DISCUSSION PAPER SERIES

(The Struggle for) Refugee Integration into the Labour Market: Evidence from Europe

Francesco Fasani
Tommaso Frattini
Luigi Minale

I Z A Institute of Labor Economics

Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

(The Struggle for) Refugee Integration into the Labour Market: Evidence from Europe

Francesco Fasani
QMUL, CReAM, IZA and CEPR

Tommaso Frattini
University of Milan, LdA, CReAM, IZA and CEPR

Luigi Minale
Universidad Carlos III de Madrid, CReAM and IZA

ABSTRACT

(The Struggle for) Refugee Integration into the Labour Market: Evidence from Europe*

In this paper, we use repeated cross-sectional survey data to study the labour market performance of refugees across several EU countries and over time. In the first part, we document that labour market outcomes for refugees are consistently worse than those for other comparable migrants. The gap remains sizeable even after controlling for individual characteristics as well as for unobservables using a rich set of fixed effects and interactions between area of origin, entry cohort and destination country. Refugees are 11.6 percent less likely to have a job and 22.1 percent more likely to be unemployed than migrants with similar characteristics. Moreover, their income, occupational quality and labour market participation are also relatively weaker. This gap persists until about 10 years after immigration. In the second part, we assess the role of asylum policies in explaining the observed refugee gap. We conduct a difference-in-differences analysis that exploits the differential timing of dispersal policy enactment across European countries: we show that refugee cohorts exposed to these polices have persistently worse labour market outcomes. Further, we find that entry cohorts admitted when refugee status recognition rates are relatively high integrate better into the host country labour market.

Corresponding author:
Luigi Minale
Department of Economics
Universidad Carlos III de Madrid
Calle Madrid 126
28903 Getafe
Spain
E-Mail: lminale@eco.uc3m.es

1. Introduction

Europe has recently experienced a major refugee crisis. The total number of individuals with recognized refugee status who reside in the EU15 area increased from approximately 1 million in 2014 to more than 1.8 million in 2016. Over the same three years, the total number of asylum applications received by EU15 countries reached an unprecedented figure of 2.6 million (UNHCR, 2017). A large fraction of these claims still needs to be processed. This dramatic increase in those seeking protection sparked a heated debate in Western countries about refugee impacts on receiving societies and on adequate policies for dealing with this phenomenon. One crucial aspect of this debate is the extent to which Western countries can effectively integrate asylum seekers into their labour markets and societies (Facchini et al. 2006; Fernández-Huertas Moraga and Rapoport 2015; Hatton 2015, 2017).

For the refugees themselves, a rapid assimilation is obviously desirable: after being forced to leave their homes and undergo strenuous trips to reach safe countries, the possibility of a new life in which to productively employ existing skills and gain new ones is of crucial importance. Indeed, labour market activity prevents destitution, welfare dependency and human capital depreciation, while possibly helping to ameliorate the psychological distress often associated with the refugee experience (Porter and Haslam 2005). Fostering the economic integration of refugees is also highly desirable for host countries because: although it requires an initial investment, better integrated refugees are less likely to rely on the welfare state in the future and can begin contributing to it earlier (Aiyar et al. 2016). Moreover, given that citizen predisposition to accept refugees seems to depend on these latter's potential economic contribution (Bansak et al. 2016), failed integration in the present may make it harder for host countries to welcome refugees in the future. At the same time, source countries have a strong

interest in seeing their citizens well integrated abroad. In a world where mobility-related economic gains can be large (Clemens 2011; Kennan 2013), emigration represents a prominent path to economic development (Clemens and Pritchett 2008), one with important consequences for the welfare of those left behind especially in countries experiencing hardship due to conflict and violence.[1]

Yet despite its current policy relevance, the integration of refugees into the labour market is still an understudied area relative to the large body of evidence on the assimilation of economic migrants.[2] The existing research on refugee integration paths is in fact limited to only a few receiving countries, often because data allowing explicit differentiation of immigrants by entry category are scarce (Bevelander 2016).[3] Nevertheless, evidence from both North America and selected European countries (Cortes 2004; Bevelander and Pendakur 2014; Bakker et al., 2016; Bratsberg et al. 2014 and 2017; Ruiz and Vargas-Silva 2017b; Sarvimäki, 2017) hints at a large initial labour market disadvantage of refugees, albeit one that tends to shrink over time.

Our paper contributes to the existing literature in several ways. We provide the first comprehensive analysis of the labour market performance of refugees vis-à-vis comparable migrants across several EU countries and over time. In making this comparison, we not only employ very recently released repeated cross-sectional survey data but condition on both

---

[1] Better integrated refugees can provide more economic support via remittances to relatives and friends remaining in the origin and neighbouring countries, potentially mitigating the adverse effects of displacement. More transfers to the internally displaced population may also help prevent the propagation of instability and violence against bordering countries (Salehyan and Gleditsch 2006; Salehyan 2008). In addition, if improved conditions in home countries prompt refugee migrants to return home, the skills and working experience accumulated in host countries will prove crucial to their reintegration and in generating economic growth in source countries (see e.g. Bahar et al. 2017).

[2] See De la Rica, Glitz and Ortega (2015) for a recent review of the literature on immigrant integration, and Bevelander (2016) for a concise up-to-date review of the evidence on refugee labour market integration.

[3] Some studies rely on country of origin and/or entry cohort data to identify immigrants likely to be refugees (e.g. Cortes 2004). Even the administrative record data to which researchers have recently begun gaining access is limited to only a few host countries (see Bratsberg et al. 2017 for Norway, Luik et al. 2016 for Sweden and Hainmueller et al. 2016 for Switzerland), while a longitudinal refugee survey conducted in the UK in 2005 and 2009 (Ruiz and Vargas-Silva 2017a) suffered extremely high attrition and was discontinued.

observable personal characteristics and unobservable factors (captured by a rich set of fixed effects) common to individuals migrating from the same area, belonging to the same arrival cohort and choosing the same destination country. In particular, the repeated cross-sectional nature of the data allows us to observe different random samples of the same immigrant cohorts at two different points in time, thereby expanding the existing knowledge on refugee integration dynamics. This data feature also enables us to credibly reconstruct refugee assimilation profiles and assess whether they converge to the levels of comparable economic migrants, and if so, after how many years. We also provide insights into how asylum policies at time of arrival explain the residual gap in labour market integration between refugees and other migrants. To do so, we employ a difference-in-differences analysis that exploits both changes over time in policy implementation across European countries and heterogeneity in terms of arrival cohort of the immigrant population within each country. Using this approach, we measure the effect on integration outcomes of the geographic dispersion of refugees upon arrival (dispersal policies) and of the uncertainty in the asylum process (refugee status recognition rates and application processing time).

We find that whereas immigrant performance in European labour markets is generally worse than that of natives along many dimensions (e.g. employment probability, likelihood of working in a skilled occupation, earned income), the outcomes for refugees are consistently worse than those for either EU or non-EU other migrants. Not only does this labour market gap not seem motivated by the different observable individual characteristics, but 60–80 percent of the "refugee gap" conditional on age, gender and education remains unexplained even when we control for unobservables using origin area, entry cohort and destination country fixed effects, and the interactions between them. Indeed, refugee employment and unemployment probabilities

result being 7.8 percentage points (11.6 percent) below and 3.1 percentage points (22.1 percent) above, respectively, those of similar non-refugee migrants. The refugees that struggle most are those from areas that account for the majority of current refugee waves (i.e. Africa and the Middle East). Our results also suggest that the worse health status and lower language proficiency of refugees may partly explain their poor labour market performance. In the second part of the paper, we show that geographic dispersal policies may be detrimental for refugee integration, an effect seemingly related to inefficient refugee allocation upon arrival given that it diminishes over time as refugees are eventually allowed to relocate. Finally, our results also indicate that refugees who arrived in countries and years characterized by a relatively high share of applicants awarded full refugee status exhibit stronger labour market integration.

The paper unfolds as follows. Section 2 presents a review of the existing research and a discussion of potential channels for the worse labour market performance of refugees relative to other migrants. Section 3 then introduces our data and provides relevant descriptive statistics. Section 4 provides preliminary evidence on the labour market outcomes of different migrant groups relative to natives. Section 5 reports the results of our main empirical analysis of refugees versus other comparable migrants, in particular our findings on area heterogeneity, assimilation, entry conditions and non-labour market outcomes. Section 6 then presents the findings of our difference-in-differences analysis assessing the role of asylum policies, after which Section 7 concludes with a brief discussion of policy implications.

2. Refugee Labour Market Integration

Existing studies on the economic integration of refugees in select host countries generally point to the existence of a sizeable refugee gap. Refugees generally have worse labour market outcomes not only with respect to natives but also to other immigrant groups. Nonetheless, the

few articles addressing the economic assimilation of refugees over time reach different conclusions depending on context (see Bevelander 2016 for a review).[4] We focus our main analysis on comparing refugees with similar migrants who have not sought humanitarian protection. In this latter case, the existence of a refugee gap is hardly surprising: the refugees have been exposed to violence, conflict and persecution and been forced to undergo an undesired and unplanned emigration to the host country.[5] They can thus reasonably be expected to face a more difficult struggle with integration than economic migrants, especially upon arrival. What is striking, however, is the size of the observable gap revealed by the data and its persistence over time.

As regards reasons for the observed gap, because our comparison of one type of migrant with another eliminates the major measurement problems common in studies comparing migrants with natives having similar education and host country work experience, we can rule out certain potential explanations. For example, discrimination in the labour market and obstacles to the recognition of foreign qualifications are likely to affect similar migrants in similar ways, irrespective of migration status.

More viable explanations for the apparently systematic labour market disadvantage include differences in the selection and self-selection mechanisms of forced versus voluntary migration. Indeed, whereas host countries can select economic migrants based on their characteristics, and

---

[4] Whereas Cortes (2004) shows that refugee economic outcomes in the U.S. overtake those of economic immigrants after about 10 years, Bevelander and Pendakur (2014) document that refugees in Canada converge towards economic migrants but never reach their level of assimilation. For refugees in Norway, Bratsberg et al. (2017) identify a non-monotonic integration path along which the employment differential with respect to natives sharply decreases in the first 5 years since arrival but then starts diverging again. In Sweden, Hansen and Lofstrom (2003) show that refugees assimilate out of welfare at a faster rate than other immigrants.

