



# Economic Research-Ekonomska Istraživanja

ISSN: 1331-677X (Print) 1848-9664 (Online) Journal homepage: <https://www.tandfonline.com/loi/rero20>

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To cite this article: Murat Anil Mercan & Mesut Karakas (2019) Do immigrants work longer hours than natives in Europe?, *Economic Research-Ekonomska Istraživanja*, 32:1, 1394-1406, DOI: [10.1080/1331677X.2019.1636700](https://doi.org/10.1080/1331677X.2019.1636700)

To link to this article: <https://doi.org/10.1080/1331677X.2019.1636700>



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Published online: 13 Jul 2019.



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# Do immigrants work longer hours than natives in Europe?

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## ABSTRACT

The difference between the working hours of natives and immigrants has begun to attract a great deal of attention in U.S. migration research, but this phenomenon has yet to be studied in a European context. In this article, we examine this difference in working hours for 13 European countries (Austria, Belgium, Denmark, Greece, Spain, Finland, France, Luxembourg, the Netherlands, Norway, Portugal, Sweden and the U.K.) for the period 1995–2013. Contrary to popular belief, we find that immigrants usually work fewer hours than natives in most of the countries studied. In addition, we observe that native workers in Western and Southern Europe have, over time, tended to increase their number of hours worked compared to immigrants. However, the opposite is true is for Northern Europe, where natives' working hours have generally decreased compared to immigrants, even following the global economic crisis in 2008.

## ARTICLE HISTORY

Received 28 May 2018

Accepted 12 December 2018

## KEYWORDS

working hours; labour supply; natives; immigrants; Europe


## JEL

J61

## 1. Introduction

As immigration rates around the world continue to be high (according to the United Nations, there were 258 million immigrants in 2017, up from 173 million in 2000,) the labour supply decisions by immigrants have become an increasingly important research topic. Wars and ethnic conflicts in the Middle East have led to waves of mass migration into Europe and this flow of foreign workers has started to shape the European labour market. However, though a number of studies on immigrants' labour supply preferences have been conducted in the U.S., little research has focused on this topic in the European context, meaning that the role of immigrant workers in European markets is not clearly understood.

In contrast to this, a significant volume of international research has been conducted on the labour supply preferences of native workers. Economists have been particularly interested in decisions regarding working time. For instance, Hammermesh and Stancanelli (2015) investigated working hours in the U.S. and four European countries

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and found that Americans were more likely to work long and irregular hours, such as night shifts, than Europeans were. Furthermore, Bell and Freeman (2001) studied the relationship between earnings distributions and working hours for the U.S. and Germany. They concluded that, in both countries, workers' decisions regarding their labour supply are positively related to earnings inequality in their occupation. In addition, Lozano (2011) investigated the flexibility of the workweeks in the U.S. during the F.I.F.A. World Cup, while Bratti and Staffolani (2007) reported that future earnings might be affected by working hours in that current working hours are seen an investment in future earnings, as mentioned in the human capital theory proposed by Becker (1963). Similarly, tournament and incentive models such as the rat-race model presented in Landers, Rebitzer, and Taylor (1996) have been used to explain why workers tend to work long hours. Various O.E.C.D. reports have also focused on long working hours; for example, an O.E.C.D. Report (2008) found that workers work on average 41 hours a week in the U.S. and only around 38 hours a week in Europe, while American workers take an average of two weeks of vacation a year, compared to the four weeks Europeans receive in annual and other paid leave. Kallis et al. (2013) investigated previous research on working hours in Europe and found that a reduction in working hours was common in regions in crisis.

Economists have also investigated other effects of immigration, such as crime rates (e.g., Bell, Fasani, & Machin, 2013), marriage (e.g., Chi & Drewianka, 2014), and labour market performance (e.g., Borjas, 1995). However, few studies have addressed immigrants' working hours compared to native workers. A notable exception is Lozano (2010), who investigated the length of the workweek for foreign-born and native workers in the U.S. to determine whether immigrants are more likely to offer longer workweeks. He finds that natives are more likely than immigrants to work long hours. In Europe, to the best of this author's knowledge, no similar research on differences in the working hours between natives and immigrants has been previously published. The need for this research in the European context has increased as the recent waves of immigration have begun to affect the old continent and shape its labour markets.

