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LABOUR-MARKET INTEGRATION OF IMMIGRANTS IN OECD-COUNTRIES: WHAT EXPLANATIONS FIT THE DATA?

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EXECUTIVE SUMMARY

Using two different measures of immigrant labour-market integration (the ratio between immigrant unemployment to native unemployment, and the ratio of employment rate among natives and immigrants) this paper tests six suggested explanations of why immigrants are less likely than natives to be working in most OECD-countries: Intolerance, the education of immigrants, welfare state generosity, employment protection laws, union power and the share of immigrants in the population.

Using bivariate and multivariate analysis, two significant patterns are found. First, welfare state generosity keeps immigrants away from the labour force. Second, given that immigrants enter the labour force, collective bargaining agreements explain immigrant unemployment. No other factors are statistically significant in cross-country regressions.

1. INTRODUCTION

Migration flows are increasing, but most rich countries have problems with labour-market integration of immigrants. Compared to natives, immigrants in most countries are more likely to be unemployed and less likely to be working. In countries where the difference is strikingly big, various possible reasons for the discrepancy are intensively debated.

As noted by the OECD (2006), almost three million long-term migrants enter OECD countries legally every year, and the numbers will continue to rise as host countries grapple with falling birth rates and ageing populations. While most would agree that immigration offers clear benefits to advanced countries, these benefits crucially depend on immigrants finding jobs rather than being supported by various welfare state systems.[1]

Despite the obvious relevance of the issue, and the political controversy involved, there are few attempts to evaluate these explanations against available data. This paper attempts to alleviate this situation by presenting some basic empirical evidence that will hopefully inspire further research using more sophisticated methods.

Six different explanations of why immigrants fare worse than natives on the labour market are tested: welfare state generosity, intolerant attitudes towards immigrants, employment protection laws, insufficient education of immigrants, collective bargaining agreements and the share of immigrants in the population. First, each explanation is tested by examining its bivariate correlation with labour-market segregation. The factors that have some explanatory power are then tested against each other in a multivariate regression. Finally, all explanations are tested simultaneously against each other.

Obviously, this way of testing different possible explanations only scratches the surface of the complex issues involved: Omitted variables are likely to matter, causality cannot be settled and country level regressions may be too high level of aggregation. On the other hand, there is substantial variation in how different countries succeed with the labour-market integration of immigrants, and many explanations suggested in the debate should be visible in a simple cross-country analysis.

The main problem can be illustrated and quantified in many ways. A commonly used measure is the ratio between the employment rates of native-borns and immigrants (defined as being born in another country). A similar but slightly different measure is to compare the unemployment rates between natives and the foreign-born population.[2]

The two measures are different because employment and unemployment are not simply two sides of the same coin. Unemployment is calculated as the number of unemployed divided by the number of people in the labour force, whereas the denominator in the employment rate is the entire adult population. Labour-market segregation can arise as a result of immigrants not entering the labour force (in which case the segregation measure based on employment rates will increase) or because immigrants in the labour force are unemployed to a higher extent (in which case the segregation measure based on unemployment will increase).

Both measures are shown in table 1, where countries are ranked according to increasing employment segregation. A value below 1 indicates that the employment rate for natives is

1. See further for example OECD Policy brief 2006 “From Immigration to Integration: Local Approaches” *(http://www.oecd.org/cfe/leed/37726512.pdf* accessed july 2013)
2.These are also mentioned as core indicators of labor-market integration by Eurostat (2011). (Zaragoza declaration)