[5] As documented in our empirical analysis (see section 5.5), the legacy of these traumatic experiences is typically visible in refugees' poorer physical (e.g. Burnett and Peel 2001) and mental (e.g. Phillimore 2011) health status relative to those of other migrants even years after arrival, whereas their poorer fluency in the host country language is probably related to the unplanned nature of their migration.

economic migrants can select their destinations based on a higher demand for their own skills, such selection is not typically possible in forced migration.[6] In addition to permitting comparison of refugees with other migrants having the same observable characteristics (e.g. gender, age, education, area of origin), our data also enable us to condition on a rich set of fixed effects that capture the unobservable characteristics, shocks, determinants and other factors common to, for example, all individuals emigrating from a certain area in the same year or all individuals arriving in a specific host country at the same time. The extent to which the inclusion of these fixed effects reduces the observed gap is informative about the role of selection pattern differences in determining the relative outcomes of refugees versus other migrants.

Another potential explanation for the observed "refugee gap" may be that economic conditions on arrival in the host country play a different role for refugees than for economic migrants. For example, several studies document that labour market conditions at the time of worker entry may have long-lasting consequences for individual careers.[7] Although these scarring effects may also be expected to affect immigrants, the existing evidence is both limited and mixed.[8] Moreover, because refugee migration decisions are driven mostly by push rather than pull factors (Hatton 2009), they are likely to be less responsive to the state of the host country's economy than those of economic migrants, increasing the chance of arrival during bad times and permanently

---

[6] On the one hand, countries that are signatories of the Geneva Convention on Refugees have no legal room to formally screen asylum seekers based on their economically relevant characteristics; on the other, forced migrants are often severely constrained in their choice of destination country. In fact, most studies document significant differences between conditional and unconditional estimates of the employment gaps between refugees and other migrants or natives (see among others, Connor 2010; Luik et al. 2016).

[7] See, for example, Arulampalam et al. (2001) and Gregg (2001) for the UK, Oreopoulos et al. (2012) for Canada, Kahn (2010) for the U.S. and Genda et al. (2010) for Japan.

[8] Chiswick et al. (1997) find that entering the U.S. during a recession may even be associated with a higher probability of employment for immigrants, a result echoed in the findings of McDonald and Worswick (1999) for Australia. Chiswick and Miller (2002), however, document an adverse, albeit not persistent, effect on earnings of entering the U.S. labour market in a period of high unemployment. On the other hand, Åslund and Rooth (2007), in a comparison of refugee cohorts arriving in Sweden just before or just after the 1990 economic crisis, find a negative and highly persistent effect on earnings and employment.

hindering future labour market prospects. Over and above the potential differences in arrival timing, scarring effects may be more persistent for refugees relative to other migrants, because the former typically start off with a substantial labour market penalty. Hence, in our empirical analysis, we assess the role of arrival conditions in explaining the refugee labour market gap (see section 5.4).

An additional mechanism analysed is the role of asylum policies in shaping refugees' labour market disadvantage. Refugees and other migrants are exposed to different policy regimes, at least in the initial period of their host country residence. Because asylum seekers generally apply for asylum as soon as they arrive in a safe host country, asylum policy differences at time of arrival can influence subsequent integration outcomes. We thus conduct a difference-in-differences analysis that first focuses on the geographic dispersal polices of asylum seekers and refugees (section 6.1) adopted in recent years by several European countries (Denmark, Ireland, Netherlands, Norway, Sweden and the UK) with the aim of preventing ethnic enclave formation by scattering refugees across the country and often away from larger cities. If ethnic enclaves are in fact detrimental to immigrant labour market integration, then dispersal policies may facilitate refugees' economic success.[9] However, being dispersed may also have negative effects. For example, not only does dispersal prevent individuals from relying on co-nationals' or relatives' networks to find a job, but limited geographic mobility reduces the chances of finding employment or good job matches. In addition, refugees are often allocated to relatively disadvantaged areas, where accommodation is cheaper but labour demand is weaker. Hence, case studies from countries with dispersal policies in place generally suggest that they tend to harm

---

[9] For investigations into the effect of ethnic concentration on immigrant labour market outcomes, see Borjas (1995), Beaman (2012), Cutler et al. (2008), Dagnelie et al. (2017), Damm (2009) and Edin et al. (2004), among others.

the labour market integration of the affected refugees.[10] We thus use our difference-in-differences analysis to determine whether refugee cohorts affected by dispersal policies have subsequent labour market outcomes that are significantly different from those of unaffected cohorts.

We then use this same approach to assess the potentially detrimental impact on refugee outcomes of uncertainty in the asylum process (see section 6.2), a first dimension of which is the processing time for asylum applications. In addition to possibly hindering applicants' incentives to make crucial investments in host country-specific human capital (e.g. its language),[11] longer waiting times unnecessarily delay legal access to the labour market, which is generally restricted during asylum claim assessment (Dustmann et al. 2017). Other sources of uncertainty are the probability of receiving asylum and the type of status offered to successful applicants. As regards the first, asylum claims can be rejected, after which unsuccessful applicants are generally subject to detention and forced removal, often falling through the cracks of the asylum system and becoming undocumented immigrants. As to the second, receiving countries can choose to grant applicants either Geneva Convention refugee status (which generally implies entitlement to permanent settlement in the host country) or more temporary forms of humanitarian protection.[12] Lower recognition of permanent refugee status exposes refugees to prolonged uncertainty about

---

[10] In a study for Sweden, Edin et al. (2004) show that, relative to refugees who arrived before the introduction of the policy (and were therefore free to choose where to settle), dispersed refugees were less likely to be employed, had lower earnings and claimed more welfare benefits. These findings are confirmed by Åslund and Rooth (2007). In the context of the Danish dispersal policy, instead, Damm and Rosholm (2010) provide evidence that relocation from the originally assigned location had a large positive effect on the probability of finding employment.

[11] Adda et al. (2017) demonstrate that migrants take their most important human capital investment decisions immediately after arrival, meaning that initial beliefs about migration temporariness can lead to substantial lifecycle losses when such expectations are revised only at a later stage.

[12] These latter types of asylum are generally offered to each civilian belonging to a certain group (generally one threatened by conflict) without going through the process of individual status determination. The right to temporary protection is typically linked to the duration of the conflict that generated the outflow. These temporary protection schemes have often been used in Europe to respond to sudden and massive inflows of individuals displaced by war (e.g. from the 1990's conflicts in the former Yugoslavia and Kosovo; see Bahar et al. 2017).

their future in the host country, potentially harming their integration prospects. The existing empirical evidence on recognition rates, although extremely limited, does in fact suggest that reducing both types of uncertainty is beneficial for refugee integration.[13]

3. Data and Descriptive Statistics

Our analysis is based on data from the European Labour Force Survey (EULFS), a large household survey of people aged 15 and over covering the 28 member states of the European Union, the candidate countries (the Former Yugoslav Republic of Macedonia and Turkey) and three countries of the European Free Trade Association (Iceland, Norway and Switzerland). Specifically, we use two *ad hoc* modules on migrant labour market outcomes collected in 2008 and 2014, which contain additional questions on migrant experience in the host country.[14] The EULFS reports information on individual circumstances, including country of birth, demographic characteristics and years since migration, as well as such employment data as immigrant labour market status and type of occupation. The 2014 module also includes information on an individual's position in the host country's national income distribution.[15]

In our sample, we define as non–natives (refugees and other immigrants) all individuals who are "foreign born", except for Germany where non-natives are defined as "foreign nationals". When information about the country of birth is missing, we use the parents' country of origin to

---

[13] For the Netherlands, Bakker et al. (2013) show that a long stay in asylum accommodations weakens refugees' chances of labour market success even in the long run and that refugees granted only temporary status have worse socio-economic integration outcomes than those awarded Dutch nationality. Likewise, in a study for Switzerland that pays more explicit attention to identifying causal relations, Hainmueller et al. (2016) show that longer wait times for asylum status determination delay refugees' subsequent economic integration. They suggest psychological distress as the primary explanation for their results.

[14] The *ad hoc* modules are available for both 2008 and 2014 for the following 13 countries: Austria, Belgium, Cyprus, France, Greece, Italy, Lithuania, Luxembourg, Norway, Portugal, Spain, Sweden, and the UK. Data for Germany, Ireland and the Netherlands are available only for 2008 and those for Bulgaria, Croatia, the Czech Republic, Estonia, Finland, Hungary, Latvia, Malta, Poland, Romania, Slovakia, Slovenia and Switzerland only for 2014.

[15] Income data are unavailable for the Czech Republic, France, Hungary, Norway and Sweden, and the EULFS does not report wages.

determine the individual's non-native status. Of particular relevance for our study is the fact that the questionnaires for the 2008 and 2014 *ad hoc* modules include information about the *main reason for migration*, thereby allowing us to distinguish *refugees* from *other migrants*. This reason-for-migration question was asked of all non-native individuals who arrived in the country of residence when they were 15 years of age or older, with interviewees given the choice of employment, study, international protection or family reunification as the primary motivation.[16] Throughout the paper, we designate all respondents who selected 'international protection' as *refugees* and all those choosing another reason as *(other) migrants*.[17]

Our sample includes all individuals of working age (25–64) who are not in full-time education or military service and have no missing information on immigrant status, education, age or origin area, for a total of 982,962 observations distributed over 20 European countries (see Appendix Table A1 for the numbers of EU migrants, non-EU migrants and refugees in each host country).[18] Descriptive statistics for this sample are presented in Table 1. Migrants represent approximately 12.4 percent of the observations, with EU immigrants accounting for 3.9 percent, non-EU immigrants for about 7.8 percent and refugees for the remaining 0.6 percent. Hence, refugees account for slightly over 5 percent of the overall immigrant population in the EULFS sample. As regards area of origin, the table shows no refugees from EU15 countries, almost 7 percent born in one of the EU new member states, and 31 percent from other non-EU European countries. An additional 25 percent are from North Africa and the Middle East, with the

---

[16] Specifically, in 2008, respondents were asked to choose among eight alternative reasons for migration: (1) employment, intra-corporate transfer; (2) employment, job found before migrating; (3) employment, no job found before migrating; (4) study; (5) international protection; (6) accompanying family/family reunification; (7) family formation, and (8) other. In 2014, the categories were reduced to six.