The goal of this study is to compare the working hours of native and immigrant workers in Europe, with a special focus on the effect of the 2008 economic crisis. We will investigate the gap in the working hours between these groups in Europe in order to increase the understanding of labour supply decisions. Our analysis is based on the European Union Labour Force Survey (E.U. L.F.S.) data set, which includes information about workers from 33 European countries. We focus on 13 of these countries, namely Austria, Belgium, Denmark, Greece, Spain, Finland, France, Luxembourg, the Netherlands, Norway, Portugal, Sweden and the U.K., from 1995 to 2013.<sup>1</sup> Our results suggest that the number of hours worked by immigrants differs from that of natives in many of these countries during this period. At one extreme, native Swedish residents worked longer hours than immigrants in almost every year, while the reverse was true in Greece. Recognising the differences in the working hours of native and immigrant workers may lead to more optimal policies for regulating the labour market and overcoming prejudice against immigrants.

This article is structured as follows. Section 2 describes the previous literature on working hours. The data set and the empirical methodology employed in our study

are described in [Section 3](#). [Section 4](#) presents the main results, while [Section 5](#) summarises and discusses the findings.

## 2. Literature review

Although the impact of working hours or the immigration on the European labour market has been separately investigated, for example, Vokić, Ćorić, and Obadić (2017) explore the relationship between willingness to work extra hours and demographic characteristics, Barslund, Di Bartolomeo, and Ludolph (2017) highlight that in Austria, France and Germany the gender gap among third-country nationals minus the gender gap among native-born is large for both high- and low-skilled workers, and Benton et al. (2014) focus on the labour market integration and how may Europe attract high-skilled workers, yet no research has specifically focused on both immigrants and working hours. However, few such studies have been conducted in the U.S. Coleman and Pencavel (1993) estimated the change in working hours in the U.S. between 1940 and 1980 and found that the number of working hours fell for workers with little education but rose for well-educated workers, when the sample of workers was restricted to those offering longer working hours. Also, they found that the number of working hours decreased for young and older men but remained nearly constant for white men in their prime years. In addition, Bell and Freeman (2001) studied the inequality-hours hypothesis, which suggests that workers' decisions on working hours are affected by the level of earnings inequality in their occupation, with a high inequality offering more opportunities because workers may earn higher wages or gain promotions when they work more hours. Their study utilised the German Socio-Economic Panel (G.S.O.E.P.) data set for Germany and the National Longitudinal Survey of Youth (N.L.S.Y.) for the U.S. They determined that if a worker chooses to work longer hours, their future earnings and likelihood of promotion are positively affected. It was also found that Germans work less than Americans not because of differences in worker behavior but because of the lower earnings disparity in Germany.

In another study, Johnson and Kuhn (2004) analyzed the changes in hourly wages and hours worked in the U.S. and Canada. They determined that increases in weekly earnings were primarily caused by increases in hours worked per week and concluded that the change in hours worked per week is one of the main underlying reasons for earnings inequality in both countries. In addition, using the British Household Panel Survey data set, Bratti and Staffolani (2007) investigated the efficiency of an effort-based career opportunity system in which firms create incentives for workers to work longer hours. They reported that there was a positive correlation between the expected likelihood of promotion and employee working time in the U.K.

Lozano (2010) used the 1994–2006 N.B.E.R. collection of the Current Population Survey's Outgoing Rotation Group data to investigate workers who work 50 or more hours a week in the U.S. and compare native and immigrant workers. Even though the popular stereotype is that immigrants tend to work very long hours, this study found that immigrants are less likely to work longer hours than native workers. The author reported that, if immigrants work an occupation for which the difference in earnings between native and immigrant workers is significant, they are less likely to

work long hours. It was also found that the dispersion of earnings plays an important role in the comparison between native and immigrant working hours, with immigrants less willing to supply long work weeks for occupations with a wide dispersion of earnings. These findings are supported by Lin (2011), who investigated the weekly work hours of Mexican immigrants in the U.S. using the U.S. Current Population Survey from 2006 to 2008. He concluded that Mexican immigrant workers on average work up to four hours fewer than non-Hispanic whites per week.

Frase and Gornick (2013) examined working hours by education level in 17 high- and middle-income countries. They reported that educated workers work more hours in the U.S. and that this pattern holds only for the richer countries in their sample. They also found that less educated employees work more in underdeveloped or developing countries. Recently, Hammermesh and Stancanelli (2015) investigated working hours in the U.S., France, Germany, the Netherlands, and the U.K., observing that more than one in three workers work on the weekend in the U.S., compared to one in five in France, Germany, and the Netherlands. In addition, one in four U.S. workers work at night in the U.S., much higher than the one in 14 in France, one in seven in Germany, and one in 10 in the Netherlands. The authors emphasised that, even though the results for the U.K. were similar to that for the U.S., the number of workers with a non-standard work schedule is still lower than in the U.S.