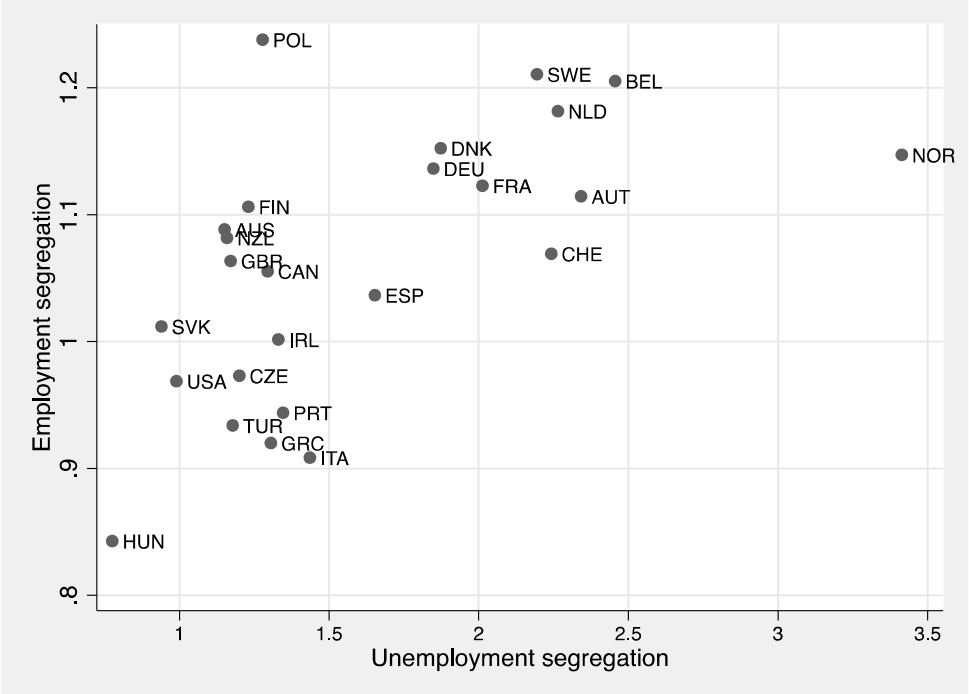
actually lower than the employment rate for the foreign born population (which is the case for 9 OECD countries).

The segregation measure based on unemployment varies more, from Hungary where unemployment among immigrants is 22 percent lower than the unemployment among natives, to Norway where immigrant unemployment is 3.4 times higher than unemployment among natives.

Table 1: The two segregation ratios (higher ratio indicate higher segregation)

Country	Employment segregation	Unemployment segregation	Country	Employment segregation	Unemployment segregation
Hungary	0.84	0.78	Great Britain	1.06	1.17
Israel	0.90		Switzerland	1.07	2.24
Italy	0.91	1.44	New Zealand	1.08	1.16
Greece	0.92	1.31	Mexico	1.08	
Turkey	0.93	1.18	Australia	1.09	1.15
Portugal	0.94	1.35	Finland	1.11	1.23
USA	0.97	0.99	Astria	1.11	2.34
CZE	0.97	1.20	France	1.12	2.01
Estonia	0.98		Deutchland	1.14	1.85
Ireland	1.00	1.33	Norway	1.15	3.41
Slovakia	1.01	0.94	Denmark	1.15	1.87
Slovenia	1.02		Netherlands	1.18	2.26
Iceland	1.03		Belgium	1.21	2.46
Spain	1.04	1.65	Sweden	1.21	2.19
Canada	1.06	1.29	Poland	1.24	1.28

FIGURE 1: THE CORRELATION BETWEEN THE TWO SEGREGATION MEASURES



In practice, countries where immigrants are less likely than natives to be employed are also countries where immigrants are more likely to be unemployed. As can be seen in Figure 1, the two measures are correlated ($r = 0.6$), but they are far from identical. The two ratios indicate slightly different types of problems and both will be used in the analysis.

The complete dataset is available as a google spread sheet, short URL: http://bit.ly/18hW3sn

2. THE HYPOTHESES

Several hypotheses have been suggested to explain the varying degrees to which OECD countries fail to integrate immigrants on the labour market. The purpose here is not to describe these hypotheses in great detail, but rather to find a reasonable quantitative measure and examine if the hypotheses seem compatible with the data and then test them against each other.

Note that the dependent variables are ratios, which means we are not trying to explain the level of employment or unemployment (which varies substantially among countries and over time), but only the relative difference between natives and immigrants. This somewhat alleviates the obvious problem of omitted variables because many factors (such as the business cycle) are likely to affect employment and unemployment for both natives and immigrants.

We first describe the hypotheses and illustrate how they fit the data using simple scatter plots. Throughout the analysis, explanatory variables are measured in 2005 or closest year possible, and the segregation ratios are computed for 2010 (or closest year possible). Cross-country differences are, however, relatively robust over time, and using data only from 2005 or 2010 seem to make very little difference.