[17] As generally reported in the literature, migrants who arrive for family reasons tend to have worse labour market outcomes than economic migrants (i.e. those who arrived for employment reasons). If we were to compare refugees exclusively with economic migrants, all estimated gaps would be amplified.

[18] We exclude all observations from countries-survey years for which the number of refugees sampled is less than 30 individuals (i.e. Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Malta, Poland, Romania, Slovakia).

remainder almost equally split between sub-Saharan Africa (18 percent) and South and East Asia (17 percent). Only 3 percent of the refugees in Europe originate from Latin American countries.

We then report the summary statistics for our major key analytic variables broken out by migrant group – natives, EU migrants, non-EU migrants and refugees (see Table 2), which reveal considerable differences in their characteristics. First, 60 percent of the refugees in the sample are men, whereas the gender mix is more balanced among natives and other migrants. On the other hand, whereas migrants, regardless of their origin, tend to be younger than natives, the age distribution of refugees more closely resembles that of the native population. Refugees are also generally less educated than natives and EU migrants, with educational qualifications closer to those of immigrants from outside the EU. About one fourth of refugees and non-EU migrants have tertiary education compared with 28 percent of natives and 32 percent of EU migrants. Conversely, 38 percent of refugees and 41 percent of non-EU migrants have at most lower secondary education, compared with corresponding shares of 31 percent among natives and 26 percent among immigrants from EU member states. Refugees do, however, on average have higher migration seniority than other migrants, with 6 percent having arrived in the host country between 2008 and 2013 (and thus being observed only in 2014) versus 7 percent of non-EU migrants and 11 percent of immigrants from other EU countries. Moreover, whereas only 9 percent of the refugees had emigrated between 2004 and 2007, this share rises to 17 percent and 22 percent among non-EU and EU migrants, respectively. Overall, 44 percent of refugees have been in the host country since before 1995, versus about 35 percent among other migrants.

Table 2 also reports descriptive statistics for the labour market indicators on which we focus throughout the empirical analysis: employment rate, labour force participation rate, unemployment rate, being in a skilled occupation, and being in the top or bottom decile of the

host country income distribution.[19] For these variables, refugees are on average at a disadvantage not only relative to natives and EU migrants but also relative to immigrants from outside the EU. For instance, the employment rate among refugees (non-EU migrants) is 60 (65) percent, their participation rate is 71 (76) percent and their unemployment rate is 16 (14) percent, with corresponding values for natives of 72, 78 and 7 percent, respectively. The probability of being in a skilled occupation is 22 percent for refugees, 26 percent for non-EU migrants and 44 percent for natives. The share of refugees in the top income decile is only 3 percent, less than half the corresponding value for non-EU migrants (7 percent) and about a quarter of the natives' share (12 percent). Hence, the remainder of our paper focuses on explaining these gaps.

4. Preliminary Evidence: Natives, Migrants and Refugees

We begin our empirical analysis by estimating the following equation to pinpoint the differences in labour market outcomes for EU immigrants, non-EU immigrants and refugees versus natives:

$$y_{idt} = \alpha_1 immEU_{idt} + \alpha_2 immNEU_{idt} + \alpha_3\, ref_{idt} + \gamma X_{idt} + \mu_{dt} + \varepsilon_{idt} \qquad \text{(eq. 1)}$$

where y_{idt} is the labour market outcome of individual i residing in country d and interviewed in survey year t (2008 or 2014); $immEU_{idt}$, $immNEU_{idt}$ and ref_{idt}, respectively, are dummy variables equal to one if the individual is an EU immigrant, a non-EU immigrant or a refugee; X_{idt} is a vector of individual controls (age, gender, education); μ_{dt} is a set of country–year fixed effects capturing any host country-specific shock at the time of interview; and ε_{idt} is an idiosyncratic shock.

---

[19] We define these indicators as follows: employment rate = the share of individuals from the working age population who are either in employment or self-employed; labour force participation rate = the share of individuals from the total working age population who are in the labour force (i.e. either employed or job hunting); unemployment rate = the share of individuals from the total labour force who are job hunting; skilled occupation = belonging to one of the three major ISCO-08 groups: Group 1: managers; Group 2: professionals; Group 3: technicians and associate professionals.

Figure 1 outlines the conditional and unconditional percentage point differences between natives and each of the three immigrant groups for the following outcomes: employment status, unemployment, labour force participation, high skilled occupation and being in the lowest or highest decile of the income distribution.[20] Across Europe, immigrants tend to have worse labour market performance than natives regardless of their origin and reason for migration, whereas the gap tends to be small for EU migrants, generally wider for non-EU immigrants and even larger for refugees. As regards unconditional employment probability, as Figure 1A shows, EU migrants are 1.5 percentage points (about 2 percent relative to the native population mean) less likely than natives to be employed, whereas the gap increases to 6.9 percentage points (9 percent) for non-EU migrants and to 17.1 percentage points (24 percent) for refugees. When we condition out intergroup differences in age, gender and education, the gaps with natives tend to increase because immigrants are on average younger and better educated (see section 3). The relative increase in the gap is especially sizeable for EU migrants, who have markedly higher levels of education than natives, whereas the difference between the conditional and unconditional gap is negligible and not statistically significant at any conventional level for refugees. A similar pattern is evident for unemployment (Figure 1B), and for labour force participation (Figure 1C). Refugees' unconditional and conditional unemployment rates are 11 (157 percent) and 10.4 (148 percent) percentage points higher than those for natives. Conversely, they have a 9.7 percentage point (12 percent) lower unconditional and 11.5 percentage point (15 percent) lower conditional probability of labour market participation than natives. Even focusing on employed individuals, non-natives tend to do worse than natives in terms of both occupational skill content and income, with both migrants and refugees tending to be less frequently employed

---

[20] We obtain the unconditional gaps by estimating a linear regression of employment probability on immigration category dummies and a set of host country–year interaction dummies, and derive the conditional gaps by integrating dummies for gender, 5-year age groups and three educational levels.

in high-skilled occupations (Figure 1D). Moreover, even though the gap with natives generally shrinks when we condition on individual characteristics, it remains large: not only are non-EU migrants 13 percentage points (30 percent) less likely to be employed in a high-skilled occupation than natives but the same conditional gap for refugees is 21 percentage points (almost 50 percent). Finally, both migrants and refugees are considerably less (more) likely than natives to be in the top (bottom) decile of the national income distribution (Figure 1E(F)). For instance, the conditional likelihood of refugees being in the top income decile is 8.3 percentage points lower than that for natives, compared with a 2.5 percentage gap for non-EU migrants.

Figure 2 then graphs the assimilation profiles for the employment (A) and unemployment (B) probabilities of the three immigrant groups, showing that although the labour market outcome gaps with natives tend to decrease with time spent in the host country for all immigrants, they remain sizeable for refugees and non-EU migrants even after 15 years or more. In fact, the figure indicates that on arrival, refugees have extremely large gaps in both employment and unemployment probability, not only with respect to natives but also to other immigrants. Moreover, although these gaps decrease considerably with time spent in the host country, it takes over 15 years for them to converge with those of non-EU migrants.

5. Refugee Gap: Results

We now focus exclusively on those countries that are a source of both refugees and other immigrants. We thus retain all non-EU15 immigrants/refugees and end up with an estimation sample of 69,128 individuals, 5,236 (7.6 percent) of them refugees.

5.1. Baseline Results

We start from estimating the following linear probability model:

$$y_{isdTt} = \beta\, ref_{isdTt} + \gamma X_{isdTt} + \mu_{dt} + \varphi_T + \omega_s + \varepsilon_{isdTt} \qquad \text{(eq. 2)}$$

where y_{isdTt} is a (binary) labour market outcome for individual i from origin area s who arrived in country d in year T and was interviewed in survey year t; X_{isdTt} is a vector of individual controls (age, gender, education); μ_{dt} is a set of destination country–interview year fixed effects capturing any economic or non-economic conditions in the destination country at the time of interview (2008 or 2014); φ_T is a set of arrival cohort fixed effects that captures all unobservable factors common to individuals arriving in the EU in the same year; ω_s is a set of origin area fixed effects capturing common time invariant characteristics of migrants arriving from the same geographic area;[21] and ε_{sdTt} is an idiosyncratic shock. Unless otherwise specified, we use heteroscedasticity robust standard errors to account for the fact that our dependent variables are binary.

We report the coefficients estimated from this linear probability model for the likelihood of employment in Table 3 (columns 1 to 5), incorporating the different controls and fixed effects stepwise. Across all specifications, we consistently find a large and significant negative employment gap between refugees and comparable migrants. The unconditional employment differential starts at a minus 6.4 percentage point baseline that initially increases when controlling for gender and age (column 2) but then decreases with the incorporation of education dummies (column 3).[22] This pattern reflects the fact that refugees are disproportionately male and young, characteristics positively associated with employment likelihood, but also that they have a lower average educational level than other migrants. As a result, the gap conditional on individual characteristics is minus 8.8 percentage points (column 3), about one third larger than

---

[21] We include dummies for seven origin areas: EU new member states; other European countries; North Africa and the Middle East; other African countries; South and East Asia; North America and Oceania; and Latin America.