### 3. Data and methodology

In this study, we use the E.U. L.F.S. data set covering 33 countries between 1983 and 2013. The E.U. L.F.S. data set contains a wide range of anonymous information about workers and others outside of the labour force and is widely considered the most useful data source for multi-country analysis and comparisons. We utilise E.U. L.F.S. data for 13 European countries (Austria, Belgium, Denmark, Greece, Spain, Finland, France, Luxembourg, the Netherlands, Norway, Portugal, Sweden and the U.K.) for the period 1995 to 2013 in our analysis.

The following regression equation is used for each year and each country to determine whether immigrants work longer hours than do natives:

$$WH_{ijt} = \beta_1 + \beta_2 Native_{ijt} + \beta_3 A_{ijt} + \varepsilon_{ijt}, \quad (1)$$

where  $WH_{ijt}$  is the working hours of the  $i$ th worker in country  $j$  at time  $t$ , and  $Native_{ijt}$  is a binary variable that is 1 if the worker is native and 0 otherwise.  $A$  represents the covariates, which are gender, age, level of schooling that is the highest International Standard Classification of Education (I.S.C.E.D.) level successfully completed, and professional status, the latter of which equals 1 if the person is an employee and 0 otherwise.

### 4. Results

Our findings are rather difficult to understand if they are presented without taking the geographical location of the 13 countries into consideration. We thus assign each country to a region in Europe according to the classification used by EuroVoc, the E.U.'s

multilingual and multidisciplinary thesaurus. EuroVoc divides Europe to four different regions: Northern, Southern, Western, and Eastern Europe. Our results cover six countries in Western Europe, four countries in Northern Europe, and three countries in Southern Europe. Unfortunately, we do not have sufficient data for Eastern Europe.

The working hours of immigrants differ between the three regions of Europe studied in this article. These patterns are also time-dependent, displaying considerable change over time. Table 1 presents the coefficients for  $Native_{ijt}$  for the six countries in Western Europe – Austria, Belgium, France, Luxembourg, the Netherlands and the U.K. Figure 1 presents these results in graph form, with the squares indicating that the difference between native and immigrant workers are statistically significant and the hollow circles indicating that the difference is not statistically different.

In Austria, most of the  $\beta_2$  coefficients are not statistically different, meaning that natives generally work as many hours as immigrants do. However, the difference was significant at some points on the graph, where the  $\beta_2$  coefficients ranged between 0.5 and 1.0. For example, for the years 1996, 2004, 2005, 2006, 2009, and 2011, natives worked more than immigrants did. The results for the Belgian labour market are very similar to those for the Austrian labour market. In Belgium, there was little difference between the hours worked by natives and immigrants, outside of a few years. However, we can observe that Belgian natives have begun to work more hours compared to immigrants in recent years. In addition, the  $\beta_2$  coefficients range between 0.5 and 1.5, indicating greater variance compared to Austria.

France has one of the largest economies in the E.U., thus providing many opportunities for employment. It has become a final target for many immigrants and is consequently exposed to a large flow of international workers. Because of this, France provides a great deal of crucial information for our study. It can be observed that French natives supply more working hours than do immigrants for 1995–2013, with