2.1 WELFARE STATE GENEROSITY

The argument that generous welfare state benefits are responsible for labour-market segregation is based on the observation that immigrants without work in most countries are entitled to some type of benefits. A simple economic intuition suggests that higher social assistance benefits lead to weaker incentives to find a job.

Strictly speaking, weak work incentives should affect both natives and immigrants. One could, however, imagine situations where the attitudes towards welfare benefits vary between immigrants and natives. It is also possible that the availability of generous welfare benefits aggravates segregation problems caused by immigrants having problems finding a job for some other reason.

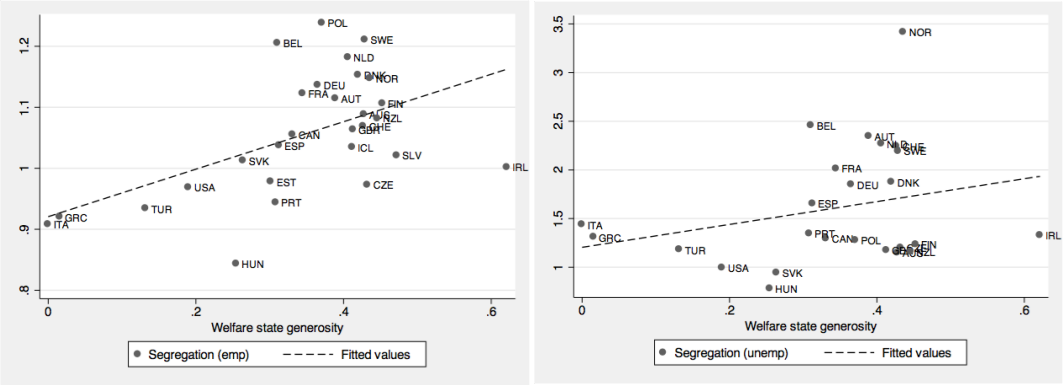
To quantify welfare state generosity, a measure was created using the OECD publication *Taxes and Wages*, which contains data on the disposable income for different types of households. OECD also reports the average full-time wage in each country, making it possible to calculate the level of the disposable income of households with no labour-market income relative to the average wage.

The measure is based on two types of households: A single unemployed person with no income and no children, and a household with two unemployed adults without income and two children. The measure is based on the average for the two household types, and can be interpreted as a general measure of the generosity of the social assistance system in each country. The mean generosity for households with no labour income is 35 percent of the average wage, with a standard deviation of 13.

The measure does not capture benefit conditionality. To varying degrees, countries require some kind of job-seeking activity from recipients. If conditionality works as intended, this should bias the results towards 0.

Simple scatter plots seem to support the idea, most clearly for employment segregation, but also for unemployment. Apparently, welfare generosity seems to correlate with higher segregation despite the fact that many countries apply conditionality in their benefit systems.[3]

FIGURE 2. WELFARE GENEROSITY AND SEGREGATION (LEFT: EMPLOYMENT, RIGHT: UNEMPLOYMENT)