[22] Note that we define as "unconditional" those estimates in which we only control for host country–year interaction dummies (see footnote 20).

the unconditional one, suggesting that refugees are relatively better selected from the distribution of employment-correlated observable characteristics than other migrants. On the other hand, when we condition on area of origin (column 4), this gap shrinks substantially by almost 20 percent (minus 7.2 percentage points), suggesting that refugees disproportionately originate from areas associated with weaker EU labour market performance. Conversely, when we control for entry cohort (column 5), the gap increases slightly, implying that refugees are slightly overrepresented in earlier cohorts, which had more time to integrate.

Note that our findings about how much each group of covariates contributes to shrinking rather than widening the refugee gap may depend on the specific sequential inclusion of controls that we followed. In order to address this potential concern, we perform a Gelbach decomposition (Gelbach, 2016) for the estimates of the employment refugee gap reported in Table 3. Our decomposition results are shown in Appendix Table A 2. The "base" specification corresponds to column 1 in Table 3, in which we exclusively condition on host country–year fixed effects. The "full" specification further includes dummies for gender, age, education, source area and entry cohort (corresponding to column 5 in Table 3). The last column of Table A 2 shows our decomposition of the part of the employment refugee gap that can be explained by each of the four covariate sets, conditional on all of them simultaneously. The decomposition broadly confirms our previous findings. Conditioning on gender and age and on entry cohort dummies increases the gap: the estimated effect is 3 and 1 percentage points, respectively. The inclusion of dummies for education and for area of origin, instead, leads to a reduction of the gap. The effect is much stronger for the latter set of fixed effects (2.1 percentage points) than for the former (0.6 percentage points.)

In order to better control for unobservable characteristics and shocks that might have determined the labour market outcomes of individuals entering the same destination country in the same year or leaving the same area in the same year we can incorporate two-way fixed effects into our specification as follows:

$$y_{isdTt} = \beta\, ref_{isdTt} + \gamma X_{isdTt} + \mu_{dt} + \theta_{dT} + \rho_{sT} + \varepsilon_{isdTt} \qquad \text{(eq. 3)}$$

where θ_{dT} is a set of host country–entry cohort fixed effects that capture all initial conditions (including unemployment, GDP growth, migrant stock, etc.) in the destination country to which each migrant cohort was exposed, irrespective of refugee status; and ρ_{sT} is a set of area or origin–entry cohort fixed effects capturing any common shock affecting migrants arriving in Europe from the same origin area in the same year. These estimates, reported in Table 3, column 6, show that allowing entry cohort effects to vary by host country and by source area generates no further reduction in the employment gap between migrants and refugees. Our overall finding is thus that the refugee–migrant employment rate differential starts off at 6.4 percentage points, increases by about 37 percent when we condition on individual characteristics, and then decreases by about 11 percent when we condition flexibly on source area and entry cohort. In fact, the most restrictive specification indicates a gap of 7.8 percentage points, suggesting that refugees are about 11.6 percent less likely to be employed than comparable migrants (whose unconditional employment probability is 0.67).

In Table 4, we consider the three other labour market outcomes of unemployment (columns 1–3), participation (columns 4–6) and skilled occupation (columns 7–9).[23] We first estimate the refugee gap while conditioning exclusively on host country–year fixed effects (columns 1, 4 and

---

[23] The average unconditional probabilities among comparable migrants for employment, unemployment, participation and high skill occupation are, respectively, 0.67, 0.14, 0.78, and 0.24.

7), then include individual characteristics (columns 2, 5 and 8) and finally incorporate the full set of two-way fixed effects (columns 3, 6 and 9). These estimations reveal that the unemployment probability is 4.4 percentage points higher for refugees than for other migrants, although the gap narrows by 30 percent when we condition on all controls and fixed effects. According to the estimates in column 3, the unemployment probability is approximately 3 percentage points (22 percent) higher for refugees than for comparable migrants. The likelihood of refugee labour market participation is also relatively low, about 6 percentage points (8 percent) less than for comparable non-refugee immigrants in our most preferred specification (column 6). Even among those who are employed, refugees are disadvantaged relative to other immigrants. Not only they are 7 percentage points (29 percent) less likely to be in a high-skilled occupation than other migrants with similar characteristics (column 9), but also they display higher probability to be in the bottom decile and lower probability to be in the top decile of each host country's income distribution than other immigrants, as we show in Table 5.[24]According to the estimates from our more complete and preferred specification (columns 3 and 6, Table 5), refugees are 6 percentage points (40 percent) more likely to fall into the bottom and almost 5 percentage points (66 percent) less likely to fall into the top decile than their non-refugee counterparts.

Lastly, to capture any additional unobservables that might explain the refugee gap, we replace the two-way fixed effects θ_{dT} and ρ_{sT} in equation (2) with three-way fixed effects for source area, host country and entry cohort (τ_{sdT}). This specification, which controls for any factor affecting both refugees and other migrants leaving the same origin area and arriving at the same destination country in the same year(s), is particularly demanding in that parameter β is now identified through within-cell variation in reason for entry in cells defined by origin area,

---

[24] Information on the position in the national income distribution is only available in the 2014 wave for respondents who were employed at the time of interview (almost 14,000 individuals, see section 3).

destination country and entry cohort. As Table 6 shows, for all six outcomes considered, the refugee gap is large and strongly significant, although the inclusion of three-way fixed effects substantially reduces the estimated gaps with respect to the coefficients obtained for two-way fixed effects, except for the probability of a skilled occupation, whose gap increases. For employment, unemployment and participation, the gap decreases by approximately 11–12 percent (columns 1–3), with the strongest reduction for the probability of being in the bottom decile of the distribution. For this latter, the refugee gap drops from 6 (Table 5, column 3) to 3.8 percentage points (Table 6, column 5), a 36 percent reduction as compared with a mere 6 percent change for the top decile probability gap.

5.2. Gender and area of origin heterogeneity

As Table 2 has shown, the proportion of males in the refugee population (60 percent) is much higher than the 47-48 percent of men among the rest of the immigrant population. In Table 7, we now estimate equations 2 and 3 separately for women and men. The refugee gap tends to be smaller for women than for men. For instance, the results in column 2 indicate that refugee women are 5 percentage points (or 8.5 percent) less likely than comparable immigrant women to be employed. In contrast, refugee men's employment rate is 11 percentage points lower than that of immigrant men with the same characteristics, a 14 percent gap relative to the baseline employment of immigrant men overall. Similar patterns hold for unemployment and participation. Conversely, little gender difference is observable in the unconditional refugee–immigrant gap in skilled occupation probability.

Next, in Figure 3, we compare conditional refugee–migrant gaps in labour market outcomes across different origin areas, which reveals substantial heterogeneity.[25] For example, the labour market outcomes of refugees from European countries outside the EU15 (NMS12 and other European countries) are not too dissimilar from those of comparable immigrants from the same regions, with any differences tending to be statistically insignificant. In fact, most refugees originating from European countries had arrived in the host country during the 1990s, meaning that by time of interview, they had caught up with the other migrants' performance.[26] On the other hand, refugees from African and Asian countries – the main source areas of recent refugee inflows and arguably of those in the foreseeable future – show particularly large gaps in all four of the outcomes considered. In fact, North African and Middle Eastern migrants display the largest gaps in employment and labour market participation, while those from other African and South and East Asian countries display the largest gaps in unemployment and skilled occupation probability, respectively.

5.3. Assimilation

Figure 4 then profiles refugee assimilation in terms of employment (A) and unemployment (B) probabilities. Although these trajectories exhibit a similar pattern to those in Figure 2, these estimates are obtained through direct comparison of refugees with similar migrants conditional on individual characteristics, destination country–survey year fixed effects and area of origin It should be noted that the availability of data collected in different waves enables us to compare the outcomes of individuals from the same entry cohort measured at different points in time simultaneously with different cohorts measured in the same year. We are thereby able to

---

[25] We build the graph by estimating separate regressions for each origin area while including controls for individual characteristics (age, gender, education), host country–year and entry cohort–host country.

[26] We find no significant refugee gap for citizens of Latin American countries; however, refugees from this area account for a mere 3 percent of the refugee population in our sample (see Table 1).

distinguish the effect of years since arrival from possible compositional changes across entry cohort. As expected, the gap is particularly large upon arrival: for individuals with no more than 3 years of residence in the host country, the employment probability gap is minus 30 percentage points, with a corresponding unemployment gap of 15 percentage points. Although this gap becomes progressively narrower with years of residence in the host country, the difference only reaches statistical insignificance after 15 years (for employment) or 9–10 years (unemployment), suggesting that refugees struggle to eliminate their initial labour market disadvantage vis-à-vis other immigrants. In Figure 5, we display these assimilation profiles in employment probabilities separately for women (A) and men (B). As already shown inTable 7, the refugee gap tends to be smaller for women than for men: upon arrival in the host country, refugee women are 23 percentage points less likely to be employed than similar female immigrants, while the gap for men is 33 percentage points. In addition, Figure 5 shows that women catch up with other immigrants at a faster pace than refugee men. Indeed, whereas the difference in employment probability between refugee and other immigrant women is not statistically significant after 11–14 years in the host country, the refugee gap among men only disappears completely around 20–24 years after arrival.

5.4. Entry Conditions

As discussed in section 2, if refugees have systematically worse timing in arriving at the destination country, making them more likely than other migrants to enter during a recession, part of the gap may be explained by the scarring effects of (adverse) economic conditions at entry. Even in the absence of systematic arrival timing differences, such scarring effects could be more profound and/or persistent for refugees than for other migrants. To explore these conjectures, in Table 8 we first match each individual in our sample with a dummy variable

22

equal to one if the host country was experiencing a recession in the year of the respondent's arrival.[27] To test for scarring effects common to both refugees and migrants, we include this recession indicator in our estimating equation. The results, reported in Table 8, column 2, show that arriving in a country during a recession implies a 6.6 percentage point lower probability of being employed at the time of survey. On the other hand, controlling for these scarring effects does not reduce the estimated refugee gap, suggesting no systematic differences in the probability of arriving in the host country during a recession.[28] Further, to test whether refugees are more negatively affected by recession than comparable migrants, we add in an interaction between the refugee and recession at entry dummies, which shows that although these two are individually significant and have a negative sign, their interaction is not significant and very close to zero (Table 8, column 3). Lastly, in column 4, we include a full set of entry cohort–host country fixed effects to capture the effect of any initial (economic or non-economic) condition – thereby absorbing the recession dummy – to which we then add entry cohort–source area fixed effects (column 5). In both cases, the estimated coefficient on the interaction between the recession and refugee dummy remains small and not significant. These results thus refute the hypothesis that facing adverse economic conditions at entry into the host country produces stronger negative effects for refugees than for other comparable immigrants.[29]

---

[27] We define a country as being in recession if it is experiencing a negative annual growth of its real per capita GDP, which information is unavailable for interviewees who arrived before 1995, reducing our sample to approximately 44.5 thousand observations. For respondents whose year of arrival is measured as an interval rather than an exact year, the recession indicator equals one if there was at least one recession year in the interval considered.