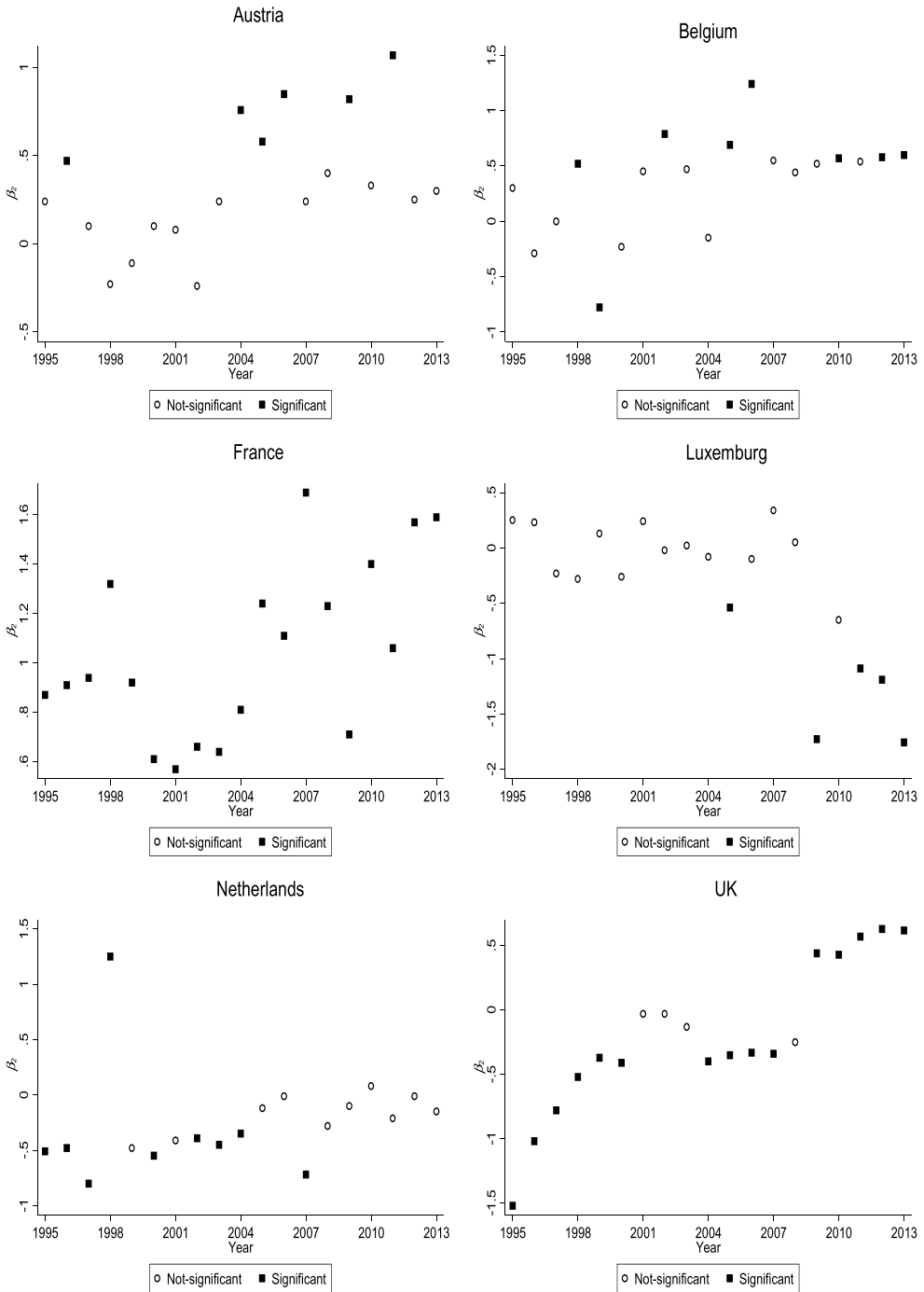
**Table 1.**  $\beta_2$  coefficients in equations for six Western European countries between 1995 and 2013.

Year	Austria <sup>†</sup>	Belgium	France <sup>‡</sup>	Luxemburg	Netherlands	U.K.
1995	0.24	0.3	0.87***	0.25	-0.51 <sup>†</sup>	-1.52***
1996	0.47**	-0.29	0.91***	0.23	-0.48*	-1.02***
1997	0.1	-0.00	0.94***	-0.23	-0.80***	-0.78***
1998	-0.23 <sup>†</sup>	0.52 <sup>***†</sup>	1.32 <sup>***†</sup>	-0.28 <sup>†</sup>	1.25 <sup>***†</sup>	-0.52 <sup>***†</sup>
1999	-0.11	-0.78**	0.92***	0.13	-0.48	-0.37**
2000	0.1	-0.23	0.61***	-0.26	-0.55*	-0.41*
2001	0.08	0.45	0.57***	0.24	-0.41	-0.03
2002	-0.24	0.79**	0.66***	-0.02	-0.39*	-0.03
2003	0.24	0.47	0.64***	0.02	-0.45**	-0.13
2004	0.76**	-0.15	0.81***	-0.08	-0.35*	-0.40**
2005	0.58**	0.69**	1.24***	-0.54***	-0.12	-0.35*
2006	0.85***	1.24***	1.11***	-0.10	-0.10	-0.33*
2007	0.24	0.55	1.69***	0.34	-0.72***	-0.34*
2008	0.4	0.44	1.23***	0.05	-0.28	-0.25
2009	0.82***	0.52	0.71***	-1.73***	-0.10	0.44**
2010	0.33	0.57*	1.40***	-0.65	0.08	0.43**
2011	1.07***	0.54	1.06***	-1.09**	-0.21	0.57***
2012	0.25	0.58*	1.57***	-1.19***	-0.01	0.63***
2013	0.3	0.60*	1.59***	-1.76***	-0.15	0.62***

Notes: †No education covariates in the regression.

‡First quarter values are used.

\*, \*\*, and \*\*\* show significance at 10%, 5%, and 1%, respectively.



**Figure 1.** Trends of  $\beta_2$  coefficients for six western European countries.

the  $\beta_2$  coefficients positive and significant for all years. This difference in working hours has increased over the years. In particular, following the global economic crisis in 2008, French natives began to work increasingly longer hours compared to

foreign-born workers. In general, the  $\beta_2$  coefficients vary between 0.5 and 2.0, indicating considerable volatility.

