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Are there gender and country of origin differences in immigrant labor market outcomes across European destinations?

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Abstract The 1994–2000 waves of the European Community Household Panel are used to study the earnings of immigrants as compared to native workers in 15 European countries. At the time of arrival, there is a significant negative partial effect of foreign birth on individual earnings compared to the native born in the destination of around 40%. These differences vary across origins and destinations and by gender. Immigrant earnings catch-up to those of the native born after around 18 years in the destination. Schooling matters more for earnings for women, whereas, language skills are relatively more important for men.

Keywords Immigration · Earnings · Gender

JEL Classification J1 · J61 · F22

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1 Introduction

Immigration has become an important socioeconomic and public policy issue in all of the highly developed economies. Western Europe, which used to think of itself as a region of emigration, has experienced substantial net in-migration in the last four decades from the lesser-developed countries, and in the last decade, from the former Eastern bloc countries. Understanding how well immigrants from different origins adapt to diverse labor markets across Europe and whether labor market outcomes, such as earnings, occupation, or unemployment among immigrants, differ by gender is central to any policy recommendation.

The European Community Household Panel (ECHP) is the first household survey that provides the data necessary for a comparative analysis of the adjustment and impact of immigrants, not only across broad geographic areas of origin but also across the European destination countries. This paper uses the 1994–2000 waves of the ECHP to conduct a systematic analysis of individual earnings from work among immigrants as compared to native-born workers. It is particularly interested in analyzing whether there is any systematic variation in the labor market performance of immigrants between the genders.

The structure of the paper is as follows. The Background section provides a brief review of the literature on immigrants' earnings in developed countries and comparisons of gender differences in immigrant outcomes. The Data and methodology section introduces the data and the statistical methodology. The Econometric results section discusses the results and the Conclusions section concludes the paper.

2 Background

Research on the labor market adjustment of immigrants in the destination economy began with Chiswick's (1978) analysis of "The Effect of Americanization on the Earnings of Foreign-Born Men." Using the 1970 Census of Population, this study found, among other results, that for adult white men, earnings were higher among immigrants residing in the United States a longer period of time, other measured variables being the same. Moreover, although initially having lower earnings, immigrants had reached earnings parity with the native born around their 13th year in the US, after which they had higher earnings.

This was followed by a study for the U.S. of male immigrants of all races and ethnicities from all countries of origin (Chiswick 1979). This study also found the earnings catch-up in the 10- to 20-year period when race/ethnic origin among immigrants is the same as the native born.[1] Yet, immigrant earnings differed by race/ethnicity.

These analyses were quickly followed by a study of white immigrant women in the United States by Long (1980) to test the robustness of the findings for men. Using the 1/1,000 sample from the 1970 Census, as did Chiswick (1978), Long shows that unlike the finding for men, there is no statistically significant effect on

[1] Chiswick (1980) developed tests of whether the positive effect of duration on earnings found in the 1970 Census cross-sectional data represented true life cycle effects. The tests indicated that they did. It will be inferred that the patterns found in the cross-sectional ECHP data also represent life-cycle developments.

immigrant women's earnings of duration in the United States. Chiswick (1980, Chapter 9) however, showed that when the 1/100 sample is used, duration is statistically significant for women, pointing to the importance of sample size in the analysis of immigrant earnings, particularly among women. Chiswick (1980, Chapter 9) did the analyses for women separately by race/ethnic group (white, black, Mexican, Cuban, and several Asian groups) and found the tendency toward the positive effect of duration in the US for most race/ethnic groups and that parity in earnings with their native-born counterparts comes sooner than for men. He also developed an algorithm for identifying Asian "war brides" and found that Asian "war brides" had lower earnings than otherwise comparable immigrant women from Asia.

During this same period, Mincer (1978) analyzed "Family Migration Decisions." In particular, Mincer was concerned with viewing the migration decisions in two-adult families as being jointly determined. There are not only movers and stayers, but also "primary movers" and "tied movers," and "primary stayers" and "tied stayers." The "tied" spouse moves or does not move on the basis of what maximizes family earnings rather than that of individual's earnings. This would put tied movers in a less favorable economic position than otherwise comparable foreign-born or native-born women.

Tied status affects earnings, labor supply and unemployment among both tied stayers and tied movers, who are disproportionately women. Tied movers, in particular, are more likely to be unemployed or out of the labor force and have lower earnings than otherwise comparable immigrant women who are primary movers.

Although most of the research on migrant labor market adjustment since then has focused on men, substantial research has been undertaken on immigrant women's labor supply, including the family investment model (Baker and Benjamin 1997). This model hypothesizes that in the early post-migration period, wives are working in the labor market rather than investing in their own destination-specific (or local) human capital so as to finance the investment in destination-specific human capital of their immigrant husbands. This would have the effect of raising the initial earnings but flattening the earnings-duration profile of immigrant women, especially if they never make these post-migration human capital investments.

Female tied movers may experience two offsetting effects on their labor supply. Given that they are tied movers, they are likely to have poorer labor market opportunities than female primary movers, and hence, are likely to have a lower earnings potential and lower labor supply. On the other hand, the family migration model suggests that they will work more in the early years in the destination to finance their husband's human capital investment. Although the literature has been somewhat ambiguous as to which effect is stronger, recent research on Australian longitudinal data in which visa category can be used to identify with greater precision "primary" and "tied" movers suggests that the response to their own opportunities dominates the family investment model hypothesis for explaining immigrant female labor supply behavior (Le 2005). If so, this implies positive selectivity of women into the labor market.

In a recent study, Antecol (2000) analyzes whether gender differences in labor force participation rates of immigrants in the U.S. are related to what she refers to as ethnic or cultural differences. Other variables the same, she finds that gender differences in labor force participation in the US across immigrant groups from different countries of origin are significantly positively related to gender

differences in the origin country. A similar, but much weaker pattern is found among second-and-higher-generation immigrants in the US, suggesting an assimilation to the economic incentives and cultural norms in the US.

This study builds on the existing literature but takes a different approach. The focus is on the analysis of the earnings of both immigrant men and women, the latter being a topic that has received too little attention.[2] It does not consider immigrants in a destination of the same gender, age, and years of schooling as homogeneous, but rather focuses on the differences by country of origin, and hence, on differences by race and ethnicity. Furthermore, unlike the standard literature on the adjustment of immigrants that focuses on one destination at a time, this study emphasizes the comparison across destination countries, as well as across countries of origin. Moreover, while the literature on immigrant adjustment is dominated by research on the English-speaking developed countries of overseas settlement (i.e., the U.S., Canada, and Australia) the analyses in this study focus on Western Europe, a region that in the past few decades has changed from a major source to a major destination for international migrants.

3 Data and methodology

The paper uses the 1994–2000 waves of the European Community Household Panel (ECHP) Survey to conduct a systematic analysis of individual income from work of immigrants as compared to native-born workers, as well as to other immigrants from the same country of origin in different destination countries and different origins in the same destination. The ECHP is a unique dataset produced by the European Union Statistical Office (Eurostat) that presents comparable micro-level (person/households) data on income, living conditions, demography, migration, housing, health, and work, for households across 15 European Union member states. The dataset also includes observations from the German socioeconomic household panel (SOEP) from the household panel from Luxembourg (PSELL) and from the British household panel (BHPS). Interviews in the ECHP were conducted simultaneously across all countries and data from national household panels were structured to mimic the rest of the ECHP.[3] Thus, the European Community Household Panel (ECHP) is the first household survey that provides the data necessary for a comparative analysis of the adjustment of immigrants not only across broad geographic areas of origin, but also across the major European destination countries.

The natural logarithm of individual earnings in purchasing power parity (PPP) terms is analyzed both in a pooled sample and controlling for country specific

[2] Although there are exceptions, the research on female immigrants' labor market experience has focused on labor supply. In addition to the other papers cited above, see for example, Blau (1980), Biswal (1999), Boyle, Cooke, Halfracree and Smith (2001), Cobb-Clark and Crossley (2004), Cobb-Clark and Connolly (2001), Duleep and Sanders (1993), Evans (1984), and Reimers (1985). For analyses of the earnings of female migrants see also Antecol, Cobb-Clark and Trejo (2003), LeClere and McLaughlin (1997) and MacPherson and Stewart (1989).

[3] Some countries were not included in the first wave but were added later (Austria in wave 2, Finland in wave 3, and Sweden in wave 4).

effects. Earnings are measured as the total net annual income from work.[4] Income data for France and Finland are in gross terms instead of net terms, and as explained below, this needs to be taken into account in interpreting the results. Results in the paper are robust to the exclusion of these countries from the sample. Net income from work includes both wage and salary earnings and self-employment income. The models in the paper have also been estimated excluding the self-employed to see whether the heterogeneity in the source of income affected the results. As explained below, no major differences emerge. To avoid creating selectivity bias, the results reported here include the self-employed.

The ECHP dataset contains around one million observations for individuals from the 15 European Union countries, but only just over half of them work and report income from work. After deleting cases with missing values for any of the explanatory variables, the sample consists of 547,639 observations on individuals aged 18 and older—231,457 women and 316,182 men. Most individuals appear repeatedly in different years because of the panel structure of the data. Thus, the standard errors are adjusted for this by clustering of observations.

Table 1 presents the distribution of observations, individuals of foreign birth, and the percentage born in other European Union nations across destination countries in the sample used in this study. The foreign born represent 5.1% of the sample. Among the foreign born, around 46% of those in the sample are citizens of other European Union countries. Some of the covariates are missing more frequently for foreign-born individuals than among natives. The last column in Table 1 presents the percentage of foreign born in the sample by destination country if the years since migration variable (YSM), a variable missing for 30% of the observations of the foreign born, were not included in estimates. If the variable YSM was excluded, the sample would contain a total of 559,106 observations of which 37,112 would correspond to foreign-born individuals. Note that the percentage of foreign born increases to 6.64% of the sample, and Luxembourg, the UK, and the Netherlands experience the largest changes in sample size.[5]

Table A1 in the Appendix presents the number of observations and the share of foreign born by destination country in the general population, working or not working. The proportions of EU born among migrants in the final sample, compared to that of the total population of migrants in the ECHP dataset, are quite stable for most countries (compare Tables 1 and A1). Due to missing observations for some variables, however, for the Netherlands, the proportion of EU born increases from 62% of the foreign population to 95% in the sample, and for the UK and Portugal, the proportions of EU born in the sample decrease from 52 to 28% and from 39 to 29%, respectively.

