age	0.17	0.41	-0.037	-0.014	0.42	-0.09
	(0.30)	(0.41)	(0.09)	(0.30)	(0.50)	(0.12)
Age Square	-0.0016	-0.01	0.0012	0.00039	-0.0052	0.0015
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Number of Children	0.052	-0.30	0.089	0.09	-0.52*	0.0037
	(0.14)	(0.21)	(0.06)	(0.15)	(0.25)	(0.08)
Married	0.69	-0.56	0.48**	-0.12	-0.38	0.23
	(0.44)	(0.68)	(0.15)	(0.46)	(0.62)	(0.17)
Middle Education	0.6	1.72*	1.69***	-0.46	0.015	1.37***
	(0.55)	(0.79)	(0.18)	(0.84)	(0.77)	(0.23)
High Education	4.44***	4.86***	5.95***	3.38***	2.56**	5.82***
	(1.08)	(1.22)	(0.37)	(0.83)	(0.93)	(0.43)
Constant	-5.58	-8.37	-2.15	-1.31	-7.02	-0.025
	(5.97)	(8.38)	(1.79)	(5.88)	(10.20)	(2.24)
Skilled Workers						
Age	-0.047	0.39	-0.084	0.34	-0.061	-0.16
	(0.21)	(0.32)	(0.08)	(0.22)	(0.42)	(0.10)
Age Square	0.00089	-0.01	0.0012	-0.004	0.00015	0.0021
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Number of Children	0.088	-0.21	0.067	0.032	-0.29	-0.0048
	(0.10)	(0.15)	(0.05)	(0.11)	(0.18)	(0.07)
Married	0.28	-0.26	0.34**	0.13	0.18	0.17
	(0.30)	(0.58)	(0.13)	(0.33)	(0.51)	(0.15)
Middle Education	0.67	0.01	0.97***	0.84*	0.38	1.02***
	(0.37)	(0.50)	(0.12)	(0.42)	(0.55)	(0.15)
High Education	2.43*	1.50	2.86***	2.03**	0.81	3.15***
	(1.04)	(1.08)	(0.35)	(0.77)	(0.84)	(0.40)
Constant	1.03	-3.92	2.52	-6.55	4.65	4.77*
	(4.03)	(6.54)	(1.50)	(4.22)	(8.49)	(2.03)
Observations	323	237	4789	234	220	4723

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

Table 9. OLS Regression Results for Oaxaca Decomposition for Denmark by the type of Citizenship Status and Gender.

Denmark	**Male**			**Female**		
VARIABLES	Eligible Migrants	Naturalized Migrants	Natives	Eligible Migrants	Naturalized Migrants	Natives
Age	-0.0083	0.075*	0.087***	0.13***	0.080**	0.13***
	(0.032)	(0.032)	(0.004)	(0.034)	(0.028)	(0.003)
Age Squared	0.00018	-0.00086*	-0.00090***	-0.0014***	-0.00085*	-0.0014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of Children	0.068**	0.011	0.040***	0.014	-0.052*	-0.025***
	(0.021)	(0.021)	(0.003)	(0.020)	(0.021)	(0.003)
Married	-0.052	0.29***	0.084***	0.0049	0.14**	0.027***
	-0.052	-0.06	-0.0063	-0.051	-0.047	-0.0052
Firm Size_Middle	-0.0085	0.30***	0.068***	0.18*	0.13*	0.11***
	(0.071)	(0.080)	(0.008)	(0.071)	(0.063)	(0.007)
Firm Size_Large	0.04	0.31***	0.17***	0.16**	0.22***	0.16***
	(0.053)	(0.063)	(0.006)	(0.056)	(0.050)	(0.006)
Education_Middle	0.13*	0.069	0.13***	0.27***	0.17**	0.098***
	(0.060)	(0.072)	(0.008)	(0.058)	(0.064)	(0.008)
Education_High	0.33***	0.15	0.23***	0.30***	0.27***	0.17***
	(0.071)	(0.080)	(0.009)	(0.070)	(0.073)	(0.009)
Occupation_Manager	0.41***	0.52***	0.43***	0.40***	0.25**	0.46***
	(0.074)	(0.094)	(0.012)	(0.075)	(0.077)	(0.012)
Occupation_Skilled	0.21***	0.18*	0.19***	0.032	0.045	0.26***
	(0.060)	(0.077)	(0.010)	(0.057)	(0.061)	(0.011)
Constant	2.89***	0.87	0.89***	-0.19	0.82	-0.17*
	(0.640)	(0.620)	(0.070)	(0.670)	(0.530)	(0.064)
Observations	301	320	16047	417	422	17469
R Squared	0.183	0.24	0.258	0.179	0.151	0.223