A small country with one of the highest G.D.P.s per capita in Europe, Luxembourg is an interesting example in the Western European context when the working hours of immigrants are analyzed. Before 2008, there are no years except for 2005 in which immigrants work more hours than do natives. However, in recent years, immigrants in Luxembourg have begun to supply more working hours than do natives, with the  $\beta_2$  coefficients becoming significant and negative in the years following 2008, with the exception of 2010. Luxembourg is the only one of the six Western European countries to exhibit this pattern. In fact, in the other countries, the working hours of natives generally become higher than or equal to those of immigrants after the global crisis in 2008. This is particularly evident in the Netherlands, for which the  $\beta_2$  coefficients are mostly statistically significant and negative before 2008, indicating that immigrants work more than natives. However, the difference between the working hours of immigrants and natives becomes insignificant after 2008, meaning that Dutch natives have begun to work as much as foreign-born workers.

The results for the U.K. reflect the general pattern in Western Europe. From 1995 until 2008, it is clear that immigrants frequently supply more labour compared to natives, with  $\beta_2$  coefficients that are negative during this period and significantly so in all years except 2001, 2002, 2003, and 2008. However, the difference between the working hours of immigrants and natives decreases over time. After 2008, the  $\beta_2$  coefficients become positive and statistically significant, indicating that natives have begun to work more than the foreign-born workers. Interestingly, the  $\beta_2$  coefficients in the U.K. follow a positive slope over time, with the difference reaching 0.5 in the 2010s, meaning that the supply of working hours from natives is increasing at a faster rate compared to that from immigrants.

The results for Northern Europe for the years between 1995 and 2013 are given in Table 2 and Figure 2. Even though the coefficients are not statistically significant in

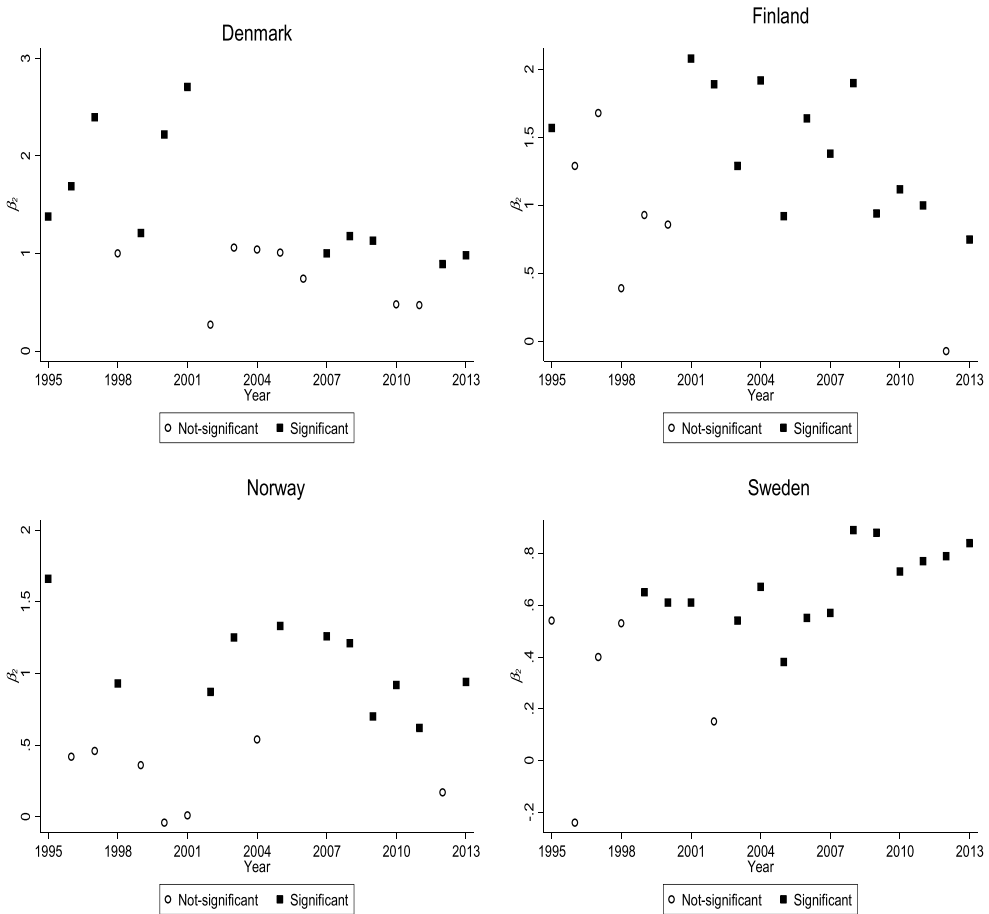
**Table 2.**  $\beta_2$  coefficients in equations for Northern European countries between 1995 and 2013.