The following explanatory variables are included in the analyses:

1. *Marital status* is measured by including two variables, one for those currently married (Married=1) and another for those in informal unions (Cohabiting=1); those single and not cohabiting is the omitted category. Marriage is expected to be associated with lower earnings for women and moderately higher earnings

[4] In each wave, data are not available to control for the weeks worked per year or the hours worked per week in the year for which annual earnings are recorded.

[5] In the case of Luxembourg and the UK this is due to the lack of (or reduced) information on year of arrival in Waves 4 to 7, when the PSELL and BHPS datasets are used instead of the original ECHP.

Table 1 Number of individuals and foreign born in the sample by destination country

Country of destination	N. of obs.	Percent total (%)	Percent foreign born (%)	Percent foreign (%)	Percent foreign female (%)	Percent foreign EU born (%)	Percent foreign if YSM excluded (%)[a]
Germany	67,422	12.3	6,571	9.75	38.1	39.26	12.57
Denmark	23,745	4.34	701	2.95	54.9	33.95	3.42
Netherlands	38,230	6.98	131	0.34	52.0	94.66	1.25
Belgium	22,257	4.06	1,629	7.32	38.0	56.11	9.51
Luxembourg	14,657	2.68	1,334	9.10	41.4	89.21	37.45
France	48,467	8.85	3,532	7.29	39.0	39.64	7.99
U.K.	56,213	10.3	1,060	1.89	47.8	28.11	3.20
Ireland	27,882	5.09	1,309	4.69	42.2	87.78	4.73
Italy	52,952	9.67	1,067	2.02	42.7	35.71	2.08
Greece	32,866	6.00	1,372	4.17	35.8	86.95	4.43
Spain	44,403	8.11	782	1.76	47.6	39.00	1.85
Portugal	40,780	7.45	1,218	2.99	46.2	29.47	3.42
Austria	22,071	4.03	1,482	6.71	44.9	23.55	7.00
Finland	27,641	5.05	899	3.25	45.8	19.80	3.49
Sweden	28,053	5.12	2,558	9.12	46.7	44.49	9.17
Total	547,639	100.0	25,645	4.68	43.2	46.0	6.64

Numbers correspond to observations and not to individuals
[a]Information on years since migration (YSM) was missing for 30% of the observations on migrants that had positive work earnings. If the variable YSM was excluded, the sample contained a total of 559,106 observations of which 37,112 corresponded to foreign-born individuals
Source: ECHP-Waves 1–7

for men to the extent that a division of labor in the household has had a different effect by gender on current and past labor supply and work effort.

2. *Number of children*. The number of children present in the household is also included in the estimates. Due to the effect of children on current and past labor supply and work effort, this variable is expected to be associated with lower earnings for women and (slightly) higher earnings for men.
3. *Education*. The completed schooling level or the enrollment status of the individual at the time of each interview is available. The educational categories are less than upper secondary (Less than Secondary=1), upper secondary (the omitted category), and at least some tertiary education (Tertiary Education=1). Unfortunately, a continuous measure of education, such as years of schooling, is not available.
4. *Experience* (years experience and years experience squared). The survey reports the year when the individual worked for the first time. However, data are not available for Sweden, and in addition, many of the reported answers are inconsistent with responses to other questions in the survey. To create a more systematic and perhaps less error-prone measure of experience, information on completed levels of education is used as follows: potential experience is

constructed as the age of the individual minus 14, 18, or 23 years depending on the highest level of schooling (i.e., age minus years of schooling minus 6 years). This measure of experience and its square are used in this study.[6]

5. *Foreign birth* (Foreign=1). A variable is included to denote that an individual was foreign born. The ECHP includes several pieces of information on the migration trajectory of each person surveyed. As no information was available on some of the questions for some countries, different data items are combined to construct this variable. This includes information on whether the person was foreign born (not readily available for Germany, part of Luxembourg, and Sweden); whether the person was born in the European Union or not (not available for Greece, the Netherlands, and the ECHP sample of Germany); and on their citizenship.
6. *Years since migration* (years since migration and sq. YSM). This variable is constructed from the year of arrival in the country of present residence. (See Table 1 for information on missing observations). The square of years since migration is also included to reflect the nonlinear relation between earnings and duration in the destination.
7. *Geographic area of origin*. This variable distinguishes between those born within or outside the European Union. For Germany, the Netherlands, Greece, Finland, and the PSELL sample from Luxembourg, this is the only information available on the foreign country of birth. Information on the continent of origin is also available for all the other countries—Europe, Africa, Asia, America, and Oceania. Where data on continents is available, except for those living in Italy and Austria, Americans can be divided into North and South/Central America. A variable for non-English speaking Americans is created that includes all persons classified as South–Central American, as well as those whose mother tongue is not English. Thus, Mexicans are in the non-English speaking American group. Individuals for whom there is no information either on language or on continent are excluded from the sample when using continents as variables in the analysis.
8. *Language spoken*. The variable "mother tongue" is not available for the UK, Sweden, and the Netherlands and is only available for the other countries in the year 2000 (seventh wave), but the mother tongue would not be expected to change over time. Using the identification code of the individual, a mother tongue variable is created for other waves when the individual is present both in the seventh wave and previously. Two variables with language information were created. Same Language=1 if the language of the migrant and that of the country of destination match. Group Language=1 when the linguistic group of the language from the country and the migrant's match; that is, they are close languages. The language groups are Romance (French, Portuguese, Spanish, Italian) English, Nordic (Danish and Swedish), or German/Dutch. Greek and Finish are considered two separate language groups. In Luxembourg and Belgium, both the Romance and Germanic language groups are accepted.

[6] Similar regressions were also computed using experience calculated as age minus the reported age at first job. (In cases where information was missing, the constructed measured of experience, described in the text, was used.) These two measures are highly correlated. The results do not vary with the measure of experience and are available from the authors by request.

Individuals for whom language information is not available are not included in the analysis when language variables are used.

Tables 2 and 3 present the means and standard deviations for some relevant variables separately by country of destination and gender. To avoid including multiple observations per person, the descriptive statistics are calculated for all the individuals interviewed in the calendar year 1997. Given that no information on the

Table 2 Means of variables for men interviewed in 1997

Destination	All				Foreign-born			
	Log work income	Less secondary education	Tertiary education	Age	Log work income	Less secondary education	Tertiary education	Age
Germany	9.49	0.20	0.24	39.75	9.51	0.59	0.06	41.08
	(0.77)	(0.40)	(0.43)	(11.78)	(0.61)	(0.49)	(0.24)	(11.97)
Denmark	9.32	0.25	0.32	39.85	9.28	0.27	0.41	38.37
	(1.03)	(0.44)	(0.47)	(13.25)	(0.86)	(0.45)	(0.50)	(10.97)
Netherlands	9.49	0.51	0.15	39.24	9.58	0.76	0.13	44.13
	(0.98)	(0.50)	(0.35)	(11.19)	(0.85)	(0.43)	(0.34)	(10.43)
Belgium	9.48	0.23	0.33	40.08	9.66	0.26	0.28	41.84
	(1.12)	(0.42)	(0.47)	(11.04)	(0.90)	(0.44)	(0.45)	(9.37)
Luxembourg	10.06	0.36	0.19	39.02	9.94	0.57	0.22	38.86
	(0.71)	(0.48)	(0.39)	(11.47)	(0.68)	(0.50)	(0.41)	(9.89)
France	9.33	0.27	0.21	39.01	9.39	0.40	0.18	43.49
	(1.03)	(0.44)	(0.41)	(11.56)	(0.89)	(0.49)	(0.39)	(10.04)
United Kingdom	9.26	0.39	0.36	39.6	9.4	0.25	0.43	42.26
	(1.14)	(0.49)	(0.48)	(13.02)	(1.13)	(0.43)	(0.49)	(11.5)
Ireland	9.28	0.44	0.16	39.76	9.35	0.25	0.21	38.04
	(1.02)	(0.50)	(0.37)	(14.81)	(1.13)	(0.44)	(0.41)	(13.03)
Italy	9.23	0.51	0.10	41.02	9.18	0.41	0.13	37.62
	(0.99)	(0.50)	(0.29)	(11.92)	(0.79)	(0.41)	(0.34)	(10.89)
Greece	9.06	0.51	0.20	43.51	9.18	0.30	0.36	38.67
	(0.84)	(0.50)	(0.40)	(13.21)	(0.61)	(0.46)	(0.48)	(12.13)
Spain	9.08	0.59	0.21	39.14	8.91	0.37	0.33	34.37
	(1.12)	(0.49)	(0.41)	(12.31)	(1.18)	(0.49)	(0.48)	(9.51)
Portugal	8.74	0.84	0.05	40.95	8.89	0.54	0.15	34.41
	(0.98)	(0.36)	(0.22)	(14.38)	(0.99)	(0.50)	(0.36)	(12.07)
Austria	9.40	0.17	0.07	37.68	9.49	0.22	0.15	40.81
	(0.93)	(0.38)	(0.26)	(12.43)	(0.69)	(0.42)	(0.36)	(11.26)
Finland	9.06	0.32	0.25	41.14	8.97	0.28	0.40	41.39
	(1.59)	(0.47)	(0.43)	(13.64)	(1.55)	(0.45)	(0.49)	(13.51)
Sweden	8.85	0.23	0.28	42.61	8.42	0.23	0.30	42.46
	(1.43)	(0.42)	(0.45)	(13.95)	(1.66)	(0.42)	(0.46)	(13.56)

Standard deviations in parentheses
Source: ECHP-Waves 1–7

year of arrival is available for Luxembourg after wave 3, the sample of those interviewed in 1996 is used, instead for this country. The mean of the natural logarithm of the net earnings from work (in PPP terms) among men ranges from a high of 10.06 in Luxembourg to a low of 8.74 in Portugal. Among women, it ranges from 9.46 in Luxembourg to 8.40 in Portugal. Among migrants, the lowest net earnings are found in Sweden, with 8.42 for men and 8.34 for women.