[28] This same conclusion could be reached by observing that including entry cohort–host country fixed effects in Table 3, column 6, does not substantially reduce the estimated gap with respect to the previous columns.

[29] In unreported regressions, we find that having arrived in the host country during a recession is also associated with a lower (higher) probability of participation (unemployment), although in neither case do we find a differential scarring effect on refugees (results available from the authors upon request).

5.5. Further Outcomes

In this section, we extend our analysis to immigrant outcomes outside the labour market; in particular, refugee–migrant differences in health status and social integration as measured by host country language proficiency.[30] It should be noted that in our data, both variables are measured at the moment of interview rather than upon entry, meaning that although they may reflect differences between refugees and other migrants on arrival, they are also the result of differences in their integration trajectories.

One likely determinant of refugees' poorer performance in the labour market is the well-documented initial gap in physical and mental health between refugees and other migrants, which results directly from their traumatic experiences of violence and forced displacement (Burnett and Peel 2001; Porter and Haslam 2005). This initial gap can either be bridged or widened by the quality of the integration process in the host country. Because the EULFS questionnaire contains no direct questions on respondent health status, we shed light on this issue using information from other items. For example, the question on labour market status, asked of all interviewees, includes a 'permanently disabled' category into which only 2.8 percent of the immigrant sample falls. Refugees, in contrast, as panel A of Table 9 shows, are 1.4–1.8 percentage points more likely to report a permanent disability than comparable immigrants (columns 1–3). Columns 4–6 of panel A then address another health-related outcome: the reason for the job search inactivity of unemployed individuals who report no such effort in the four weeks prior to interview. We exclude from this sub-sample all those who previously self-identified as having a permanent disability. Of the remainder, approximately 9 percent answered

---

[30] Welfare state dependency, may also vary between refugees and other migrants. Unfortunately, the EULFS questionnaire includes only one question on welfare, namely on unemployment benefit receipts. Conditional on employment status (and our usual set of controls), we find that refugees and migrants have similar likelihood to receive benefits.

that health or disability prevented them from job hunting, with refugees 9 percentage points more likely to give this response than comparable immigrants.

Because language proficiency is one of the crucial determinants of integration in the host country (Chiswick and Miller 2014), it is rational for migrants to select a destination country based also on their own language skills and invest in learning the host country language before migrating. Forced migration, however, typically prevents refugees from carefully planning their movement and optimally choosing their destinations. We can thus expect refugees on average to have lower language proficiency upon arrival than comparable migrants, and this initial gap can then increase or decrease with years of residence in the host country. When asked in both the 2008 and 2014 wave about the main obstacle to their employability in the host country, about one fourth of the immigrant respondents identified lack of proficiency in the host country language, with refugees 4–5 percentage points more likely than other migrants to make this choice (Table 9, panel B, columns 1–3). This pattern is mirrored in responses to the 2014 module, where we find that whereas about 13 percent of the immigrant worker sample report having low language proficiency in speaking the main host country language, this share increases by 3–4 percentage points among the refugee population (see columns 4–6 in panel B).[31]

---

[31] The 2014 survey directly asks immigrant interviewees to rate their fluency in speaking the main host country language on a four point scale. We use dummy equal to one if the respondent chooses the lowest level ('beginner or less').

6. Role of Asylum Policies

To investigate the role of asylum policies in bridging rather than widening the refugee gaps documented above, we focus first on dispersal policies (section 6.1) and then on indicators of the degree of uncertainty in the asylum process (section 6.2).[32]

6.1. Refugee Dispersal Policies

A relatively common scheme adopted by several European countries is a *dispersal policy* for asylum seekers and refugees (hereafter, DP), which commonly requires that individuals seeking humanitarian protection settle in specific locations across the receiving country. Despite the theoretically ambiguous consequences of DPs for refugee labour market integration (see section 2), they were implemented in Sweden from 1985 to 1994 (Edin et al. 2003) and in Denmark from 1986 to 1998 (Damm 2009) and are still in place in Ireland (since 2000), the Netherlands (since 1987), Norway (since 1994) and the UK (since 2000; Bell et al. 2013). To identify these policies' effects on the refugee gap, we exploit the differential timing of DPs across countries in a difference–in–differences setup. Our identification strategy relies on variation in policy exposure across entry cohorts within the same country (i.e. comparing cohorts who arrived in a specific country before and after the introduction or termination of the DPs) and within entry cohorts across countries (i.e. comparing the same arrival cohort across countries with and without active DPs). We implement our difference–in–differences approach by regressing employment probability (and other labour market variables) on a refugee dummy and on an interaction term between this latter and a DP indicator dummy (equal one if a DP was active in the year when the individual entered the host country). As in all previous regressions, we

---

[32] Because the EULFS provides no individual information on the refugee status recognition process (whether respondents migrating for humanitarian protection reasons had applied for asylum, had been successful, time they had waited, and so forth), we proxy individual experience by matching interviewees with aggregate indicators of the asylum policy in place in the host country at the time of arrival.

condition on the usual set of controls (age, gender, education, host country by year FE) and capture any entry condition common to both migrants and refugees (including the presence of a DP) by conditioning on entry cohort–host country fixed effects. We also control for source area fixed effects and, in the most restrictive specification, interact these with entry cohort dummies.

Before presenting our estimates, we briefly discuss two potential concerns regarding the causal interpretation of our estimates. The first is that governments might choose when to introduce (or withdraw) a dispersal policy based on such considerations as economic recession (boom). In our case, however, this particular concern is of minimal importance because as long as the effects of economic conditions at entry are similar for refugees and migrants (as shown in section 5.4), our identification strategy captures them by means of entry cohort–host country fixed effects. A second potential issue is refugee self-selection into potential destination countries, which may be affected by the introduction of a dispersal policy that discourages some refugees from applying, thereby altering flow composition. Although we cannot completely rule out this concern, we need to bear in mind that asylum applicants face extremely stringent constraints on their freedom to pick destination countries.[33] In addition, it is theoretically unclear whether a dispersal policy should discourage disproportionately more low-ability than high-ability asylum seekers from applying. Such a compositional change would go against our findings in the former case while exaggerating them in the latter.

Our results are reported in Table 10 with standard errors clustered at the entry cohort–host country level, which is the level of variation of the DP dummy variable. The estimated

---

[33] Not only are refugees typically forced into migrating by violence, which prevents them from carefully planning their moves, but regulation may further restrict their choice set. In the EU, for instance, the 1990 Dublin Convention implies that individuals can apply for asylum in a member country only if they have not previously been in any other member country. Thus, asylum seekers targeting the UK, for example, should arrive there without having been recorded (and fingerprinted) in any other EU country or their applications will be turned down by UK authorities and transferred to the EU country in which they were first documented.

coefficients on the interaction term in columns 1–3 indicate that refugees who arrived when a DP was in place have a notably larger employment gap with comparable migrants than those not exposed to the policy. In the most restrictive specification (column 3), the refugee gap for these latter is minus 6 percentage points, rising to minus 14.8 percentage points for those who have been exposed to dispersal policy. Such negative DP effect on refugee outcomes is confirmed by the results for unemployment, participation and the probability of being employed in a skilled occupation (columns 4, 5 and 6, respectively), although the interaction coefficient for unemployment is not precisely estimated. Our results thus suggest that the detrimental effects of DPs on the labour market performance of those they affect – likely contributed to by an absence of ethnic networks, lack of geographic mobility and placement in disadvantaged areas (see section 2) – clearly prevail over potentially positive effects.

Because these mobility restrictions are generally temporary, we can further assess whether dispersion's detrimental effects are related to potentially suboptimal refugee location by testing whether they fade out with time in the host country. To do so, we estimate the same regression for three different migrant groups based on number of years since arrival in the host country (5 years or less; between 6 and 14 years; and 15 years or more). As panel A of Table 11 shows, the negative DP effect on refugee employment is large and strongly significant for individuals with at most 5 years of residence (column 1) but tends to decrease and lose statistical significance for groups with longer residence (columns 2 and 3). Indeed, among those who arrived within the previous 5 years or less, the employment gap between non-refugee migrants and DP-affected refugees is almost twice as large as that for unaffected refugees: 17 percentage points more with respect to a refugee gap of 18.5 percent. For those who arrived from 6 to14 years previously, however, this ratio decreases to about 1.5, and for those who arrived 15 or more years

previously, not only is the overall DP effect insignificant but the refugee gap is close to zero and also not statistically significant. These results suggest that as refugees start relocating within the host country, the initial detrimental effect of having being dispersed fades out, supporting the conjecture that the negative DP effect on labour market integration results from the suboptimal initial allocation of asylum seekers. This general pattern is confirmed for the other labour market outcomes considered (see panels B, C and D of Table 11).