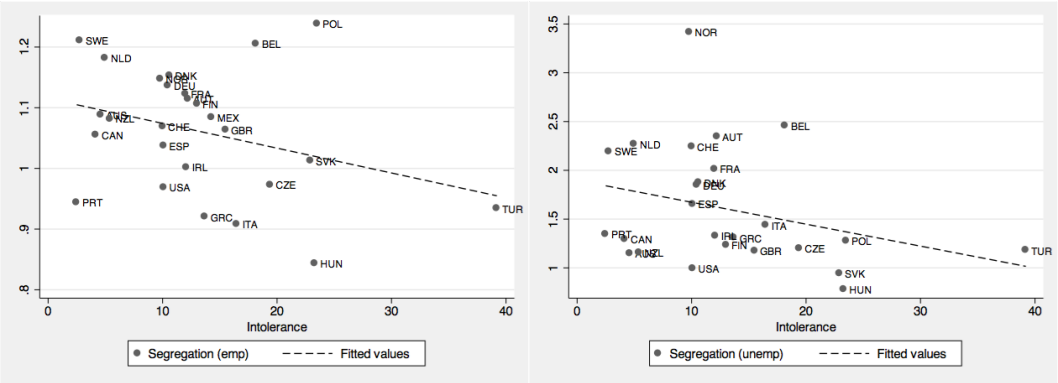


2.2 INTOLERANCE

A simple and intuitive idea is that the varying degrees of labour-market segregation can be explained by varying degrees of intolerance against immigrants. To test this explanation, a question from the World Values Survey is used. People were asked about their attitudes towards having neighbors from different groups. Using this question, a measure of intolerance against immigrants was created by taking the share claiming they would not want to have foreigners as their neighbors.

This measure varies a lot between different countries, being lowest in Sweden and Portugal (both below 3) and highest in Turkey (49). The OECD average intolerance is 13 percent, with a standard deviation of 8.

FIGURE 3: INTOLERANCE AND SEGREGATION (LEFT: EMPLOYMENT, RIGHT: UNEMPLOYMENT)



3. For more on conditionality, see for example Kay and Hartwich (2008).

Interestingly, countries where many people are intolerant against foreigners tend to be countries where employment rates between natives and immigrants differ less. The pattern is the same for unemployment segregation, though the correlation is much weaker.

A possible explanation is that stated attitudes may be a bad measure of actual behavior, but that still does not explain the direction of relationship.

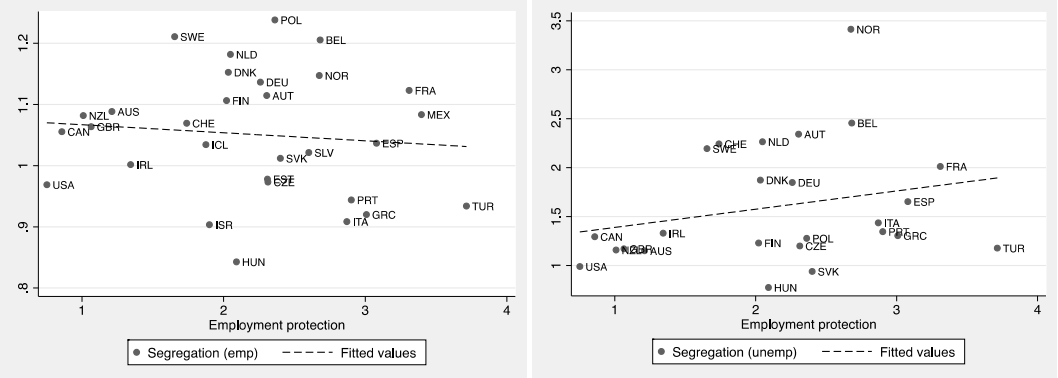
2.3 EMPLOYMENT PROTECTION LAWS

A third hypothesis is that employment protection laws are to blame for labour-market segregation. The idea is that by increasing the costs of firing people, they induce employers to go for safe options when hiring people, and that employment protection laws therefore affect the labour-market situation for marginal groups (cf. Skedinger, 2010).

The explanation is tested using the OECD index on the overall strictness of employment protection laws, ranging from 0 to 6, with higher values indicating stricter laws. This index is provided in several versions, and the version used is the most recent (version 3), updated in July 2013, where the earliest values available start in 2008. The values used are the average for strictness of fixed and temporary contracts. The sample average is 2.2, with a standard deviation of 0.8. The strictness is lowest in the United States (0.75) and highest in Turkey (3.7).

The idea fits the data reasonably when it comes to unemployment rates, but the correlation is the opposite of expected for employment rates. Based on the explanation that employment protection laws impact the hiring behavior of employers, it is expected that the relationship is stronger for unemployment segregation.[4]