Year	Denmark	Finland	Norway	Sweden
1995	1.38*	1.57*	1.66***	0.54
1996	1.69**	1.29	0.42	-0.24
1997	2.40***	1.68	0.46	0.4
1998	1.00 <sup>†</sup>	0.39 <sup>†</sup>	0.93*** <sup>††</sup>	0.53 <sup>†</sup>
1999	1.21*	0.93	0.36	0.65*
2000	2.22***	0.86	-0.04	0.61*
2001	2.71***	2.08***	0.01	0.61***
2002	0.27	1.89***	0.87**	0.15
2003	1.06	1.29**	1.25***	0.54***
2004	1.04	1.92***	0.54	0.67***
2005	1.01	0.92*	1.33***	0.38*
2006	0.74	1.64***	NA	0.55*****
2007	1.00***	1.38***	1.26***	0.57***
2008	1.18***	1.90***	1.21***	0.89***
2009	1.13**	0.94**	0.70**	0.88***
2010	0.48	1.12***	0.92***	0.73***
2011	0.47	1.00**	0.62**	0.77***
2012	0.89**	-0.07	0.17	0.79***
2013	0.98***	0.75**	0.94***	0.84***

Notes: <sup>†</sup>No education covariates in the regression.

\*, \*\*, and \*\*\* show significance at 10%, 5%, and 1%, respectively. NA: Not Available.





**Figure 2.** Trends of  $\beta_2$  coefficients for four northern European countries.

some years, they all take positive values during this period. However, there is a common pattern among the Northern European countries analyzed in this study that the difference between the working hours of natives and immigrants decreases over time.

Denmark is the country in which the largest difference between the working hours of natives and immigrants in our sample, with  $\beta_2$  coefficients varying between 1.0 and 3.0, indicating that natives work more than immigrants. However, this difference is insignificant between 2002 and 2006, with the natives' labour supply decreasing compared to that of foreign-born workers in recent years. Denmark's trend contrasts with that for most countries in Western Europe. Our results for Finland are similar to those for Denmark, though the difference between native and immigrant workers' working hours is more apparent. The  $\beta_2$  coefficients are statistically significant for most of our sample, showing that natives usually work more than immigrants. However, the gap in working hours falls over time and has demonstrated a clear negative trend over the last 13 years.

The findings for Norway do not differ greatly from the results of Denmark and Finland, providing further support for the general pattern in Northern Europe. Norwegian natives supply more labour compared to foreign-born workers for most of

the years, with  $\beta_2$  coefficients that are statistically significant and positive. However, the difference between the working hours of natives and immigrants generally decreases over time, even though there are some exceptions in which the  $\beta_2$  coefficients are not statistically significant. Recently, Norwegian nationals' excess labour supply compared to immigrants is also similar to those in Denmark and Finland, with a coefficient of 0.94 in 2013.

It is also interesting to observe that the 2008 global crisis has no apparent effect on the labour supply of immigrants in Denmark, Finland, or Norway. Being large countries with harsh climates and low populations, Denmark, Finland, and Norway most likely do not represent an attractive destination for immigrants, who thus avoid them as a final target.

To some degree, Sweden contradicts the pattern in Northern Europe and more closely aligns with Western Europe, with  $\beta_2$  coefficients that are more frequently significant compared to those in Denmark, Finland, and Norway. However, similar to the other countries in our study in Northern Europe, these statistically significant coefficients are all positive, meaning that natives work more relative to foreign-born workers. It is only in 1995, 1996, 1997, 1998, and 2002 that there is no significant difference in the labour supply with respect to country of birth. However, the global economic crisis in 2008 seems to have affected Swedish nationals' working hours because the  $\beta_2$  coefficients rise from 0.67 in 2004 to 0.89 and 0.88 in 2008 and 2009, respectively. Even though the  $\beta_2$  coefficient decreases to 0.73 in 2010, a clear distinction between the periods before and after the 2008 economic crisis can be made. Because of this, we observe a slight increase in the difference between the working hours of natives and immigrants (Figure 3).