Next, we study whether the DP effect differs across countries. In Table 12, we report the estimated coefficients of a triple interaction between the refugee dummy, a DP dummy, and an indicator for each of the five countries in our sample that have implemented a DP at some point: the Netherlands, Norway, Ireland, the UK, and Sweden.[34] The DP coefficients for the employment equation (column 1) are negative for the Netherlands, Norway, Ireland and the UK (although not precisely estimated for Norway) suggesting that the average detrimental DP effect we uncover in Table 10 is not driven by any specific country. Quantitatively similar results are confirmed for unemployment, participation and the probability to be employed in a skilled occupation (columns 2, 3 and 4, respectively). The size of the effect, however, seems to vary across countries: Ireland displays the largest negative coefficient, followed by the UK, Netherlands and Norway. For Sweden, instead, we estimate a small positive - although not significant - coefficient. Differences in the magnitude of the coefficients can be explained by heterogeneity in the characteristics and implementation of DP across countries. Differences in the DP timing may also matter. For countries like Ireland and the UK, that introduced a dispersal policy in year 2000, the effect is estimated out of exposed individuals who arrived relatively recently, for whom the negative impact of the DP may still be very visible in our data.

---

[34] The specification also includes all the double interactions between a refugee dummy and an indicator for each of the 20 host countries in the sample, while the double interaction between the DP dummy and each host country is absorbed, as before by the entry cohort*host country fixed effects.

Differently, the Sweden policy ended in 1994: DP-exposed refugees in our sample have since then accumulated substantial migration seniority in Sweden, which may have dissipated any DP effect.

6.2. Asylum Policy Uncertainty

As argued in section 2, individuals seeking humanitarian protection face substantial uncertainty during the refugee status recognition process or even subsequently if their claims are rejected outright or they are not granted permanent residence status. We thus investigate this aspect by using official UNHCR records on refugee status determination to construct objective measures of asylum system performance that are time variant and host country-source area specific.[35] In particular, we construct a measure of permanent status recognition rate computed as the ratio of the number of applicants granted refugee status to the total number of decisions reached every year. Further, we build a decision rate – a proxy for processing times – that is the ratio of the number of decisions (positive and negative) reached every year to the number of pending applications plus the new application submitted during the year. Since UNHCR records are bilateral, both indicators are host country-area of origin specific, better reflecting the actual asylum policy each group of asylum seekers faces in each destination country. In our sample, the average recognition rate is approximately 6.5 percent, although there is wide variation both across host countries and source areas and over time within countries. The average decision rate is instead at 70 percent, implying that it takes on average 1.5 years to process all applications accumulated in one year. The UNHCR indicators used in the regressions – $High\_Rec\_Rate_T$ and $High\_Dec\_Rate_T$ – are dummy variables identifying source areas, host countries and arrival

---

[35] The UNHCR Statistical Online Population Database (http://popstats.unhcr.org/en/overview) reports annual data on asylum application processing that include the numbers of applications submitted, pending applications at the beginning and end of the year, applications recognized, applications rejected, and applications otherwise closed. Data are reported bilaterally (source country-destination country) for all world countries since year 2000.

years for which, respectively, the recognition rate or the decision rate were particularly high (i.e. above the 75th percentile of the EU countries distribution between 2000 and 2014). After constructing these variables, we match each individual in our sample with the corresponding indicator for their area of origin in the host country at the time of arrival.[36] If lower asylum policy uncertainty is beneficial for the integration of refugees, we would expect a better labour market performance from individuals that were exposed to higher recognition rates and higher decision rates.

To test this conjecture, as in the previous section, we regress the probability of employment and of unemployment on a refugee dummy and the interaction between the refugee dummy and the UNHCR indicators. Results are presented in panels A and B of Table 13, respectively. Column 1 reports our baseline refugee gap, without including any UNHCR indicator. We then include the recognition rate (columns 2-4), the decision rate (columns 5-7) and both indicators (column 8-10). We condition on the usual individual regressors and fixed effects and cluster standard errors at the entry cohort–host country level. In addition to those controls, in columns 3-4, 6-7 and 9-10 we control for asylum system congestion at the time of arrival by conditioning on the total number of asylum applications received from the same origin area by the host country in that year (interacted with the refugee dummy).[37] Our estimates suggest that asylum policies do matter in shaping future economic integration of refugees. In particular, being exposed to relatively higher recognition and decision rates seem to reduce the refugee gaps we have documented so far. Indeed, for both employment and unemployment probability, the estimated coefficients on the interaction terms with both UNCHR indicators have an opposite sign from the estimated

---

[36] To minimize measurement error in attributing these 'initial asylum policy conditions' to each interviewee, we restrict the sample to individuals for whom we have the precise year of arrival in the host country in both waves of the EULFS survey (i.e. individuals who arrived in 2004 and later).

[37] Hatton (2016) and Hatton and Moloney (2015) show that tougher host country policies on asylum application processing deter asylum applications.

refugee–other migrant gap. These effects, however, are not always precisely estimated. Arriving in a host country in a year characterized by a relatively high permanent status recognition rate would reduce the employment gap by approximately 5-7 percentage points (with respect to a baseline refugee gap of minus 21-25 percent), although the coefficient is not significant or only marginally significant at conventional levels (Panel A). The effect is instead significant for the probability of unemployment (Panel B): being exposed to higher recognition rates halves the refugee gap in unemployment, shrinking it by 10-11 percentage points. The estimates on the decision rate, although qualitatively similar, are instead not significantly different from zero in all specifications. Although these findings are subject to the same previously discussed caveats regarding causal interpretation, they suggest that reducing uncertainty for refugees may improve their labour market outcomes.

7. Conclusions

The major refugee crisis experienced in Europe in recent years has positioned concerns about the successful integration of asylum seekers into host societies and their labour markets at the centre of the current economic and political debate. This paper contributes to this discourse by providing the first comprehensive analysis of the labour market performance of refugees vis-à-vis comparable migrants across several EU countries and over time. In particular, using the most recent available cross-European data, we document that refugees in EU countries have experienced slower and more difficult economic integration than other migrants with very similar characteristics (e.g. demographics, origin area, entry cohort), a 'refugee gap' that is substantial and persistent over time. We also provide evidence suggesting that different asylum policies in host societies can contribute to bridging rather than widening the refugee gap.

Our findings raise serious concerns about the future economic integration of asylum seekers who arrived in EU countries during the last few years. The fact that the current refugee crisis has been characterized by a sudden vast inflow of individuals in a relatively short time span will probably add to the challenges with which host countries must deal. Part of the difficulties faced by refugees trying to integrate into receiving societies are inherently associated with the forced nature of their migration. For example, exposure to conflict, traumatic experiences and unplanned migrations all generate important hurdles and undesirable legacies that prevent asylum seekers from making a successful start upon arrival. What happens next, however, is at least partially in the hands of host governments. Our analysis suggests that governments have the power to negatively influence the speed and quality of refugee integration by implementing potentially suboptimal and counterproductive asylum policies. One reason for such implementation is the important trade-off these governments face when making decisions in this policy area. That is, whenever they aim to reduce immigrant inflows by making their policies more restrictive and their countries less attractive (for instance, by reducing recognition rates of asylum applications), they also tend to affect existing stocks of immigrants and/or refugees, potentially harming their future prospects for socio-economic integration. At the same time, short-term political considerations may induce policy makers to favour measures that minimize immediate costs rather than maximizing long-run benefits, leading to potential underinvestment in refugee integration. Dispersing asylum claimants and refugees in relatively deprived areas, for instance, may be justified by immediate budget savings from lower accommodation costs, but these savings should be weighed against the negative effects of refugee dispersal on their future labour market integration. Hence, an additional challenge posed by the current refugee crisis is how to overcome myopia in designing European asylum policy.

References

Adda, Jérôme, Dustmann, Christian, Görlach, Simon, 2017. The dynamics of return migration, human capital accumulation, and wage assimilation. Mimeo, Bocconi University.

Aiyar, Shekhar, Barkbu, Bergljot, Batini, Nicoletta, Berger, Helge, Detragiache, Enrica, Dizioli, Allan, Ebeke, Christian, Lin, Huidan, Kaltani, Linda, Sosa, Sebastian, Spilimbergo, Antonio, Topalova, Petia, 2016. The refugee surge in Europe: economic challenges. IMF Discussion Note No.16/02.

Arulampalam, Wiji, 2001. Is unemployment really scarring? Effects of unemployment experiences on wages. Econ. J., 11(475), 585–606.

Åslund, Olof, Rooth, Dan–Olof, 2007. Do when and where matter? Initial labour market conditions and immigrant earnings. Econ. J., 117(518), 422–448.

Bahar, Danny, Hauptmann, Andres, Özgüel, A. and Rapoport, Hillel, 2017. Productive knowledge diffusion through return migration: a natural experiment of Yugoslavian refugees in Germany. Mimeo, Paris School of Economics.

Bakker, Linda, Dagevos, Jaco, Engbersen, Godfried, 2013. The importance of resources and security in the socio–economic integration of refugees. A study on the impact of length of stay in asylum accommodation and residence status on socio-economic integration for the four largest refugee groups in the Netherlands. J.Int. Migr. Integr., 15(3) 431–448.

Bakker, Linda, Dagevos, Jaco, Engbersen, Godfried, 2016. Explaining the refugee gap: a longitudinal study on labour market participation of refugees in the Netherlands. J. Ethn. Migr. Stud. 43(11) 1-17.

Bansak, Kirk, Hainmueller, Jens, Hangartner, Dominik, 2016. How economic, humanitarian, and religious concerns shape European attitudes toward asylum seekers. Science, 354(6309), 217–222.

Beaman, Lori A., 2012. Social networks and the dynamics of labour market outcomes: evidence from refugees resettled in the US. Rev. Econ. Stud., 79(1), 128–161.

Bell, Brian, Fasani, Francesco, Machin, Stephen, 2013. Crime and immigration: evidence from large immigrant waves. Rev. Econ. Stat., 21(3), 1278–1290.

Bevelander, Pieter, 2016. Integrating refugees into labor markets. IZA World of Labor, 269, doi: 10.15185/izawol.269.

Bevelander, Pieter, Pendakur Ravi, 2014. The labour market integration of refugee and family reunion immigrants: a comparison of outcomes in Canada and Sweden. J. Eth. Migr. Stud., 40(5), 689–709.

Borjas, George J., 1995. Ethnicity, neighborhoods, and human capital externalities. Am. Econ. Rev., 85(3), 365–390.