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

Table 10. OLS Regression Results for Oaxaca Decomposition for France by the type of Citizenship Status and Gender.

France	**Male**			**Female**		
VARIABLES	Eligible Migrants	Naturalized Migrants	Natives	Eligible Migrants	Naturalized Migrants	Natives
Age	0.075	0.0099	0.060***	-0.0069	-0.071	0.046***
	(0.055)	(0.058)	(0.011)	(0.092)	(0.089)	(0.013)
Age Squared	-0.00064	-0.000074	-0.00059***	0.00017	0.00098	-0.00039*
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)
Number of Children	-0.084**	-0.008	-0.0022	-0.09	-0.12*	-0.066***
	(0.027)	(0.030)	(0.007)	(0.050)	(0.053)	(0.010)
Married	0.34***	0.15	0.091***	-0.14	0.075	-0.02
	(0.086)	(0.090)	(0.017)	(0.130)	(0.130)	(0.021)
Supervisor	0.14	0.089	0.18***	0.53**	0.1	0.27***
	(0.093)	(0.084)	(0.016)	(0.170)	(0.140)	(0.022)
Education_Middle	0.20*	0.082	0.15***	0.23	0.25	0.19***
	(0.098)	(0.094)	(0.021)	(0.160)	(0.150)	(0.029)
Education_High	0.14	0.36**	0.39***	0.2	0.64***	0.50***
	(0.140)	(0.110)	(0.026)	(0.210)	(0.180)	(0.033)
Occupation_Manager	0.67***	0.50**	0.51***	0.76*	0.23	0.60***
	(0.190)	(0.160)	(0.036)	(0.300)	(0.300)	(0.055)
Occupation_Skilled	0.20*	0.19	0.20***	0.25	-0.09	0.25***
	(0.098)	(0.130)	(0.030)	(0.150)	(0.220)	(0.049)
Constant	0.15	2.02	0.88***	1.75	3.43	0.78**
	(1.090)	(1.160)	(0.210)	(1.760)	(1.770)	(0.260)
Observations	235	189	4040	192	188	4297
R Squared	0.284	0.235	0.291	0.186	0.207	0.233

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

Table 11. Decomposition Results of the Unexplained Component of the Income Differences to the Advantage of the First Group and the Disadvantage of the Second Group.

	Paid-employment (Male)			Paid-employment (Female)		
	Native - Eligible Migrant	Native - Naturalized Migrant	Naturalized - Eligible Migrant	Native - Eligible Migrant	Native - Naturalized Migrant	Naturalized - Eligible Migrant
VARIABLES	(1)	(2)	(4)	(5)	(6)	(7)
Denmark						
Unexplained_1	0.011***	0.011***	-0.21***	0.0090***	0.0090***	-0.091***
	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)	(0.02)
Unexplained_2	0.13***	0.21***	0.13***	0.083***	0.091***	0.083***
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Observations	16,348	16,367	621	17,886	17,891	839
France						
Unexplained_1	0.017***	0.017***	-0.044	0.017***	0.017***	-0.077
	(0.00)	(0.00)	(0.04)	(0.00)	(0.00)	(0.06)
Unexplained_2	0.20***	0.044	0.20***	0.26***	0.077	0.26***
	(0.04)	(0.04)	(0.04)	(0.06)	(0.06)	(0.06)
Observations	4,275	4,229	424	4,489	4,485	380