FIGURE 4 EMPLOYMENT PROTECTION LAWS AND SEGREGATION



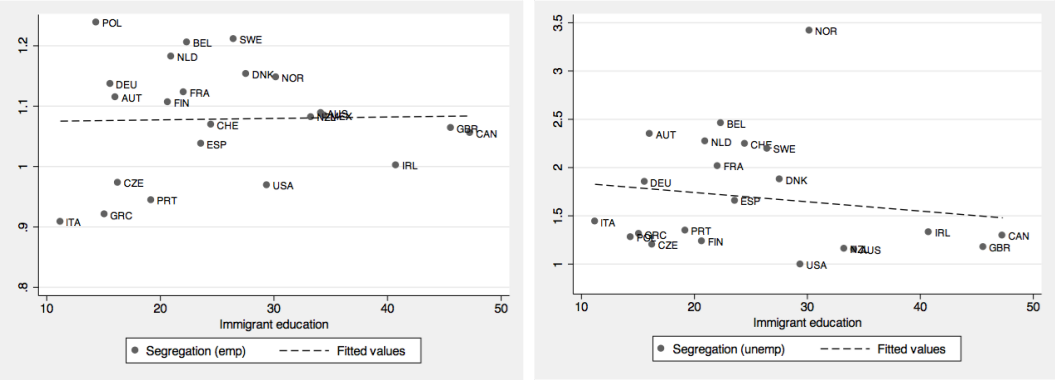
2.4 INSUFFICIENT EDUCATION OF IMMIGRANTS

A fourth possible explanation is that labour-market segregation is the result of immigrants not being sufficiently educated to be easily employed. Many OECD countries are technologically advanced, and the labour-market problems might simply be a result of immigrants not being equipped in terms of schooling and skills for these advanced labour markets. We should thus see that countries where immigrant population is better educated have lower segregation.

4. It is worth noting that earlier versions of the data, as well as the index for fixed contracts only, fit the data better – but were still not significant in multivariate regressions.

To test the idea, OECD data on the share of foreign born with high (tertiary) education are used. The share of the foreign born population with high education has a sample mean of 26 percent and standard deviation 10. The share was highest in Canada (47) and lowest in Italy (19).

FIGURE 5 IMMIGRANT EDUCATION AND SEGREGATION



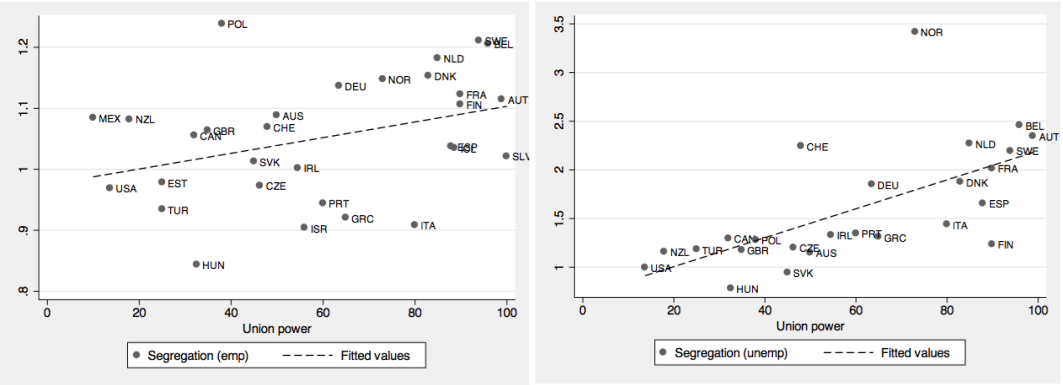
For unemployment segregation, the scatterplot indicates a weak slope in the expected direction, but for employment segregation there is no pattern visible. The correlation is equally inconclusive when using different measures of education (such as percent foreign born with only primary education).

2.5 COLLECTIVE BARGAINING AGREEMENTS

Immigrants might compete for jobs by offering to work for lower wages or by working less convenient hours. It is possible that countries where unions have the power to block such competition will have from higher labour-market segregation as a result. To measure union power, the share of the labour market covered by collective bargaining agreements is used. The sample average is 59 percent, ranging from 10 percent in Mexico to 100 percent in Slovenia. The standard deviation is 28, indicating that there is a lot of variation between countries in this variable.

The explanation fits the data rather well, especially for unemployment segregation.