Table 3 Means of variables for women interviewed in 1997

Destination	All				Foreign-born			
	Log work income	Less secondary education	Tertiary education	Age	Log work income	Less secondary education	Tertiary education	Age
Germany	8.91	0.23	0.19	38.71	8.88	0.67	0.04	40.37
	(0.91)	(0.42)	(0.39)	(11.37)	(0.90)	(0.47)	(0.20)	(10.98)
Denmark	8.95	0.23	0.36	38.61	8.82	0.29	0.40	36.63
	(1.04)	(0.42)	(0.48)	(12.35)	(1.06)	(0.46)	(0.50)	(10.05)
Netherlands	8.64	0.26	0.20	36.90	8.56	0.60	0.30	32.40
	(1.17)	(0.44)	(0.40)	(10.93)	(0.54)	(0.52)	(0.48)	(11.30)
Belgium	8.99	0.19	0.41	37.55	8.99	0.21	0.33	39.61
	(1.18)	(0.39)	(0.49)	(10.53)	(1.13)	(0.41)	(0.47)	(11.08)
Luxembourg	9.46	0.44	0.15	36.05	9.34	0.52	0.18	37.10
	(0.96)	(0.50)	(0.36)	(11.23)	(1.03)	(0.50)	(0.39)	(9.85)
France	8.88	0.27	0.26	38.09	8.95	0.39	0.27	41.75
	(1.09)	(0.44)	(0.44)	(11.38)	(1.02)	(0.49)	(0.44)	(9.96)
United Kingdom	8.79	0.51	0.33	38.60	9.03	0.08	0.69	37.92
	(1.06)	(0.50)	(0.47)	(12.65)	(1.17)	(0.28)	(0.48)	(10.20)
Ireland	8.64	0.30	0.19	35.40	8.52	0.26	0.29	34.49
	(1.11)	(0.46)	(0.40)	(12.67)	(1.20)	(0.44)	(0.46)	(10.150
Italy	8.92	0.39	0.12	38.55	8.73	0.40	0.11	35.07
	(1.02)	(0.49)	(0.32)	(11.08)	(1.16)	(0.49)	(0.32)	(9.06)
Greece	8.60	0.44	0.30	40.11	8.58	0.29	0.43	33.10
	(0.95)	(0.50)	(0.46)	(12.81)	(0.67)	(0.46)	(0.50)	(9.30)
Spain	8.65	0.46	0.29	36.58	8.77	0.16	0.40	36.58
	(1.14)	(0.50)	(0.46)	(11.37)	(1.11)	(0.37)	(0.49)	(10.30)
Portugal	8.40	0.74	0.08	39.10	8.66	0.40	0.21	35.95
	(1.09)	(0.44)	(0.27)	(12.90)	(0.94)	(0.49)	(0.41)	(12.39)
Austria	8.85	0.26	0.09	36.77	8.94	0.32	0.18	41.06
	(1.04)	(0.44)	(0.28)	(12.16)	(0.92)	(0.47)	(0.38)	(12.69)
Finland	8.69	0.30	0.35	40.33	8.71	0.22	0.41	42.41
	(1.55)	(0.46)	(0.48)	(12.96)	(1.56)	(0.42)	(0.49)	(11.96)
Sweden	8.53	0.19	0.32	41.35	8.34	0.22	0.33	42.56
	(1.36)	(0.39)	(0.47)	(13.27)	(1.59)	(0.42)	(0.47)	(12.85)

Standard deviations in parentheses
Source: ECHP-Waves 1–7

The relative level of education across countries and of migrants relative to natives varies widely. Tables 2 and 3 include the proportion of the sample with less than secondary studies and with tertiary (at least some college) education. Those with secondary schooling are the benchmark group. Educational attainment has a wider variance among migrants than among natives. In Denmark, for example, 41% of the immigrant men have some college education compared to 32% of all Danish men. The proportions with less than secondary schooling stand at 27 and 25% among immigrants and all Danes, respectively. Germany has a less educated pool of immigrants with only 6% college educated foreign-born men and 59% with less than secondary schooling. By contrast, the foreign born living in Ireland are highly educated relative to the Irish born in the sample: 21% of them have some college education as opposed to 16% of all men and only 25% have less than secondary schooling compared to 44% of all Irish men. The education of both all women and foreign-born women is on average higher than that of men's. This is not at all surprising as the sample is restricted to women who are working, and on average, they tend to be more educated.

Mean age, around 40 years, is relatively similar across the total sample of men in the 15 European destinations. Yet, the mean age of the foreign born living in Southern Europe is substantially lower, around 34, in Portugal and in Spain. On average, migrants are younger in these destinations. The pattern is similar for foreign born women. The mean age of native female workers is lower than that of the men's, particularly in countries where female labor force participation has grown recently—such as Spain and Ireland. Ages for female immigrant workers range from a high of 42 in Finland and Sweden to a low of 32 in the Netherlands, 33 in Greece, and around 35 in Ireland, Italy, and Portugal.

The mean years since migration for foreign-born individuals, their standard deviation, and the values of the tenth, 25th, and 75th percentiles of the distribution are reported in Table 4 by destination and gender. Not surprisingly, Luxembourg has the lowest mean of all countries, 16.28 years for men and 15.34 years for women. Many of the foreign born in Luxembourg are temporarily assigned to positions in the institutions of the European Union bureaucracy. Finland follows closely. Political changes in the former Soviet Union facilitated the movement of population to this country from the early 1990s. On the other hand, immigrants in Spain, Greece, and Portugal, countries that traditionally, and until very recently, were a source rather than a destination for migrants, have a relatively lower average years since migration.[7] For most countries, mean duration is longer for men than for women, as many men migrate first and bring the family after they are established.

Ordinary least squares models are first estimated with either a dichotomous variable that indicates birth outside the destination country or two such variables that distinguish between foreign-born individuals who where born in or outside the European Union. Furthermore, foreign birth in and outside of the European Union are separately interacted with the country of destination to determine whether the earnings difference associated with foreign birth in and outside the EU differ across the 15 destination countries.

[7] Still the tremendous influx of immigration experienced by Southern European countries, particularly Spain, during the last five years is not included in the sample given the time period it covers.

Table 4 Distribution of years since migration for foreign born men and women interviewed in 1997

Destination	Mean	St. Dev.	Percentile		
			10th	25th	75th
Men					
Germany	21.98	8.59	7	18	28
Denmark	19.02	13.26	5	11	25
Netherlands	24.10	15.16	5	9	38
Belgium	28.51	12.67	10.5	20	36
Luxembourg	16.28	10.86	5	7	23
France	27.90	11.26	10	22	35
United Kingdom	24.20	13.86	5	14	34
Ireland	24.04	12.61	6	17	30
Italy	26.37	12.75	9	18	34
Greece	19.47	12.68	6	7	26
Spain	20.50	10.02	7	12	27
Portugal	19.25	9.49	9	15	22
Austria	20.60	15.06	5	8	27
Finland	16.95	12.86	4	7	23
Sweden	23.90	18.95	4	9	34
Women					
Germany	22.22	7.93	8	18	27
Denmark	21.17	13.08	5	9	27.5
Netherlands	18.36	14.45	2	9	30.5
Belgium	25.24	12.97	7	15.5	34
Luxembourg	15.34	10.39	5	7	23
France	25.57	12.23	7	17	35
United Kingdom	22.76	12.87	5	12	33
Ireland	22.34	11.59	6	15	29
Italy	22.57	11.57	7.5	13	29
Greece	17.27	9.12	6	10	22
Spain	20.74	11.43	6	13	28
Portugal	20.16	7.30	10	16	23
Austria	18.85	15.86	4	6	25
Finland	16.14	12.90	4	7	22
Sweden	24.68	16.12	6	12	33

Individuals in Luxembourg were interviewed in 1996
Source: ECHP-Waves 1–7

As one of the focuses of the paper is to understand whether some underlying gender demographic differences are associated with variation in individual earnings from work, we choose not to include individual fixed effects in the model.

Individual fixed effect would eliminate most of the parameters of interest for this study as most of the explanatory variables do not change over time. Unobservable individual-specific effects might be correlated with other included variables in the analyses. Selectivity in labor force participation among women, in general, and female migrants, in particular, is an important concern carefully addressed in other papers (Field-Hendrey and Balkan 1991; Dustmann and Schmidt 2000).[8] Still, we do not find in our data enough identifying variables beyond those of interest in the earnings equation to enable us to account for selection.[9] As a result, causal interpretation of the parameters is problematic as we note below. Still, to account for the presence of multiple observations per person, errors are clustered by individual using the procedure in Stata 9.

To correct for price changes and other time specific influences, the models include time fixed effects for years when individuals were interviewed. Those interviewed in the year 2000 are the benchmark. The most complete specification presented in the next section estimates log net annual earnings (E) as follows

$$E_i = \alpha + \sum \beta_j X_{ij} + \sum_{n=(2,15)} C_n + \sum_{n=(1,15)} \mathrm{EU}^* C_n + \sum_{n=(1,15)} \mathrm{NoEU}^* C_n + \sum_{t=(94,99)} \mathrm{d_t} + e \tag{1}$$

where α is a constant (Germany is the benchmark); X_j are the demographic controls; C_n (n=1,...,15) are the destination countries; EU equals one if the individual was born in one of the 15 (original) countries in the European Union other than the destination country; NoEU equals one if the individual was born outside the 15 countries of the European Union and $\mathrm{d_t}$ are the years of interview variables. The next section presents partial results for the simple specifications that do not include country interactions; then, the complete estimates of the model with country interactions are reported, and finally, the next section discusses the rest of the findings.

[8] Table A2 in the Appendix presents the proportion of adult individuals from the complete ECHP dataset that report positive work income by country. Differences across countries for males are relatively small. The proportion of migrant men with positive earnings is relatively close to that of natives in their destination country, though slightly lower in Nordic countries and the Netherlands. The proportion of females with positive earnings, however, ranges from a low of 27% and 29% in Greece and Spain to a high of 73% and 72% in Finland and Sweden. Female migrants are slightly more likely to receive work income, particularly in the countries with low labor force participation. Conversely in Nordic countries, which have very high native female participation rates, their attachment to the labor force is weaker than that of natives.

[9] Analyses were conducted using the Heckman selectivity correction technique to adjust for sample (labor force participation) selectivity. Among males, there was no apparent selectivity. Among females, however, lambda showed considerable instability, but the basic patterns were subject to little change. The selectivity correction analyses are not reported in this paper.