Bratsberg, Bernt, Raaum, Oddbjorn, Roed, Knut, 2014. Immigrants, labour market performance and social insurance. Econ. J., 24(580), 644–683.

Bratsberg, Bernt, Raaum, Oddbjorn, Roed, Knut, 2017. Immigrant labor market integration across admission classes. IZA Discussion Paper No. 10513.

Burnett, Angela, Peel, Michael, 2001. Health needs of asylum seekers and refugees. BMJ, 322(7285), 544–547.

Chiswick, Barry R., Cohen, Yinon, Zach, Tzippi, 1997. The labor market status of immigrants: effects of the unemployment rate at arrival and duration of residence. ILR Rev., 50(2), 289–303.

Chiswick, Barry R., Miller, Paul W., 2002. Immigrant earnings: language skills, linguistic concentration and the business cycle. J. Popul. Econ., 15(1), 31–57.

Chiswick, Barry R., Miller, Paul W., 2014. International migration and the economics of language. IZA Discussion Papers 7880.

Clemens, Michael A., 2011. Economics and emigration: trillion-dollar bills on the sidewalk?. J. Econ. Perspect., 25(3), 83–106.

Clemens, Michael A., Pritchett, Lant, 2008. Income per natural: measuring development for people rather than places. Popul. Dev. Rev., 34(3), 395–434.

Connor, Phillip, 2010. Explaining the refugee gap: economic outcomes of refugees versus other immigrants. J. Refug. Stud., 23(3), 377–397.

Cortes, Kalena E., 2004. Are refugees different from economic immigrants? Some empirical evidence on the heterogeneity of immigrant groups in the United States. Rev. Econ. Stat., 86(2), 465–480.

Cutler, David M., Glaeser, Edward L., Vigdor, Jacob L., 2008. When are ghettos bad? Lessons from immigrant segregation in the United States. J. Urban Econ., 63(3), 759–774.

Dagnelie, Olivier, Mayda, Anna M., Maystadt, Jean-Francois, 2017. Labor market integration of refugees to the United States: do entrepreneurs in the network help?. U.S. Department of State, Office of the Chief Economist (OCE), Working Paper No. 2017-05.

Damm, Anna Piil, 2009. Ethnic enclaves and immigrant labor market outcomes: quasi-experimental evidence. J. Labor Econ., 27(2), 281–314.

Damm, Anna Piil, Rosholm, Michael, 2010. Employment effects of spatial dispersal of refugees. Rev. Econ. Househ., 8(1), 105–146.

De la Rica, Sara, Glitz, Albrecht, Ortega, Francesc, 2015. Immigration in Europe: trends, policies and empirical evidence. In Handbook of the Economics of International Migration, Vol. 1B, Chapter 24, pp. 1303–1362, Barry R. Chiswick and Paul W. Miller (Eds.). North-Holland.

Dustmann, Christian, Fasani, Francesco, Frattini, Tommaso, Minale, Luigi, Schönberg, Uta, 2017. On the economics and politics of refugee migration. Econ. Policy, 32(91), 497–550.

Edin, Per-Anders, Fredriksson, Peter, Åslund, Olaf, 2003. Ethnic enclaves and the economic success of immigrants: evidence from a natural experiment. Q. J. Econ., 118(1), 329–357.

Edin, Per-Anders, Fredriksson, Peter, Åslund, Olaf, 2004. Settlement policies and the economic success of immigrants. J. Popul. Econ. 17, 133–155.

Facchini, Giovanni, Lorz, Oliver, Willmann, Gerald, 2006. Asylum seekers in Europe: the warm glow of a hot potato. J. Popul. Econ., 19(2), 411–430.

Fernández-Huertas Moraga, Jesùs, Rapoport, Hillel, 2015. Tradable refugee-admission quotas and EU asylum policy. CESifo Econ. Stud., 61, 638–72.

Gelbach, Jonah B., 2016. When do covariates matter? And which ones, and how much? J. Labor Econ., 34(2), 509–543

Genda, Yuji, Kondo, Ayako, Ohta, Souichi, 2010. Long-term effects of a recession at labor market entry in Japan and the United States. J. Human. Res., 45(1), 157–196.

Gregg, Paul, 2001. The impact of youth unemployment on adult unemployment in the NCDS. Econ. J., 111(475), 626–653.

Hainmueller, Jens, Hangartner, Dominik, Lawrence, Duncan, 2016. When lives are put on hold: lengthy asylum processes decrease employment among refugees. Sci. Adv., 2(8), e1600432.

Hansen, Jorgen, Lofstrom, Magnus, 2003. Immigrant assimilation and welfare participation: do immigrants assimilate into or out of welfare?. J. Hum. Resour., 38(1).

Hatton Timothy J., 2009. The rise and fall of asylum: what happened and why?. Econ. J., 119(535), 183–213.

Hatton, Timothy J., 2015. Asylum policy in the EU: the case for deeper integration. CESifo Econ. Stud., 61, 605–37.

Hatton, Timothy J., 2017. Refugees and asylum seekers, the crisis in Europe and the future of policy, Econ. Policy, 32(91), 447-496.

Hatton, Timothy J. 2016. Refugees, asylum seekers, and policy in OECD countries. Am. Econ Rev., 106(5), 441-445.

Hatton, Timothy J. and Moloney, Joe, 2015. Applications for asylum in the developed world: modelling asylum claims by origin and destination. CEPR Discussion Paper No. 10678.

Kahn, Lisa B., 2010. The long-term labor market consequences of graduating from college in a bad economy. Labour Econ., 17(2), 303–316.

Kennan, John, 2013. Open borders. Rev. Econ. Dyn., 16(2), 1–13.

Luik, Marc-André, Emilsson, Henrik, Bevelander Pieter, 2016. Explaining the male native–immigrant employment gap in Sweden: the role of human capital and migrant categories. IZA Discussion Paper No. 9943.

McDonald, James Ted, Worswick, Christopher, 1999. The earnings of immigrant men in Australia: assimilation, cohort effects, and macroeconomic conditions. Econ. Rec., 75 (1), 49–62.

Oreopoulos, Philip, Von Wachter, Till, Heisz, Andrew, 2012. The short- and long-term career effects of graduating in a recession. Am. Econ. J.: Appl. Econ., 4(1), 1–29.

Phillimore, Jenny, 2011. Refugees, acculturation strategies, stress and integration. J. Soc. Policy, 40(3), 575–593.

Porter, Matthew, Haslam, Nick, 2005. Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. J. Am. Med. Assoc., 294(5), 602–612.

Ruiz, Isabel, Vargas-Silva, Carlos, 2017a. Are refugees' labour market outcomes different from those of other migrants? Evidence from the United Kingdom in the 2005–2007 period. Popul. Space Place, 23(6), e2049.

Ruiz, Isabel, Vargas-Silva, Carlos, 2017b. Differences in labour market outcomes between natives, refugees and other migrants in the UK. Mimeo, University of Oxford.

Salehyan, Idean, 2008. The externalities of civil strife: refugees as a source of international conflict. Am. J. Political Sci., 52(4): 787–801.

Salehyan, Idean, Gleditsch, Kristian S., 2006. Refugees and the spread of civil war. Int. Organ., 60(2), 335–366.

Sarvimäki, Matti, 2017. Labor market integration of refugees in Finland. Nord. Econ. Policy Rev., 7(1): 91–114.

UNHCR, 2017. Statistical Yearbook 2015. United Nations High Commissioner for Refugees (UNHCR).

Figures

Figure 1– Refugee–native and immigrant–native gaps in labour market outcomes
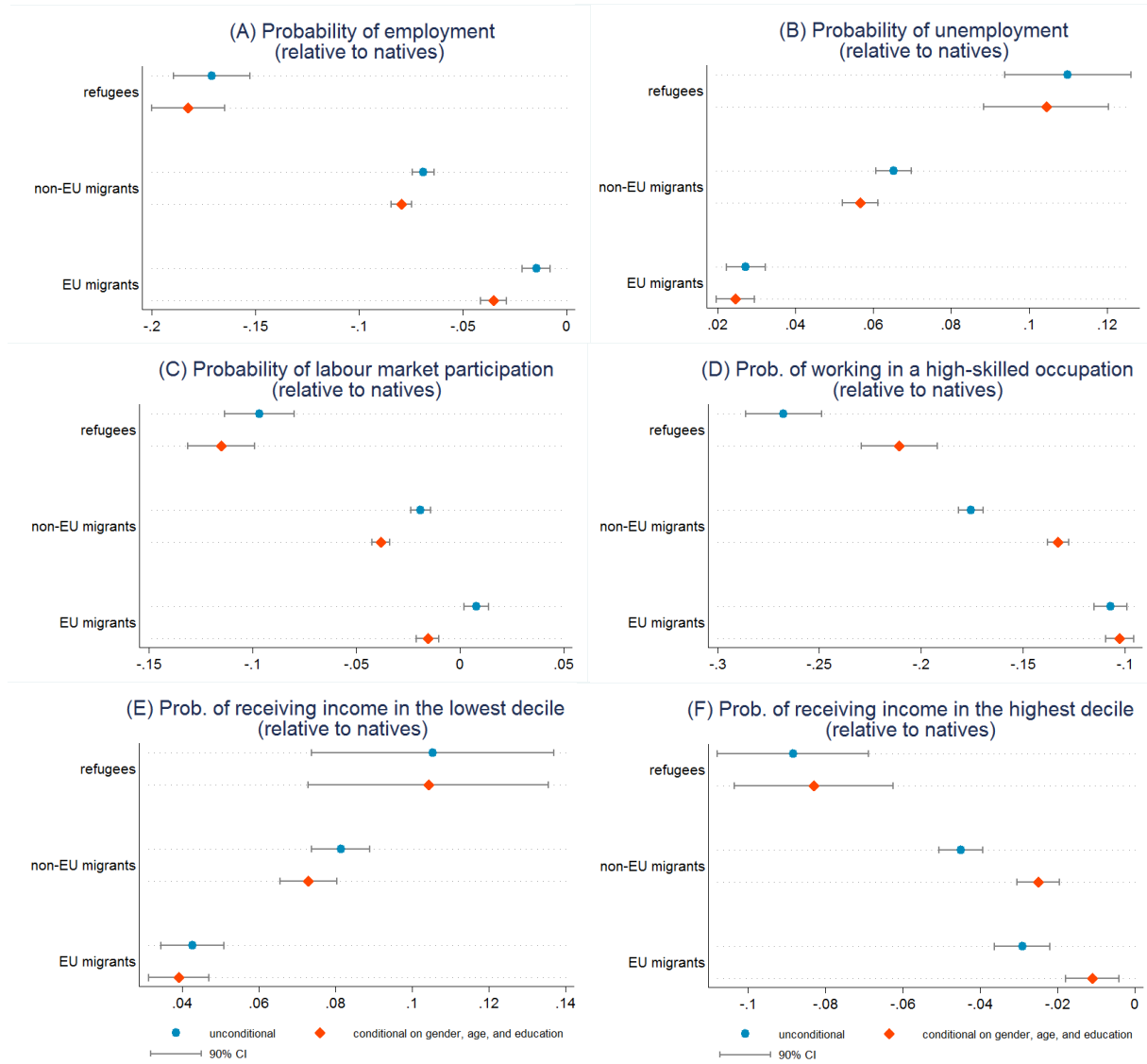
Notes. The figure shows the unconditional and conditional differences (and 90 percent confidence intervals based on robust standard errors) for various labour market outcomes between EU and non-EU migrants and natives, as well as between refugees and natives. The dependent variable is, alternatively, a dummy for whether the individual is employed (A); job hunting versus being in employment (B); employed or job hunting versus being out of the labour force (C); employed in a high skilled occupation versus being employed in other occupations (D); in the bottom decile of the national income distribution (E); or in the top decile of the national income distribution (F). Unconditional estimates are obtained from linear probability regressions that include destination country–observation year interaction dummies. Conditional gaps further control for gender, age and education. The sample comprises individuals aged 25–64 surveyed in 2008 or 2014. We also report 90 percent confidence intervals based on robust standard errors.