Table 3 shows the results for the three Southern European countries, Greece, Portugal, and Spain. Currently, all of these countries are experiencing severe financial problems and are dependent on foreign funds for economic sustainability. From an immigration perspective, Greece is the starting point in Europe for many immigrants on their journey into Europe and is exposed to waves of migration from countries to the east. The  $\beta_2$  coefficients for Greece are all statistically significant and negative except for 2012 and 2013, indicating that immigrant workers tend to work longer hours than Greek natives do. In fact, with some coefficients close to -2.00, Greece exhibits the most negative coefficients in our sample. However, the global crisis in 2008 has an impact on the behavior of natives in terms working hours. After 2008, the  $\beta_2$  coefficients become higher and the difference between the two groups of workers is insignificant in 2012 and 2013. This indicates that natives have begun to work as many hours as immigrants do in recent years.

The results for Portugal differ from those of Greece. Portugal exhibits significant  $\beta_2$  coefficients only for the years 1995, 1996, and 1997, and even though the coefficients are negative after 1997 (except for 2005), this lack of statistical significance indicates that the native and immigrant workers have similar working hours. Although Spain is a close neighbour of Portugal, Spanish natives' working hours are more similar to those of the native workers in Greece. From the mid-1990s until 2003, native workers in Spain tend to work as much as immigrants. After 2003, however, the hours worked by native Spaniards begin to decrease compared to those of

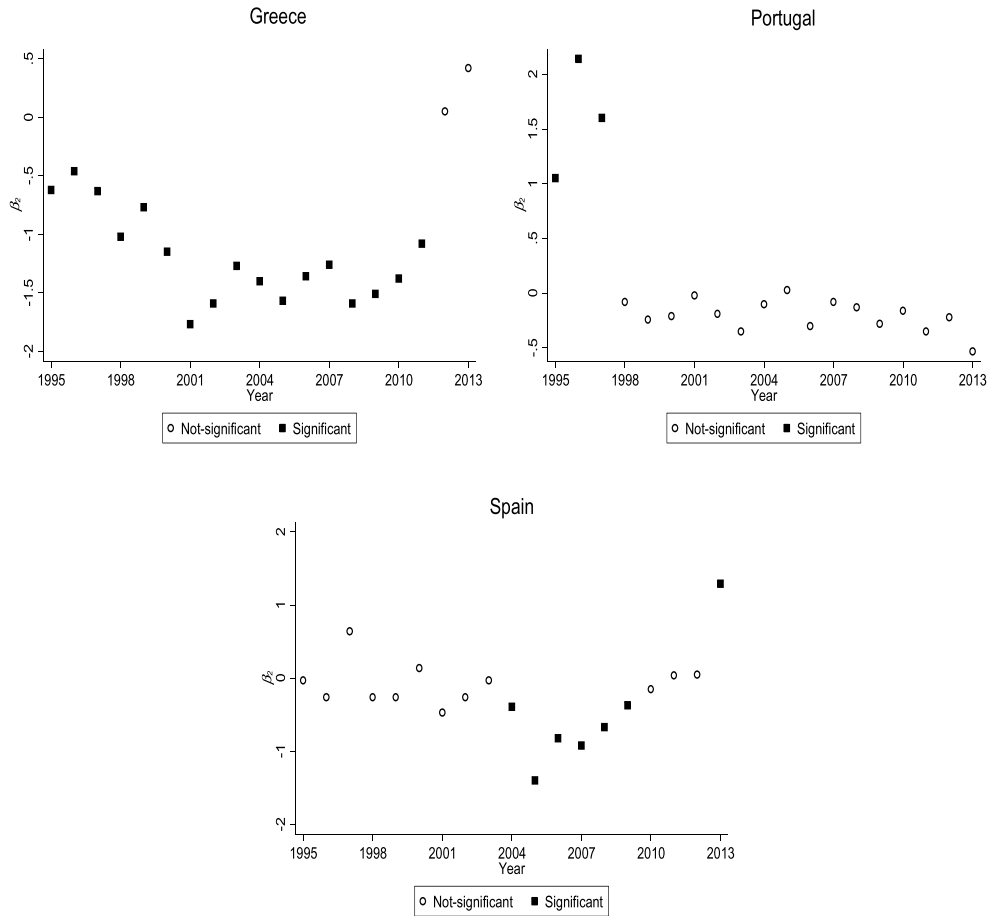


Figure 3. Trends of  $\beta_2$  coefficients for three southern European countries.

Table 3.  $\beta_2$  coefficients in equations for Southern European countries between 1995 and 2013.