4 Econometric results

4.1 The earnings of the foreign born across gender

To study the differences in earnings associated with foreign birth, the natural logarithm of annual earnings from work net of taxes (in PPP terms) is analyzed both in a native-foreign pooled sample of all destination countries, and also, including destination country fixed-effects, with and without interactive variables between foreign birth and country of destination. For France and Finland, however, the earnings data are in gross terms. In addition, countries differ substantially in their tax systems. This explains why net work earnings for Sweden are among the lowest in Tables 2 and 3. Sweden has high and progressive taxes but also has substantial transfers not included as income in the dependent variable. Country-fixed effects are included in the estimates precisely to control for these differences and to isolate the changes in earnings associated with foreign birth from other institutional features of the country of destination. Welfare provisions such as housing, child allowances, and day-care subsidies, guaranteed income, unemployment benefits, and others vary greatly across Europe and tend to be very generous in Nordic countries. Consideration of the effects of these sources of income on net total income are beyond the scope of this study.

Table 5 presents two sets of results, for males and females, separately. Model A includes only one dichotomous variable for foreign birth and model B distinguishes whether the foreign-born individual was born in another country in the European Union or outside the European Union. In the pooled sample, without country variables, the earnings of foreign-born men and women at the time of arrival are estimated to be around 40 and 36%, respectively, lower than those of natives. When

Table 5 Partial effect of foreign birth, either in the EU or outside the EU, at arrival on work earnings compared to native as percentage of the earnings of natives, by gender

	Men	Women	Men	Women	Men	Women
Model A						
Foreign	−0.401[a]	−0.362[a]	−0.424	−0.427[a]	−0.441[a]	−0.409[a]
	(0.042)	(0.056)	(0.040)[a]	(0.053)	(0.040)	(0.053)
Adj. R-Sq	0.25	0.18	0.28	0.20	0.34	0.22
Model B						
EU	−0.296[a]	−0.311[a]	−0.378	−0.416[a]	−0.395[a]	−0.405[a]
	(0.046)	(0.059)	(0.044)[a]	(0.057)	(0.042)	(0.055)
Non-EU	−0.450[a]	−0.391[a]	−0.445	−0.432[a]	−0.460[a]	−0.411[a]
	(0.042)	(0.056)	(0.040)[a]	(0.055)	(0.040)	(0.054)
Adj. R-Sq	0.25	0.18	0.28	0.20	0.34	0.22
Self-employed	Yes	Yes	Yes	Yes	No	No
Destination-fixed effects	No	No	Yes	Yes	Yes	Yes
N. obs	316,182	231,457	316,182	231,457	262,905	214,436

Dependent variable: natural logarithm of work earnings. Robust standard errors clustered by individual are below coefficients. Full regression equations include interview year dummy variables as well as individual characteristics

[a]Significant at 1%

Source: ECHP-Waves 1–7

foreigners are split among those born in the European Union and those born outside it, the EU-born men and women experience only 30 and 31% lower earnings at arrival with respect to natives, whereas, men and women born outside the EU have around 45 and 39% lower earnings than natives, respectively.

When destination country variables are included, foreign birth is associated with a slightly larger decrease in earnings, around 42% for both men and women. Interestingly, whereas the inclusion of destination country-fixed effects hardly changes the estimates for men and women born outside of the European Union, it implies much lower earnings associated with birth in another country within the European Union—38% for men and 42% for women lower than natives at arrival.

Finally, to analyze whether the heterogeneity of sources of work income has an impact on the estimated coefficients, we exclude self-employed individuals from the sample. The results are presented in the last two columns of Table 5. Except from a slight increase in the associated gap in earnings between immigrants and natives among men and a slight reduction among women, the coefficients are fairly similar. Nonetheless, the adjusted R-square increases substantially with the smaller sample, presumably because of the substantial variability in self-employment earnings. The rest of the tables in the paper include all individuals that report positive work earnings. The results are robust to the exclusion of self-employed individuals and can be obtained by request.

The most complete model in the paper includes destination country dichotomous variables and interactive variables for destination country with foreign birth in and outside of EU. Table 6 presents estimated coefficients of earnings of the foreign born, from the EU and from outside the EU, as a percentage deviation from the earnings of natives of the same gender in each destination country. (Table A3 in the Appendix presents complete results of this specification.) Robust standard errors clustered by individual and significance levels for all coefficients are included in Table 6. The third and sixth columns of Table 6 indicate whether the earnings difference between the natives and the EU and non-EU immigrants differ significantly For example, the coefficient, −0.167, for EU men in Belgium means that, at arrival, men born outside Belgium but in the European Union earn about 17% less than men born in Belgium, other variables the same. The coefficient, −0.425, for those born outside the EU means that, at arrival, they earn about 42% less than men born in Belgium, other things equal.[10] The entry in the third column indicates that there are significant differences (at a 5% level) between the earnings of foreign men in Belgium who were born in another country of the EU and those who were born outside the EU.

The earnings of immigrants born in the EU at arrival do not differ significantly from the native born in Germany, the UK, and Portugal, and are lower by only 15%, for those living in Belgium. By contrast, the differences are large (up to 45 to 60%) for those living in Denmark, Luxembourg, Ireland, Spain, and Finland. For EU-born women, except for those in Germany and in the UK whose earnings at arrival are comparable to natives, differences at arrival with respect to native-born women are significant and range from 27% in Portugal to 61% in Finland. The UK is the "best" destination after Germany for EU-born immigrants. Countries where the relative

[10] The percent difference in earnings (b) equals exp (b*)−1 where b* is the regression coefficient. The parameter, b, is approximately equal to b* only when b is small.

Table 6 Partial effect of foreign birth, either in the EU or outside the EU, at arrival on earnings compared to native as percentage of the earnings of natives in that country, by gender

	EU men	Non-EU men	Diff. Eu/ non-EU	EU women	Non-EU women	Diff. EU/ non-EU
Germany	−0.081	−0.115[a]	–	0.038	−0.059	[b]
	(0.052)	(0.047)		(0.074)	(0.068)	
Denmark	−0.450[c]	−0.562[c]	–	−0.342[c]	−0.439[c]	–
	(0.105)	(0.101)		(0.097)	(0.098)	
Netherlands	−0.243[a]	−0.513	–	−0.377[c]	−0.065	[a]
	(0.112)	(0.713)		(0.112)	(0.114)	
Belgium	−0.167[b]	−0.425[c]	[a]	−0.337[c]	−0.386[c]	–
	(0.091)	(0.084)		(0.127)	(0.117)	
Luxembourg	−0.485[c]	−0.579[c]	–	−0.457[c]	−0.620[c]	–
	(0.051)	(0.109)		(0.082)	(0.168)	
France	−0.376[c]	−0.462[c]	–	−0.305[c]	−0.314[c]	–
	(0.072)	(0.062)		(0.089)	(0.085)	
United Kingdom	−0.083	−0.462[c]	[a]	−0.160	−0.326[c]	–
	(0.154)	(0.087)		(0.132)	(0.110)	
Ireland	−0.496[c]	−0.285[a]	[d]	−0.392[c]	−1.123[c]	[c]
	(0.086)	(0.126)		(0.093)	(0.272)	
Italy	−0.301[a]	−0.350[c]	–	−0.496[c]	−0.477[c]	–
	(0.148)	(0.078)		(0.170)	(0.110)	
Greece	−0.288[c]	−0.262[c]	–	−0.468[c]	−0.467[c]	–
	(0.057)	(0.092)		(0.073)	(0.155)	
Spain	−0.484[c]	−0.626[c]	–	−0.286[a]	−0.551[c]	[b]
	(0.139)	(0.081)		(0.118)	(0.127)	
Portugal	−0.142	−0.173[b]	–	−0.272[a]	−0.123	–
	(0.100)	(0.089)		(0.109)	(0.085)	
Austria	−0.270[c]	−0.383[c]	–	−0.414[c]	−0.268[c]	–
	(0.099)	(0.054)		(0.131)	(0.080)	
Finland	−0.599[c]	−0.441[c]	–	−0.607[a]	−0.450[c]	–
	(0.151)	(0.119)		(0.242)	(0.135)	
Sweden	−0.373[c]	−0.808[c]	[c]	−0.478[c]	−0.692[c]	[c]
	(0.067)	(0.065)		(0.079)	(0.076)	

Dependent variable: natural logarithm of work earnings. Robust standard errors clustered by individual are below coefficients. Full regression estimates in Table A3. Earnings are calculated for an individual with 10 years of experience, high school diploma, married and with one child. For foreign born, earnings are measured at the time of arrival (duration equal to 0 years). For significance levels, foreign born in columns (1), (2), (4), and (5) are compared to natives, and in columns (3) and (6), foreign EU born are compared to non-EU born

[a]Significant at 1%
[b]Significant at 5%
[c]Significant at 10%
[d]Significant at 15%
Source: ECHP-Waves 1–7

earnings at arrival of the EU-born women are the lowest with respect to the native born (over 45% lower) are Finland, Luxembourg, Sweden, Greece, and Italy.