FIGURE 6. COLLECTIVE BARGAINING AND SEGREGATION (LEFT: EMPLOYMENT, RIGHT: UNEMPLOYMENT)

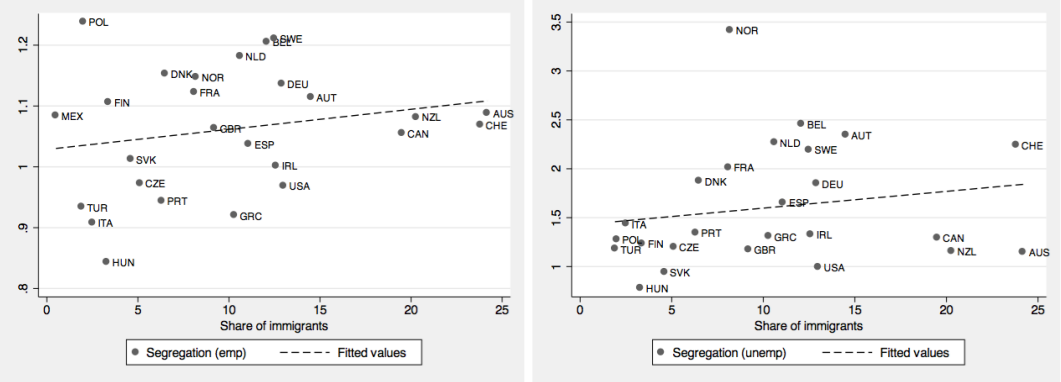


2.6 THE IMMIGRANT SHARE

Finally, one might argue that an important factor to consider is the share of foreign born in the country. The idea would be that it is easier to integrate foreign born when they are relatively few, and that segregation is a result of having too high immigrant share in the population. The theoretical basis for the idea is somewhat unclear, but anti-immigration parties sometimes raise the argument.

The sample average immigrant share is 10 percent, with a standard deviation of 6.6. The share is lowest in Mexico (0.5 percent) and highest in Australia (24 percent).

FIGURE 7. THE SHARE OF IMMIGRANTS AND SEGREGATION



As seen in figure 7, there is a weak tendency for countries with a larger share of foreign-born population to have somewhat higher labour-market segregation, both regarding employment and unemployment.

2.7 MULTIVARIATE ANALYSIS

So far, only bivariate relationships have been examined. It has been shown that many of the suggested explanations could be made to look credible, when no other factors are considered. The biggest exception is tolerance, which does not correlate as expected with any of the two measures of labour-market segregation.

But many variables may matter at the same time. For example, many countries with generous welfare states also have powerful unions and strict employment protection laws. Is it possible to discriminate between different possible explanations?

Moving beyond simple scatter plots, table 2 (unemployment segregation) and table 3 (employment segregation) shows the results from eight regressions using ordinary least squares. The first six columns correspond to the scatterplots already shown, adding information on the level of statistical significance. Column 7 is a multivariate regression of those explanations that were significant at 10 percent level or higher. Finally, column 8 tests all explanations against each other.[5]

The results are informative. Two factors are significantly correlated with unemployment segregation in bivariate regressions: Segregation is lower where intolerance is high. Countries with more powerful unions also have higher unemployment segregation. Including both variables in the same regressions, tolerance no longer attains statistical significance.

5. Note that column 8 suffers both from multicollinearity and from the fact that the number of data points is too low to identify a model with six explanatory variables.

In rough terms, countries where the coverage of collective bargaining agreements is 10 percent higher have 14 percent higher excess unemployment among immigrants (relative to natives). Remarkably, the coefficient only decreases marginally and remains significant in a regression with all six explanations included simultaneously.

To illustrate the size of the estimated coefficient, suppose Sweden decreased the collective bargaining coverage from 94 percent in 2005 to the sample average at 59 percent. This corresponds to roughly to lowering the unemployment segregation ratio from 2,2 to 1,7.

Similarly, if UK would increase the collective bargaining coverage rate from 35 percent to the sample average, the estimated effect implies an increase in the unemployment segregation from 1.17 to 1.5.

For employment segregation, two factors are significant in bivariate regressions and they remain so when included simultaneously: Once again union power matters, and so does the measure of welfare state, which attains a higher level of statistical significance and a bigger coefficient (also when accounting for the higher standard deviation).