Year	Greece	Portugal	Spain
1995	-0.62***	1.05**	-0.03
1996	-0.46**	2.14***	-0.26
1997	-0.63***	1.60***	0.64*
1998	-1.02***†	-0.08†	-0.26†
1999	-0.77***	-0.24	-0.26
2000	-1.15***	-0.21	0.14
2001	-1.77***	-0.02	-0.47*
2002	-1.59***	-0.19	-0.26
2003	-1.27***	-0.35	-0.03
2004	-1.40***	-0.10	-0.39*
2005	-1.57***	0.03	-1.40***
2006	-1.36***	-0.30	-0.82***
2007	-1.26***	-0.08	-0.92***
2008	-1.59***	-0.13	-0.67***
2009	-1.51***	-0.28	-0.37**
2010	-1.38***	-0.16	-0.15
2011	-1.08***	-0.35	0.04
2012	0.05	-0.22	0.05
2013	0.42	-0.53	1.29***

Notes: †No education covariates in the regression.

\*, \*\*, and \*\*\* show significance at 10%, 5%, and 1%, respectively.

immigrants and the  $\beta_2$  coefficients become negative between 2004 and 2009. However, this trend starts to weaken after 2008 and natives begin to work as much as immigrants again. Surprisingly, the  $\beta_2$  coefficient for 2013 is positive and statistically significant.

In summary, the findings for Greece and Spain exhibit a clear trend similar to that in Western Europe. Both the Western and Southern European countries included in our analysis were substantially affected by the 2008 global economic crisis, driving the natives in these countries to supply more labour in terms of working hours compared to immigrant workers.

## 5. Conclusion

Even though immigration is a contentious topic in Europe, too little research has been conducted to determine the ultimate influence of migrant workers on the labour market in Europe. This study investigates the difference in the working hours between immigrants and natives and represents the first attempt to investigate this topic in Europe. Our results suggest that natives usually work more than immigrants in most of Europe, the notable exception being Greece. Even so, the gap between the working hours of Greek natives and immigrants also disappears after the 2008 global economic crisis, lending support for the overall conclusion.

To more clearly understand these results, we separated the 13 countries into three regions and compared the working hours of the two focal groups. With a few exceptions, natives tend to supply more working hours than do immigrants in Western Europe. This was particularly true after the 2008 global economic crisis, which compelled native workers to take on more hours. On the other hand, the countries in Northern Europe, with the exception of Sweden, exhibited a different trend, with the working hours of natives decreasing over time. This persisted even during the worst of the 2008 global economic crisis. The high elderly population compared to other regions in Europe could be a factor behind this trend. The climate may also play an important role, with more job opportunities in Nordic countries available for native workers because immigrants typically prefer countries with milder climates. The wave of migration to Northern Europe may provide an opportunity for the aging population to shift blue-collar jobs from native workers to immigrants. Thus, even though the shrinking gap between the working hours of native and immigrant workers may seem undesirable at first, it could be beneficial for Northern Europe in the long term. The lack of response to the reduction in the gap following the 2008 financial crisis provides substantial support for this argument.

The results for Southern Europe after 2008 are similar to those of Western Europe. Before 2008, immigrants supplied more labour than did natives, with the exception of those in Portugal. This may have been the result of a Mediterranean culture in which people like to make free time available for themselves. However, the global economic crisis in 2008 inflicted heavy damage on the economies of these countries. Thus, their labour supply behavior began to change and the gap between the working hours of natives and immigrants started to decrease.

This article is the first attempt to investigate the working hours of natives and immigrants in Europe. Despite its importance in this respect, it has some limitations. To begin with, more control variables for immigrants' backgrounds need to be included. If European countries host significantly different immigrant groups, this may lead to differences in working hour trends between the countries. Another issue that may affect the accuracy of the results is the lack of information about employers' characteristics as control variables.

Although this analysis may have econometric concerns, we believe that the findings make an important contribution to the immigration debate in Europe. Analyses of recent refugee flow into Europe should consider our conclusion that natives' working hour decisions are more affected by economic conditions than are the decisions of immigrants. Our article suggests that prejudice against immigrants on the issue of labour supply in Europe is not valid because immigrants do not work as much as natives. We also observe that natives in both Western and Southern Europe tended to increase their working hours after the global economic crisis in 2008, while they did not in Northern Europe. Indeed, even though natives currently work more than immigrants in Northern Europe, the gap between the labour supply of natives and immigrants is decreasing. Thus, it may be worthwhile to direct immigrants to countries in Northern Europe where immigrants' working hours continue to increase in relation to those of natives even during a global economic crisis.

It is obvious that more research is needed into this subject in Europe. Future research should focus on why natives responded to the 2018 recession by increasing their working hours. There may be many possible reasons for this, such as immigrants being more likely to be discriminated against or the effects of natives' non-labour income accumulation. Another possible research topic is investigating the effect of earnings dispersion, which may more clearly explain the differences in labour supply.

## Note

1. These countries were chosen because they offered the largest data sets and their official statistical organisation approved the use of their data in this analysis.

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