The earnings of migrants born outside the EU are significantly lower at migration than those of natives in all countries, except for women in Germany, the Netherlands, and Portugal and for men in the Netherlands. The lack of significant of the large negative coefficient estimated for non-EU men in the Netherlands is likely

Table 7 Differences in earnings of natives and of foreign born at arrival in destination countries as compared to those living in Germany, by gender

Destination	Men			Women		
	Native	Foreign born		Native	Foreign born	
		EU	Non-EU		EU	Non-EU
Germany	0	0	0	0	0	0
Denmark	−0.058[a]	−0.427[a]	−0.505[a]	0.105[a]	−0.275[a]	−0.275[a]
	(0.015)	(0.099)	(0.098)	(0.017)	(0.097)	(0.088)
Netherlands	0.164[a]	0.002	−0.234	−0.003	−0.418[a]	−0.009
	(0.011)	(0.07)	(0.705)	(0.017)	(0.113)	(0.090)
Belgium	−0.002	−0.088	−0.312[a]	0.096[a]	−0.279[b]	−0.231[b]
	(0.017)	(0.078)	(0.075)	(0.021)	(0.113)	(0.107)
Luxembourg	0.784[a]	0.380[a]	0.320[a]	0.851[a]	0.356[a]	0.290[c]
	(0.013)	(0.046)	(0.108)	(0.024)	(0.088)	(0.169)
France	0.005	−0.29[a]	−0.342[a]	0.118[a]	−0.225[a]	−0.137[c]
	(0.012)	(0.054)	(0.049)	(0.016)	(0.080)	(0.073)
United Kingdom	0.037[a]	0.035	−0.31[a]	−0.030[b]	−0.228[c]	−0.297[b]
	(0.012)	(0.156)	(0.081)	(0.015)	(0.132)	(0.103)
Ireland	0.155[a]	−0.26[a]	−0.015	0.071[a]	−0.359[a]	−0.993[a]
	(0.015)	(0.077)	(0.106)	(0.021)	(0.084)	(0.269)
Italy	−0.043[a]	−0.263[c]	−0.278[a]	0.237[a]	−0.297[c]	−0.181[c]
	(0.011)	(0.137)	(0.068)	(0.016)	(0.164)	(0.104)
Greece	−0.208[a]	−0.415[a]	−0.355[a]	−0.019	−0.525[a]	−0.427[a]
	(0.011)	(0.05)	(0.091)	(0.017)	(0.070)	(0.159)
Spain	−0.110[a]	−0.513[a]	−0.621[a]	0.003	−0.321[a]	−0.489[a]
	(0.011)	(0.136)	(0.074)	(0.017)	(0.117)	(0.126)
Portugal	−0.353[a]	−0.414[a]	−0.411[a]	−0.079[a]	−0.389[a]	−0.143[b]
	(0.013)	(0.097)	(0.082)	(0.018)	(0.108)	(0.072)
Austria	0.146[a]	−0.043	−0.122[b]	0.207[a]	−0.245[c]	−0.002
	(0.014)	(0.094)	(0.049)	(0.019)	(0.129)	(0.063)
Finland	−0.211[a]	−0.729[a]	−0.537[a]	−0.068[a]	−0.713[a]	−0.459[a]
	(0.019)	(0.15)	(0.116)	(0.020)	(0.240)	(0.129)
Sweden	−0.367[a]	−0.659[a]	−1.06[a]	−0.283[a]	−0.799[a]	−0.916[a]
	(0.013)	(0.06)	(0.059)	(0.015)	(0.075)	(0.007)

Calculations from estimates in Table A2. For foreigners, earnings are measured at the time of arrival. Robust standard errors clustered by individual are below coefficients

[a]Significant at 1%

[b]Significant at 5%

[c]Significant at 10%

Source: ECHP-Waves 1–7

related to the very small sample size of this group. Results from tests presented in columns (3) and (6) in Table 6 indicate that the earnings of individuals born outside of the EU are significantly lower than the EU born in some of the countries. Sweden is the country where the differences are the greatest and most significant overall. At migration, a man born outside the European Union earns around 81% less than a Swedish man and a non-EU-born woman around 70% less than a Swedish woman. These individuals earn at migration about 44 and 21% less than EU-born immigrants for men and women, respectively. In the UK and Spain the differences between the two groups of foreign workers (EU and non-EU) are also relatively sizable both for men and women, but only significant for men in the UK and for women in Spain. In Spain, those differences amount to lower earnings of the non-EU born of 14% for men and 26% for men. In the UK, the numbers are 38 and 16% for men and women respectively. In addition, men from outside the EU in Belgium earn a significant 25% less than their EU counterparts—a group that includes many EU bureaucrats—and women from outside the EU in Ireland earn a significant 73% less than those born in the EU.

Interestingly, for non-EU men in Ireland, non-EU women in Austria and both non-EU men and women in Finland earnings at arrival are higher than those of migrants from EU countries, though the difference is only marginally significant for Ireland. These groups of migrants are, on average, better educated than the population in their destinations. In Ireland, most of those immigrants are from the US and Canada, and in Austria and Finland, they arrive mainly from the former Soviet Union. Around 77% of migrants to Austria are from outside the EU, and Austria hosts a quarter of all non-EU European migrants in the sample.

To sum up, differences in earnings by nativity vary greatly across countries, with migrants in Germany and Portugal faring the best relative to natives and those in Sweden, Denmark, Luxembourg, and Spain, the worst—particularly among those not born in the EU.

Table 7 presents differences in earnings of the native and the foreign born in 14 countries from those of the same nativity living in Germany. That is, Germany is the benchmark with a value zero and all the other values in the table represent percentage deviations from German earnings. For example, the coefficient −0.058 for Danish native men means that men born in Denmark earn about 5.8% less than men born in Germany, other variables the same. Robust standard errors are included in the table.

Among native men and women, earnings are the highest in Luxembourg. The foreign born in Luxembourg also have the highest earnings of all, particularly among EU-born migrants. A close look at the composition of EU migrants in Luxembourg shows that there are both conventional economic migrants—mostly from Portugal—and those who work for the European Union institutions and who enjoy very high salaries. The earnings advantage in Luxembourg is smaller when the non-EU group is examined, but only around 10% of migrants in Luxembourg come from outside the EU, and these are mostly from Eastern Europe.

Among natives, men living in the UK and the Netherlands, Italian women and all individuals living in Austria and Ireland have higher net income from work than their German counterparts. Swedish workers and Portuguese men have the lowest net income of all. Again, it is important to remember that the dependent variable does not include any transfers that tend to be generous in Nordic countries.

Setting aside Luxembourg, among EU-born foreign men, those living in the Netherlands, the UK, Austria, and Germany receive the highest earnings. Among foreign EU women, Germany is by far, the best destination, followed by Austria, Ireland, France, and the UK—countries where foreign EU women typically earn at arrival around a quarter less than their counterparts in Germany. Sweden and Finland are the countries where the foreign EU born have the lowest net earnings compared to those living in Germany, over two-thirds less.

Earnings among foreign men born outside the European Union are, again, much lower in Nordic countries (Denmark, Sweden and Finland) and Spain in comparison to those in Germany where they fare the best. Earnings in Ireland and Austria follow closely those in Germany. Later, it is shown that in the case of Ireland, this may be traced to the particular composition of its immigration pool that contains a large proportion of men born in North America. Earnings for foreign women born outside the EU are more homogeneous across countries than those of men. Austria, the Netherlands, and Germany are the best destinations, followed closely by France, Italy, and Portugal. The lowest earnings for the group are found in Sweden and Ireland.

4.2 Gender differences in demographic variables

One of the aims of the paper is to study whether demographic variables are associated with differences in individual net work income by gender. Columns (1) to (4) in Table 8 include only coefficients of the demographic control variables for the general specifications employed in the paper. Columns (5) and (6) in Table 8 include the same set of variables and a language variable. Complete estimates for all specifications are included in the Appendix (Table A3). Interesting gender differences arise from the analysis of Table 8.

As expected, earnings increase with the level of education. Returns to education are higher for women than for men. Estimates in Table 8 columns (1) and (2) imply the earnings of women with tertiary education are 92% higher than those with less than upper secondary education. Differences for the same educational groups among men are only in the order of 65%. The increase in the differences for the same groups, to 103 and 71%, respectively, in columns (5) and (6) is related to changes in the sample—due to the unavailability of language data from the Netherlands, the UK, and Sweden—rather than to the inclusion of a control of language proficiency.

Years of experience in the work place—or years of potential experience, as estimated here—have a similar effect across gender. Women double their initial earnings after 12 years of experience and men after 12.5 years. Even though actual and potential experience are less close for women than for men, results are fairly similar when using experience as calculated as age minus the reported age at first job.

Individuals living with a partner, whether married or cohabiting, have higher earnings than single workers. Married men earn 3 to 4% more than those in consensual unions and around 32% more than single men. The fact that married men earn relatively more than those with other civil status—the "marriage premium"—has already drawn extensive attention in the literature (Korenman and Neumark 1991, 1992; Loh 1996). Stratton (2002) also finds that marriage is associated with higher wages than cohabitation. Controlling for the number of children in the household, married women earn around 7% more than single women but around 15 to 16% less than those in consensual unions. Waldfogel (1998) provides a good

review of the literature, analyzes the "family gap" in earnings between men and women, and argues that family factors, more than differences in human capital across gender are behind the gender earnings gap. The differences found between marriage and cohabitation for both men and women are consistent with the expectation that within cohabiting unions, there is less specialization and division of labor than in marriages (Willis and Michael 1994) although intrahousehold specialization among married couples may be dwindling (Light 2004).

The number of children in the household is associated with lower women's earnings of around 14% per child. Thus, while married women without children earn more than singles, married mothers with one child earn 7% less than single women without children. This result is consistent with the decline in wages

Table 8 Selected variables from a regression analysis of earnings by gender

	Men	Women	Men	Women	Men	Women
Less secondary	−0.241[a]	−0.339[a]	−0.245[a]	−0.345[a]	−0.268[a]	−0.410[a]
education	(0.006)	(0.008)	(0.006)	(0.008)	(0.007)	(0.010)
Tertiary education	0.412[a]	0.583[a]	0.414[a]	0.583[a]	0.443[a]	0.621[a]
	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)	(0.010)
Years experience	0.101[a]	0.107[a]	0.101[a]	0.107[a]	0.095[a]	0.103[a]
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Years experience	−0.002[a]	−0.002[a]	−0.002[a]	−0.002[a]	−0.002[a]	−0.002[a]
Squared	(0.00002)	(0.00002)	(0.00002)	(0.00003)	(0.00002)	(0.00003)
Years since	0.031[a]	0.030[a]	0.022[a]	0.020[a]	0.020[a]	0.016[a]
Migration	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
Sq. YSM	−0.00045[a]	−0.00037[a]	−0.00029[a]	−0.00019[b]	−0.00026[a]	−0.00012
	(0.00007)	(0.00009)	(0.00007)	(0.00009)	(0.00009)	(0.0001)
N. children	0.010[a]	−0.143[a]	0.010[a]	−0.143[a]	0.008[a]	−0.113[a]
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)
Married	0.321[a]	0.075[a]	0.319[a]	0.075[a]	0.320[a]	0.064[a]
	(0.008)	(0.009)	(0.008)	(0.009)	(0.009)	(0.010)
Cohabiting	0.280[a]	0.233[a]	0.279[a]	0.234[a]	0.274[a]	0.210[a]
	(0.009)	(0.010)	(0.009)	(0.010)	(0.011)	(0.013)
Group					0.116[a]	0.088[c]
Language∗Foreign					(0.039)	(0.047)
Foreign	−0.424[a]	−0.427[a]				
	(0.040)	(0.053)				
N. obs	316,182	231,457	316,182	231,457	251,836	173,307
Adj. R-Sq	0.28	0.20	0.29	0.20	0.28	0.21