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

Appendix 2

Citizenship Legislation in Demark

Danish citizenship laws were created in 1950 and have been gradually tightened ever since, securing its place among the most severe citizenship legislations in Europe. As of 2010, the requirements for naturalization included residency in Denmark for 9 years (8 years for refugees), renouncement of previous citizenship, and passing a language and a citizenship test. Moreover, the individuals must also swear an oath of allegiance and loyalty to Denmark and be self-supporting, meaning not receiving any social benefits during the year prior to naturalization. Since in our dataset we do not know whether or not an individual is a refugee, we classified the migrants as eligible for naturalization if they have lived in Denmark for at least 9 years and did not receive any social benefits on the 9^{th} year of residency. The foreign-born share of population in Demark is around 7-8 %, the majority of whom are immigrants from Asia (40-45%), with the rest mainly originating from Eastern Europe, Africa and Latin America.

Citizenship Legislation in France

France has one of the softest and most accessible citizenship policies among EU member countries. It has tolerant policies for dual citizenship and the required conditions for citizenship obtainment include residency of 5 years (ever since 1945). The requirements also include some other conditions, such as no criminal conviction of a certain type or good character that are pretty much standard for most other European countries. During the interval 1990-2010 the country experienced four citizenship legislation changes (1993, 1998, 2003 and 2006), but none of these changes was fundamental. In our analysis an immigrant in France was categorized as eligible for naturalization if he lived in France for at least 5 years. Immigrants constitute to around 13% of the French population with 4.5% being naturalized. The majority of immigrants in France

originate from Eastern Europe (40-45%) and Africa (30-35%), and the rest are mainly from Asia and Latin America.

Abstrakt

Tento článek empiricky odhaduje vliv naturalizace – udělení občanství – na integraci do pracovního trhu mezi imigranty první generace ve Francii a Dánsku. Přispíváme k současnému poznání ve dvou aspektech. Zaprvé porovnáváme pracovní možnosti a příjmy mezi naturalizovanými, nenaturalizovanými a domorodými pracovníky. Zadruhé studujeme, jak charakteristiky udělování občanství ovlivňují tyto rozdíly. Naše výsledky ukazují vysokou prémii naturalizace a plné socioekonomické integrace naturalizovaných imigrantů ve Francii, zemi s laxními pravidly pro získání občanství. Tato prémie neexistuje v Dánsku, zemi se striktními pravidly pro získání občanství.

Working Paper Series
ISSN 1211-3298
Registration No. (Ministry of Culture): E 19443

Individual researchers, as well as the on-line and printed versions of the CERGE-EI Working Papers (including their dissemination) were supported from institutional support RVO 67985998 from Economics Institute of the CAS, v. v. i.

Specific research support and/or other grants the researchers/publications benefited from are acknowledged at the beginning of the Paper.

Published by
Charles University, Center for Economic Research and Graduate Education (CERGE)
and
Economics Institute of the CAS, v. v. i. (EI)
CERGE-EI, Politických vězňů 7, 111 21 Prague 1, tel.: +420 224 005 153, Czech Republic.
Printed by CERGE-EI, Prague
Subscription: CERGE-EI homepage: http://www.cerge-ei.cz

Phone: + 420 224 005 153
Email: office@cerge-ei.cz
Web: http://www.cerge-ei.cz

Editor: Jan Zápal

The paper is available online at http://www.cerge-ei.cz/publications/working_papers/.

ISBN 978-80-7343-392-5 (Univerzita Karlova, Centrum pro ekonomický výzkum
a doktorské studium)
ISBN 978-80-7344-421-1 (Národohospodářský ústav AV ČR, v. v. i.)