In general, however, effects on employment segregation are slightly smaller. The country with highest welfare state generosity is Ireland where the estimated benefit level is 62 percent of the average wage. Should Ireland lower generosity to the sample average at 35, employment segregation would decrease from 1.0 to 0.9, which means that Ireland would become a country where the employment of natives is 10 percent lower than the employment of immigrants.

TABLE 2. DEPENDENT VARIBLE: UNEMPLOYMENT SEGREGATION

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intolerance	-0.0225**						-0.0101	0.00199
	(0.0106)						(0.00867)	(0.0181)
Welfare state generosity		0.0117						0.00981
		(0.0069)						(0.0073)
Employment protection laws			0.186					0.307
			(0.124)					(0.381)
Immigrant education				-0.00961				0.00664
				(0.00926)				(0.0188)
Union power					0.0149***		0.0140***	0.0113**
					(0.00266)		(0.00274)	(0.00459)
Immigrant share of population						0.0171		0.0294
						(0.0168)		(0.0232)
Constant	1.898***	1.204***	0.927***	1.934***	0.709***	1.426***	0.873***	-0.535
	(0.211)	(0.200)	(0.265)	(0.255)	(0.140)	(0.204)	(0.203)	(1.135)
Observations	25	25	25	22	25	25	25	22
R-squared	0.090	0.071	0.144	0.026	0.408	0.032	0.431	0.470

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

TABLE 3. DEPENDENT VARIBLE: EMPLOYMENT SEGREGATION

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intolerance	-0.00409							0.00310
	(0.00247)							(0.00464)
Welfare state generosity		0.00389***					0.00346***	0.00334*
		(0.0011)					(0.0011)	(0.0019)
Employment protection laws			-0.0131					-0.0354
			(0.0193)					(0.0329)
Immigrant education				0.000237				-0.00159
				(0.00197)				(0.00286)
Union power					0.00128**		0.00119**	0.00178
					(0.000573)		(0.000560)	(0.00120)
Immigrant share of population						0.00330		0.00165
						(0.00264)		(0.00302)
Constant	1.115***	0.921***	1.027***	1.073***	0.975***	1.029***	0.863***	0.906***
	(0.0331)	(0.0368)	(0.0473)	(0.0651)	(0.0395)	(0.0409)	(0.0448)	(0.157)
Observations	26	28	30	23	30	26	28	22
R-squared	0.103	0.272	0.007	0.001	0.128	0.045	0.374	0.413

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

3. CONCLUSIONS

In most OECD-countries, foreign-born fare worse on the labour market than natives. Many explanations have been suggested to explain this pattern. But few survive a very simple test against available data. Notably, xenophobic attitudes, the education of immigrants and the share of immigrants in the population do not correlate with segregation as they should if they are indeed useful explanations. The empirical support for the importance of employment protection laws is also weak.

There is some support in the data for the idea that welfare state generosity keeps immigrants away from the labour force. The strongest support among the six tested explanations is found for union power, as measured by the share of the labour market covered by collective bargaining agreements.

The analysis comes with a number of qualifications, some of which have already been mentioned in the introduction. Naturally, labour-market integration is not the only important type of integration. For example, a report from Eurostat (2001) discusses four broad groups of integration: Employment, education, social exclusion and active citizenship. One could also argue that a different measure of xenophobic attitudes or immigrant education would generate different results.

The results fit well with the idea that the short run economic benefits from immigration comes from allowing immigrants to compete for jobs by lowering wages in some sectors, thereby lowering production costs and freeing up resources for alternative use. When workers that suffer directly from such competition are allowed to block it using powerful unions, immigrants end up unemployed to a larger degree and the economic benefits from immigration do not materialize. If this analysis is correct, one way forward is to look for ways in which those workers who risk short-term losses can be compensated using parts of the social gains from increased immigrant employment.

Eurostat. (2001). Indicators of Immigrant Integration - A Pilot Study. *Eurostat Methodologies and Working papers, doi:10.2785/13779*.

Kay, L., and Hartwich, O.M., Eds. (2008). *When Hassle Means Help*: Policy Exchange.

Skedinger, P. (2010). *Employment Protection Legislation - Evolution, Effects, Winners and Losers*: Edward Elgar.