Dependent variable: natural logarithm of work earnings. Robust standard errors clustered by individual are below coefficients. Complete estimates shown in Table A3 also include country dummy variables alone in all columns and interacted both with EU and with non-EU origin in columns (3) to (6). Language information is not available for the Netherlands, the UK, and Sweden. Therefore, these countries are not included in columns (5) and (6)

[a]Significant at 1%

[b]Significant at 5%

[c]Significant at 10%

Source: ECHP-Waves 1–7

associated to motherhood found in Neumark and Korenman (1994), Waldfogel (1998), and Lundberg and Rose (2000) among others. For men, the coefficient on the number of children is significant and positive, but negligible in size (around 1% per child) (as in Loh 1996). If the number of children is excluded from the specification, married women, on average, earn about 3% less than single women. Besides the bias from the omitted variable, this change in the relative ranking across marital status may also be related to the fact that the measure of potential experience employed here is farther away from actual experience for married women than for others, particularly, if they have interrupted (temporarily) their careers to bear children.[11]

The years that have lapsed since the migrant came to the destination and the square of years since migration are included in the regression in Table 8. Time in destination is associated with higher earnings. Given the estimated coefficients on years since arrival and foreign birth in Table 8 columns (1) and (2), it takes immigrant men around 19 years and immigrant women, 18 years, to earn what native workers earn on average, other variables being the same for both genders.[12] After 15 years in the destination country, the earnings disadvantage of foreign born over natives is only 6.7 and 6.0% for men and women, respectively. When the same specification is run separately by country, the timing of earnings convergence to natives' is extraordinarily similar (around 18 years) across countries.

Table A3 in the Appendix presents the proportion of migrants in each country whose mother tongue belongs to the same language group as the destination country. This information is not available for individuals living in the Netherlands, the UK, and Sweden. The proportions are very high for most countries, except for Germany, followed by Denmark. Around 74% of those migrating to Portugal, 45% of migrants in France, and 52% of immigrants living in Spain speak a language in the Romance group. This arises from the propensity among migrants to move to a country where, other things the same, the cost of adjustment is lower. A smaller linguistic distance between the origin and destination languages reduces this cost (Chiswick 1998; Chiswick and Miller 1995, 1998).[13]

The partial effect of same group language in earnings is negative in estimates that do not include country of destination variables (not shown here) as a higher proportion of migrants are from the same language group as the destination countries with lower average earnings. However, once country of destination variables are included in Table 8, columns (5) and (6), a group language match is associated with a statistically significant 9% increase in earnings for migrant women and a 12% increase for migrant men, compared to coming from a different linguistic group. Results are very similar if a variable for an exact language match is included instead. Further, when similar regressions are computed by considering

[11] See Lundberg and Rose (2000) for a recent analysis of the effect of intermittent careers on women's earnings.

[12] This is quite similar to the United States where the earnings catch up for economic migrants is about 15 years, other measured variables the same (Chiswick 1979, 1986). Others find evidence of a catch up for female migrants: Blau (1980) among women in the early 20th century waves of migration to the US and Field-Hendrey and Balkan (1991) in the 1970 and 1980 US Census. Interestingly, there does not appear to be a difference in the effect of duration in the destination on earnings across gender as Beach and Worswick (1993) find in the Canadian data.

[13] A similar phenomenon is found in Canada where immigrants to French-speaking Quebec come disproportionately from Romance language countries of origin.

only the subset of immigrants who are not citizens, as opposed to all foreign born, the results are extremely robust for men, but language does not seem to make a difference for noncitizen women's earnings.

The associated gain from language proficiency, however, varies across destination countries. When a simple interaction of language proficiency and France is added to the model, the earnings of immigrants in France are 20% higher if they speak a Romance language, but the general coefficient of group language match fails to achieve any significance level. When the variable that indicates a group language match is interacted with all destination country variables (in results

Table 9 Number of observations and shares of immigrants with positive work earnings by continent of origin for each destination country

	Continent of origin							
Country of destination	Asia	Oceania	Africa	Non-Eng America	English America	EU	Non-EU Europe	Total
Denmark	101		24	45	15	104	74	363
Belgium	19		154	24	4	424	67	692
Lux.	14		31	4	6	498	18	571
France	83		576	32	10	612	129	1,442
U.K.	122	25	80	48	42	154	44	515
Ireland	5	4	1	7	40	560	11	628
Italy	10		62	50	23	193	149	487
Spain	6		35	140	14	122	31	348
Portugal	12		336	32	6	166	10	562
Austria	42		3		1	188	457	691
Sweden	148	3	28	65	17	605	405	1,271
Total	562	32	1,330	447	178	3,626	1,395	7,570
	Continent of Origin							
Country of destination	Asia	Oceania	Africa	Non-Eng America	English America	EU	Europe non-EU	Total
Denmark	17.97		1.8	10.07	8.43	2.87	5.30	4.80
Belgium	3.38		11.58	5.37	2.25	11.69	4.80	9.14
Lux.	2.49		2.33	0.89	3.37	13.73	1.29	7.54
France	14.77		43.31	7.16	5.62	16.88	9.25	19.05
U.K.	21.71	78.12	6.02	10.74	23.6	4.25	3.15	6.80
Ireland	0.89	12.5	0.08	1.57	22.47	15.44	0.79	8.30
Italy	1.78		4.66	11.19	12.92	5.32	10.68	6.43
Spain	1.07		2.63	31.32	7.87	3.36	2.22	4.60
Portugal	2.14		25.26	7.16	3.37	4.58	0.72	7.42
Austria	7.47		0.23		0.56	5.18	32.76	9.13
Sweden	26.33	9.38	2.11	14.54	9.55	16.69	29.03	16.79
Total	100	100	100	100	100	100	100	100

Numbers correspond to observations and not to individuals. Final sample used in the analysis after deleting observations with missing values by relevant variables. Information on continents of origin is not available for Germany, the Netherlands, Greece, or Finland
Source: ECHP-Waves 1–7

not shown here) language proficiency is associated with a large boost in earnings for both men and women in Finland and France. In Finland—where a group language match effectively implies a perfect match—the coefficient implies a 50% gain that completely overcomes the disadvantage of a foreign birth. This result suggests a high proportion of returning families among immigrants in Finland. In France, the gains are in the order of 25%, similar to those for immigrant men in Portugal and Austria and smaller than the 50% found for men in Germany. Conversely, immigrant men in Spain with a native language of the Romance group have earnings 27% lower than those whose mother tongue belongs to another group language. In this instance, group language may be a proxy for geographic area of origin. As we see in the discussion below, Latin American men are at the bottom of the earnings distribution, other things being equal. For all the other

Table 10 Partial effect of region of birth on earnings for the foreign born compared to the native Born in that country, by gender

	Men			Women		
	Diff. from EU migrants			Diff. from EU migrants		
EU	−0.233[a]	−0.425[a]		−0.112	−0.289[a]	
	(0.060)	(0.058)		(0.070)	(0.068)	
Non-EU Europe	−0.512[a]	−0.565[a]	a	−0.388[a]	−0.462[a]	a
	(0.057)	(0.054)		(0.073)	(0.070)	
English America	−0.417[a]	−0.486[a]	–	−0.255	−0.344[b]	–
	(0.133)	(0.127)		(0.159)	(0.157)	
No Eng. America	−0.697[a]	−0.629[a]	b	−0.424[a]	−0.472[a]	b
	(0.093)	(0.092)		(0.107)	(0.104)	
Asia	−0.677[a]	−0.655[a]	a	−0.322[a]	−0.344[a]	–
	(0.078)	(0.075)		(0.087)	(0.084)	
Africa	−0.433[a]	−0.484[a]	–	−0.022	−0.147[c]	a
	(0.064)	(0.061)		(0.079)	(0.076)	
Oceania	0.105	0.030	a	−0.122	−0.084	–
	(0.158)	(0.154)		(0.315)	(0.313)	
Constant	8.217[a]	8.194[a]		8.010	7.979[a]	
	(0.013)	(0.020)		(0.015)[a]	(0.024)	
Destination Country dummies	No	Yes		No	Yes	
N. obs	221,014	221,014		160,467	160,467	
Adj. R-Sq	0.24	0.28		0.18	0.20	

Dependent variable: natural logarithm of work earnings. Robust standard errors clustered by individual are below coefficients. Complete estimates also include interview year dummy variables as well as individual characteristics. The benchmark country is Belgium for columns (2) and (5). Information on continents is not available for Germany, the Netherlands, Greece, and Finland; therefore, these countries are not included in the sample

[a]Significant at 1%

[b]Significant at 5%

[c]Significant at 10%

Source: ECHP-Waves 1–7

countries, the coefficient is not significant. Results across for other countries do not change if Finland and France are eliminated from the sample.

4.3 Earning differences across continents of origin

The ECHP provides information on the country of birth for broad geographic areas, although information on continents of origin is not available for Germany, the Netherlands, Greece, and Finland. Thus, these countries are not included in the estimates. Table 9 and Table A5 in the Appendix present data on the distribution of destination countries for migrants from each continent. Table 9 includes the number of observations per continent and its shares across destination countries for the sample of those who report positive net work income used in this study. Table A4 includes the distribution of foreign born by continent across destinations for the complete ECHP dataset. From a total of 29,733 observations of immigrants with information on continent of origin in the ECHP data, the sample in the analysis includes 7,570 observations with positive work income and complete information on all covariates.

The number of immigrants from Oceania is fairly small and they are mostly concentrated in the UK, Ireland, and Italy. Asians are almost absent from Southern Europe. Over half of those coming from Africa choose France as their destination. The majority of them, around 85%, are natives of former French colonies, particularly in North Africa. Among immigrants from the Western Hemisphere, English speakers move predominantly to either the UK or Ireland, whereas, those from South and Central America choose mainly Spain, Portugal, and Italy. Clearly, there is a tendency for migrants from the Western Hemisphere to move to European destinations where their origin language is, or is very close to, the destination language. Table 10 presents estimates for the analysis of earnings including variables for the continents of origin of the foreign born: European Union, non-EU Europe, English America (US and Canada), non-English America, Asia, Africa, and Oceania. Native Germans are the benchmark.

In pooled regressions without controls for country of destination, in Table 10 columns (1) and (4), the difference between foreign EU born and natives is estimated to be a marginally significant 11% lower earnings for women and twice as much for men at arrival. Being born outside the European Union is associated with an additional loss of earnings except among those born in Oceania. The net work income of this latter group is not significantly different from that of natives. Among continents, the earnings of Asian and Central and South American men are over 67% lower than those of natives. Women born in non-English speaking American countries are at the bottom of the distribution with earnings 42% lower than natives. Overall, the relative difference in earnings among immigrants from different origins compared to natives is larger for men than for women.

When the country of destination variables are included in Table 10, columns (2) and (5), the relative difference in earnings between non-EU immigrants and natives widens, whereas, the difference in earnings between immigrants born either inside or outside of the European Union diminishes. This result accords with the finding in Table 3 when all 15 countries are included in the sample. Coefficients for all continents except for the EU are very stable across both specifications. Table 10, columns (3) and (6), present significance levels of the difference between the

earnings of individuals born in the EU and individuals born in other geographical areas in the model that includes country of origin variables.

In Table 10 columns (2) and (5), the net earnings of the foreign born in another EU country are 42 and 29% lower at arrival than natives, for men and for women, respectively. Incomes for non-EU born Europeans are 56 and 46% lower for men and for women than natives' income and significantly different from earnings of EU born. Conversely, the earnings of English Americans are not significantly different from those born in the EU. Men born in South and Central America have significantly lower earnings than non-EU Europeans in pooled results but not when the variables for country of destination are included in Table 10. The concentration of Central and South American immigrants in lower income countries of Southern Europe explains why the implied gap diminishes from 18% in pooled results in Table 10, column (1), to only a nonsignificant 6% in column (2).

The earnings of Asian born men are significantly lower than those born in the EU and in Eastern Europe. The relative difference between Asian men and Eastern European men moves from 16% in the pooled sample to only 9% when variables for country of destination are included in Table 10 column (2). Asian women earn over 12% more than Eastern Europeans, and their earnings are not significantly different from those of women born in the EU. The few migrants from Oceania are highly geographically concentrated—in the UK, Ireland, and Italy—and are moving from one high-income to another high-income area. This may explain why the earnings for an Australian in Europe are not significantly different from those of a native worker.

Finally, the strongly significant and stable coefficient in all estimates for African migrants deserves some discussion. Not only are the earnings of African men about 8% higher than Eastern Europeans and not significantly different than EU born in Table 10, column (2), but also, African women, on average, do significantly better than EU-born foreigners. African-born women earnings are 36% higher than those of Eastern European women and 9% higher than EU-born migrants when destination country variables are not included in Table 10 column (4), and still, 31 and 14% better, respectively, when country variables are added in column (5).

There are several potential explanations for this finding. First, half of the migrants from Africa in the sample live in France, and French income data in the analysis is gross and not net of taxation. Still, the difference in the earnings advantage with respect to EU born does not decline and remains significant when destination country-fixed effects are included in the model. Second, as most of these migrants in France were born in French speaking former colonies in Africa (85% come from North Africa), their language skills provide better job opportunities, as was just discussed. Finally, the long tradition of African migration into France may provide networks to newcomers. When similar regressions are computed excluding France, the coefficient for African women goes down slightly to −0.163 and is statistically significant (and the coefficient of African men increases to −0.407). In parallel, as the coefficient for non-EU born remains at −0.421, African women still earn 26% more than Eastern Europeans and 13% more than EU-born migrants in that sample.

Interestingly, the adjusted R-squared of the earnings model does not increase when either a variable for foreign origin or geographic area of origin-fixed effects are included in the estimates. This indicates that differences in immigrant per-

formance vary little by continent of origin but mostly by underlying demographic variables and that the share of immigrants is relatively small in the sample.

5 Conclusions

This paper has presented, for the first time, an analysis of immigrant earnings that focuses on differences by gender, country of origin, and country of destination. It is possible to do this using the integrated set of data from the European Community Household Panel (ECHP) (1994–2000). Overall, immigrants in Western Europe earn around 40% less at arrival than the native born in that destination with the earnings differential greater for those born outside the EU than for immigrants born in other EU countries. The earnings disadvantage of immigrants relative to the natives varies greatly across countries, with migrants in Germany and Portugal faring the best relative to natives and those in Sweden, Denmark, Luxembourg, and Spain, the worst—particularly among those not born in the EU. In absolute terms, however, immigrants in Luxembourg, Germany, Netherlands, and Austria have the highest earnings. Gender differences in earnings are more important among those born outside the European Union, with women doing relatively better than men compared to the native born of the same gender. By continent, Asian, Latin-American, and Eastern European men have the lowest earnings. Latin-American and Eastern European women are at the bottom of the women's distribution.

Returns to education are larger for immigrant and native-born women than for men. With regard to living arrangements, other things equal, women in consensual unions earn 16% more than married women and 23% more than singles. The presence of one child, however, reduces earnings of married women to 7% less than those of singles. Married men outperform those in consensual unions by 3% and singles by 32%.

Immigrants tend to gravitate to countries with a close linguistic and cultural background, and immigrants earn more if their origin language is the same as or close to that of the destination than if the languages differ—around 12 and 9% for men and women, respectively. There is a tendency for an earnings catch-up. The immigrant-native earnings gap narrows with duration in the destination and is closed at about 18-years duration, other measured variables the same.

While addressing many matters, this paper also raises new issues that warrant further research. To what extent are the differences in the immigrant/native earnings ratios by gender in the destinations due to differences in the selectivity of immigrants from the various origins to the various destinations? To what extent do differences in the transferability of skills across origins and destinations play a role? To what extent do differences in the destinations in terms of flexibility in labor markets, public assistance to immigrants, receptivity to immigrants, access to job training and destination language training, and discrimination play a central role?

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Appendix

Table A1 Number of individuals and of foreign-born in the sample by destination country in the ECHP dataset

Country of destination	N. of obs.	Percent total (%)	N. Foreign born	Percent foreign (%)	Percent foreign female (%)	Percent foreign EU born (%)
Germany	110,204	11.03	13,797	12.52	47.97	38.39
Denmark	33,031	3.3	1,351	4.09	57.59	41.45
Netherlands	63,533	6.36	844	1.33	53.67	61.26
Belgium	40,123	4.01	4,276	10.66	52.71	65.19
Luxembourg	39,785	3.98	12,293	30.90	51.84	88.23
France	85,057	8.51	7,428	8.73	51.24	39.58
U.K.	87,820	8.79	2,991	3.41	55.27	52.16
Ireland	49,093	4.91	2,163	4.41	56.96	87.70
Italy	115,759	11.58	2,083	1.80	58.57	37.97
Greece	76,329	7.64	3,571	4.68	59.59	90.79
Spain	103,815	10.39	1,823	1.76	55.29	43.01
Portugal	80,522	8.06	2,429	3.02	52.66	39.65
Austria	40,315	4.03	2,978	7.39	57.96	25.62
Finland	36,345	3.64	1,332	3.66	47.52	25.83
Sweden	37,726	3.77	4,132	10.95	51.62	39.38
Total	999,457	100	63,491	6.35	52.44	55.00

Source: ECHP-Waves 1–7

Table A2 Proportion of adult native and foreign-born with positive work earnings, by gender

Country	Percent reporting positive work earnings (%)			
	Men		Women	
	All	Foreign	All	Foreign
Germany	0.73	0.75	0.54	0.51
Denmark	0.78	0.69	0.67	0.54
Netherlands	0.71	0.63	0.52	0.52
Belgium	0.67	0.65	0.48	0.38
Luxembourg	0.69	0.78	0.39	0.52
France	0.66	0.63	0.50	0.42
United Kingdom	0.72	0.68	0.59	0.55
Ireland	0.71	0.74	0.43	0.51
Italy	0.59	0.70	0.33	0.41
Greece	0.61	0.57	0.27	0.30
Spain	0.58	0.57	0.29	0.36

Table A2 (continued)

Country	Percent reporting positive work earnings (%)			
	Men		Women	
	All	Foreign	All	Foreign
Portugal	0.64	0.67	0.39	0.50
Austria	0.68	0.66	0.43	0.42
Finland	0.79	0.77	0.73	0.68
Sweden	0.77	0.65	0.72	0.60
Total	0.67	0.70	0.46	0.48

Share of individuals from the complete ECHP dataset that report positive net work income
Source: ECHP-Waves 1–7

Table A3 Regression analysis of earnings with country interacted both with foreign origin and non-EU birth, by gender

	Men	Women	Men	Women	Men	Women
Less secondary education	−0.241[a]	−0.339[a]	−0.245[a]	−0.345[a]	−0.268[a]	−0.410[a]
	(0.006)	(0.008)	(0.006)	(0.008)	(0.007)	(0.010)
Tertiary education	0.412[a]	0.583[a]	0.414[a]	0.583[a]	0.443[a]	0.621[a]
	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)	(0.010)
Years experience	0.101[a]	0.107[a]	0.101[a]	0.107[a]	0.095[a]	0.103[a]
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Years experience squared	−0.002[a]	−0.002[a]	−0.002[a]	−0.002[a]	−0.002[a]	−0.002[a]
	(0.00002)	(0.00002)	(0.00002)	(0.00003)	(0.00002)	(0.00003)
Years since migration	0.031[a]	0.030[a]	0.022[a]	0.020[a]	0.020[a]	0.016[a]
	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
Sq. YSM	−0.00045[a]	−0.00037[a]	−0.00029[a]	−0.00019[b]	−0.00026[a]	−0.00012
	(0.00007)	(0.00009)	(0.00007)	(0.00009)	(0.00009)	(0.0001)
N. children	0.010[a]	−0.143[a]	0.010[a]	−0.143[a]	0.008[a]	−0.113[a]
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)
Married	0.321[a]	0.075[a]	0.319[a]	0.075[a]	0.320[a]	0.064[a]
	(0.008)	(0.009)	(0.008)	(0.009)	(0.009)	(0.010)
Cohabiting	0.280[a]	0.233[a]	0.279[a]	0.234[a]	0.274[a]	0.210[a]
	(0.009)	(0.010)	(0.009)	(0.010)	(0.011)	(0.013)
Group language					0.116[a]	0.088[c]
					(0.039)	(0.047)
Foreign	−0.424[a]	−0.427[a]				
	(0.040)	(0.053)				
Germany-EU[d]			−0.081	0.038	−0.045	0.112
			(0.052)	(0.074)	(0.056)	(0.080)
Denmark-EU[d]			−0.450[a]	−0.342[a]	−0.450[a]	−0.342[a]
			(0.105)	(0.097)	(0.109)	(0.104)
Netherlands-EU[d]			−0.243[b]	−0.377[a]		
			(0.112)	(0.112)		
Belgium-EU[d]			−0.167[c]	−0.337[a]	−0.215[b]	−0.344[a]
			(0.091)	(0.127)	(0.094)	(0.132)

Table A3 (continued)

	Men	Women	Men	Women	Men	Women
Luxembourg-EU[d]			−0.485[a]	−0.457[a]	−0.462[a]	−0.419[a]
			(0.051)	(0.082)	(0.053)	(0.084)
France-EU[d]			−0.376[a]	−0.305[a]	−0.417[a]	−0.295[a]
			(0.072)	(0.089)	(0.080)	(0.094)
United Kingdom-EU[d]			−0.083	−0.160		
			(0.154)	(0.132)		
Ireland-EU[d]			−0.496[a]	−0.392[a]	−0.516[a]	−0.382[a]
			(0.086)	(0.093)	(0.090)	(0.099)
Italy-EU[d]			−0.301[b]	−0.496[a]	−0.355[b]	−0.489[a]
			(0.148)	(0.170)	(0.155)	(0.173)
Greece-EU[d]			−0.288[a]	−0.468[a]	−0.347[a]	−0.470[a]
			(0.057)	(0.073)	(0.062)	(0.080)
Spain-EU[d]			−0.484[a]	−0.286[b]	−0.526[a]	−0.274[b]
			(0.139)	(0.118)	(0.143)	(0.121)
Portugal-EU[d]			−0.142	−0.272[b]	−0.214[b]	−0.288[b]
			(0.100)	(0.109)	(0.103)	(0.116)
Austria-EU[d]			−0.270[a]	−0.414[a]	−0.336[a]	−0.443[a]
			(0.099)	(0.131)	(0.102)	(0.134)
Finland-EU[d]			−0.599[a]	−0.607[b]	−0.616[a]	−0.570[b]
			(0.151)	(0.242)	(0.150)	(0.241)
Sweden-EU[d]			−0.373[a]	−0.478[a]		
			(0.067)	(0.079)		
Germany-no-EU[e]			−0.115[b]	−0.059	−0.082	0.016
			(0.047)	(0.068)	(0.052)	(0.074)
Denmark-no-EU[e]			−0.562[a]	−0.439[a]	−0.549[a]	−0.404[a]
			(0.101)	(0.098)	(0.101)	(0.103)
Netherlands-no-EU[e]			−0.513	−0.065		
			(0.713)	(0.114)		
Belgium-no-EU[e]			−0.425[a]	−0.386[a]	−0.454[a]	−0.369[a]
			(0.084)	(0.117)	(0.089)	(0.121)
Luxembourg-no-EU[e]			−0.579[a]	−0.620[a]	−0.567[a]	−0.589[a]
			(0.109)	(0.168)	(0.107)	(0.166)
France-no-EU[e]			−0.462[a]	−0.314[a]	−0.479[a]	−0.306[a]
			(0.062)	(0.085)	(0.065)	(0.090)
United Kingdom-no-EU[e]			−0.462[a]	−0.326[a]		
			(0.087)	(0.110)		
Ireland-no-EU[e]			−0.285[b]	−1.123[a]	−0.309[b]	−1.127[a]
			(0.126)	(0.272)	(0.132)	(0.274)
Italy-no-EU[e]			−0.350[a]	−0.477[a]	−0.386[a]	−0.480[a]
			(0.078)	(0.110)	(0.082)	(0.114)
Greece-no-EU[e]			−0.262[a]	−0.467[a]	−0.304[a]	−0.482[a]
			(0.092)	(0.155)	(0.097)	(0.161)
Spain-no-EU[e]			−0.626[a]	−0.551[a]	−0.661[a]	−0.568[a]
			(0.081)	(0.127)	(0.086)	(0.129)
Portugal-no-EU[e]			−0.173[c]	−0.123	−0.243[a]	−0.156[c]
			(0.089)	(0.085)	(0.095)	(0.092)

Table A3 (continued)

	Men	Women	Men	Women	Men	Women
Austria-no-EU[e]			−0.383[a]	−0.268[a]	−0.378[a]	−0.244[a]
			(0.054)	(0.080)	(0.056)	(0.084)
Finland-no-EU[e]			−0.441[a]	−0.450[a]	−0.472[a]	−0.457[a]
			(0.119)	(0.135)	(0.119)	(0.138)
Sweden-no-EU[e]			−0.808[a]	−0.692[a]		
			(0.065)	(0.076)		
Constant (Germany)	8.154[a]	7.824[a]	8.133[a]	7.804[a]	8.176[a]	7.799[a]
	(0.012)	(0.015)	(0.013)	(0.016)	(0.014)	(0.017)
Denmark	−0.088[a]	0.077[a]	−0.058[a]	0.105[a]	−0.064[a]	0.094[a]
	(0.014)	(0.017)	(0.015)	(0.017)	(0.015)	(0.017)
Netherlands	0.138[a]	−0.029[c]	0.164[a]	−0.003		
	(0.011)	(0.017)	(0.011)	(0.017)		
Belgium	−0.024	0.069[a]	−0.002	0.096[a]	−0.004	0.075[a]
	(0.016)	(0.021)	(0.017)	(0.021)	(0.017)	(0.021)
Luxembourg	0.746[a]	0.809[a]	0.784[a]	0.851[a]	0.786[a]	0.863[a]
	(0.012)	(0.023)	(0.013)	(0.024)	(0.013)	(0.024)
France	−0.029[b]	0.093[a]	0.005	0.118[a]	0.009	0.114[a]
	(0.012)	(0.016)	(0.012)	(0.016)	(0.012)	(0.016)
United Kingdom	0.011	−0.055[a]	0.037[a]	−0.030[b]		
	(0.012)	(0.015)	(0.012)	(0.015)		
Ireland	0.123[a]	0.036[c]	0.155[a]	0.071[a]	0.149[a]	0.055[a]
	(0.014)	(0.020)	(0.015)	(0.021)	(0.015)	(0.021)
Italy	−0.070[a]	0.208[a]	−0.043[a]	0.237[a]	−0.034[a]	0.240[a]
	(0.011)	(0.015)	(0.011)	(0.016)	(0.011)	(0.016)
Greece	−0.232[a]	−0.052[a]	−0.208[a]	−0.019	−0.206[a]	−0.027
	(0.011)	(0.016)	(0.011)	(0.017)	(0.011)	(0.017)
Spain	−0.140[a]	−0.027[c]	−0.110[a]	0.003	−0.104[a]	0.001
	(0.011)	(0.016)	(0.011)	(0.017)	(0.011)	(0.017)
Portugal	−0.377[a]	−0.102[a]	−0.353[a]	−0.079[a]	−0.343[a]	−0.062[a]
	(0.013)	(0.017)	(0.013)	(0.018)	(0.014)	(0.018)
Austria	0.120[a]	0.185[a]	0.146[a]	0.207[a]	0.148[a]	0.208[a]
	(0.013)	(0.019)	(0.014)	(0.019)	(0.014)	(0.020)
Finland	−0.241[a]	−0.097[a]	−0.211[a]	−0.068[a]	−0.216[a]	−0.086[a]
	(0.019)	(0.020)	(0.019)	(0.020)	(0.019)	(0.020)
Sweden	−0.417[a]	−0.332[a]	−0.367[a]	−0.283[a]		
	(0.013)	(0.015)	(0.013)	(0.015)		
N. obs	316,182	231,457	316,182	231,457	251,836	173,307
Adj. R-Sq	0.28	0.20	0.29	0.20	0.28	0.21

Dependent variable: natural logarithm of net work earnings. Earnings are gross for France and Finland. Robust standard errors clustered by individual are below coefficients. Language information is not available for the Netherlands, UK, and Sweden. Therefore, these countries are not included in columns (3) and (4)

[a]Significant at 1%

[b]Significant at 5%

[c]Significant at 10%

[d]EU indicates foreign born in the EU living in that country

[e]No-EU indicates foreign born outside the EU living in that country

Source: ECHP-Waves 1–7

Table A4 Proportion of immigrants with group language match

Country	Group language
Germany	13.0
Denmark	27.7
Netherlands	N/A
Belgium	52.9
Luxembourg	48.4
France	44.7
United Kingdom	N/A
Ireland	44.6
Italy	57.1
Greece	58.2
Spain	52.4
Portugal	73.9
Austria	36.0
Finland	38.8
Sweden	N/A
Total	40.1

Group language=1 when the linguistic group of the language of the destination country and the migrant's mother tongue match. See text for details
Source: ECHP-Waves 1–7

Table A5 Number of observations of immigrants by continent of origin for each destination country in the ECHP Dataset

	Continent of origin							
Country of destination	Asia	Oceania	Africa	Non-Eng America	Eng America	EU	Non-EU Europe	Total
Denmark	320	4	64	70	35	405	264	1,162
Belgium	95		706	83	14	1,983	401	3,282
Lux.	25		80	9	15	1,711	103	1,943
France	390		2,998	78	13	2,530	621	6,630
U.K.	618	75	262	125	90	489	150	1,809
Ireland	59	18	20	7	134	1,884	25	2,147
Italy	34	34	345	205	68	728	581	1,995
Spain	23	2	186	679	14	715	131	1,750
Portugal	20		1,074	280	39	622	33	2,068
Austria	146		28	27	27	693	1,917	2,838
Sweden	609	10	152	169	66	1,611	1,492	4,109
Total	2,339	143	5,915	1,732	515	13,371	5,718	29,733

Total observations of immigrants in the ECHP dataset with continent of origin available. Information on continents of origin is not available for Germany, Netherlands, Greece, or Finland
Source: ECHP-Waves 1–7

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