Figure 2 – Employment and unemployment gaps with natives by years since arrival

A. Probability of employment (relative to natives)

B. Probability of unemployment (relative to natives)

EU   Non-EU   Refugees
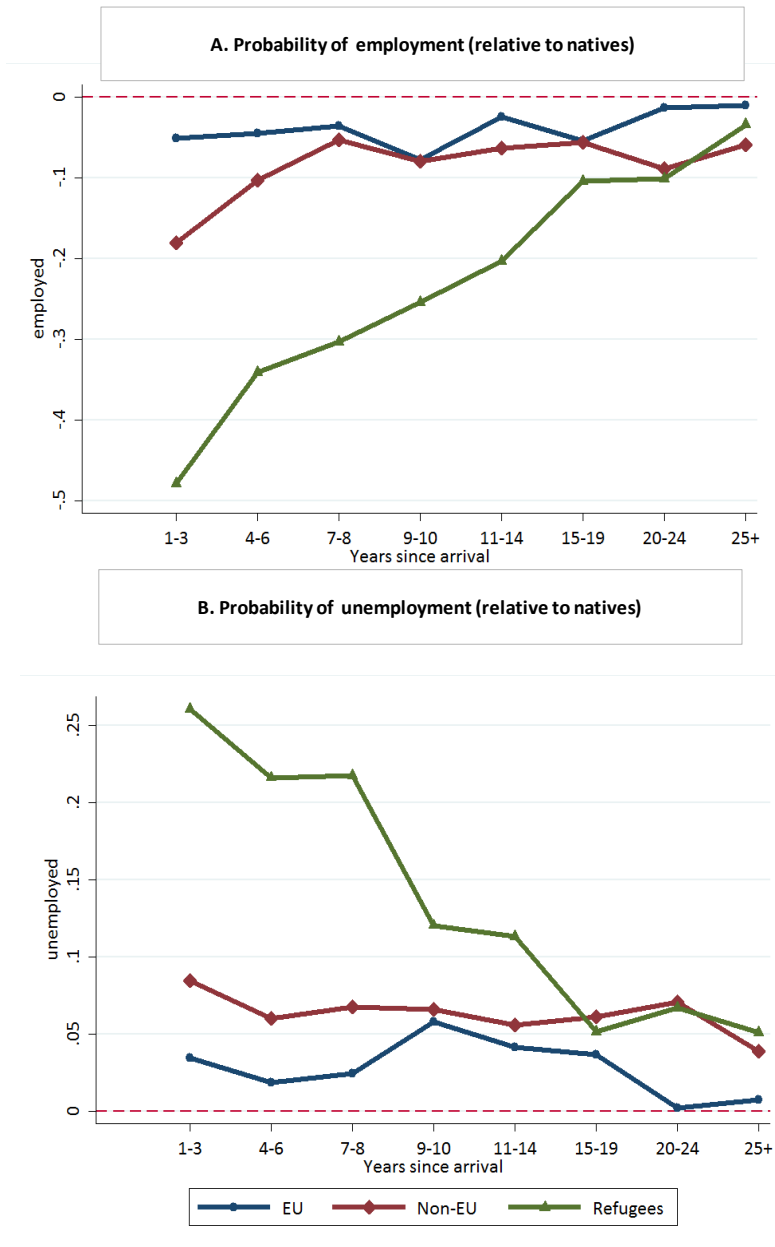
Notes. Figure 2A outlines the evolution of the percentage point difference in employment probability (conditional on age, gender and education plus destination country–interview year fixed effects) between natives and EU migrants (blue circles), non-EU migrants (red diamonds) and refugees (green triangles) by years in the host country. The sample comprises individuals aged 25–64 surveyed in 2008 or 2014. Figure 2B illustrates the evolution of the percentage point difference in unemployment probability (conditional on age, gender and education) between natives and EU migrants (blue circles), non-EU migrants (red diamonds) and refugees (green triangles) by years in the host country. The sample comprises individuals aged 25–64 who were employed or job hunting when surveyed in either 2008 or 2014.

40

Figure 3 – Refugee–immigrant gaps in labour market outcomes by area of origin
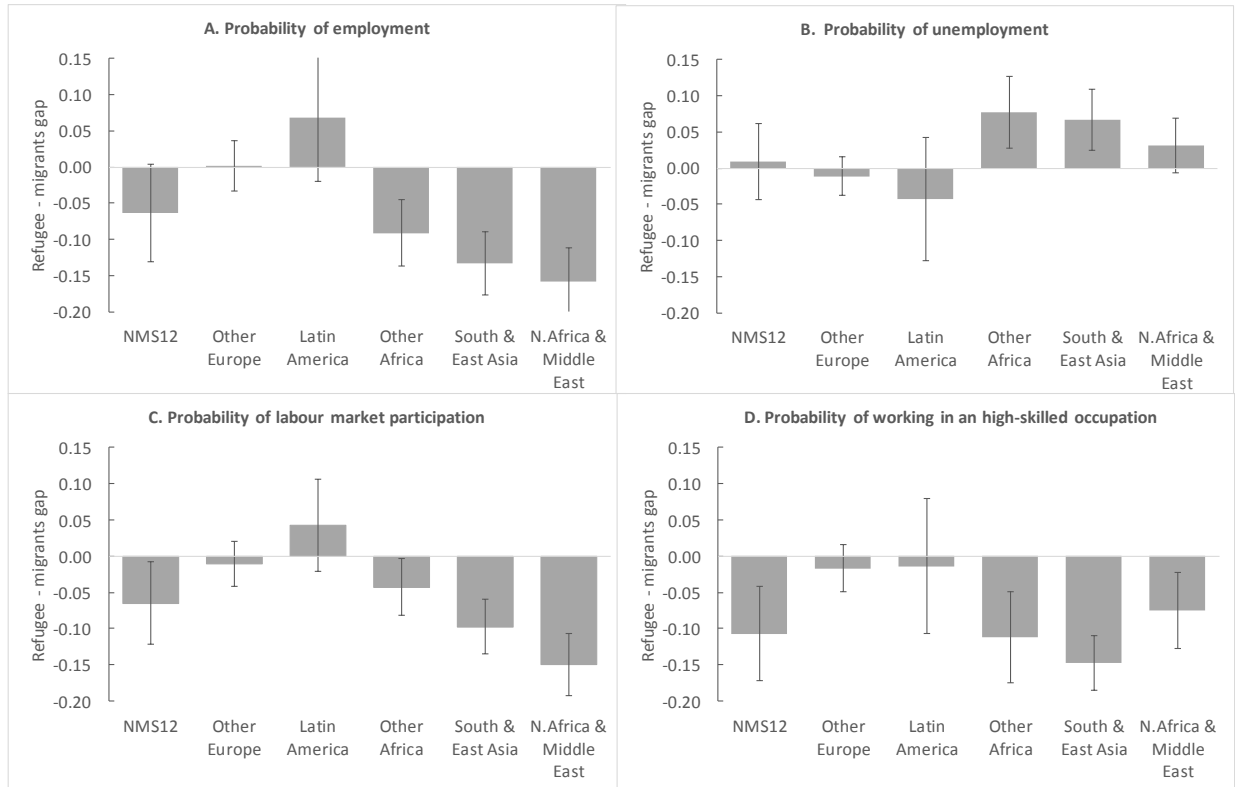
Notes. The figure illustrates the conditional refugee–non-EU 15 migrant differences in various labour market outcomes, together with the corresponding robust standard error-based 90 percent confidence intervals. We estimate the regressions separately for each area of origin, controlling for gender, age, education, as well as interaction between destination country dummies and observation year or entry cohort dummies. The dependent variable is, alternatively, a dummy for whether the individual is employed (A); job hunting versus being in employment (B); or employed or job hunting versus being out of the labour force (C). The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014.

Figure 4 – Refugee–immigrant employment and unemployment gaps by years since arrival

A. Probability of employment

B. Probability of unemployment
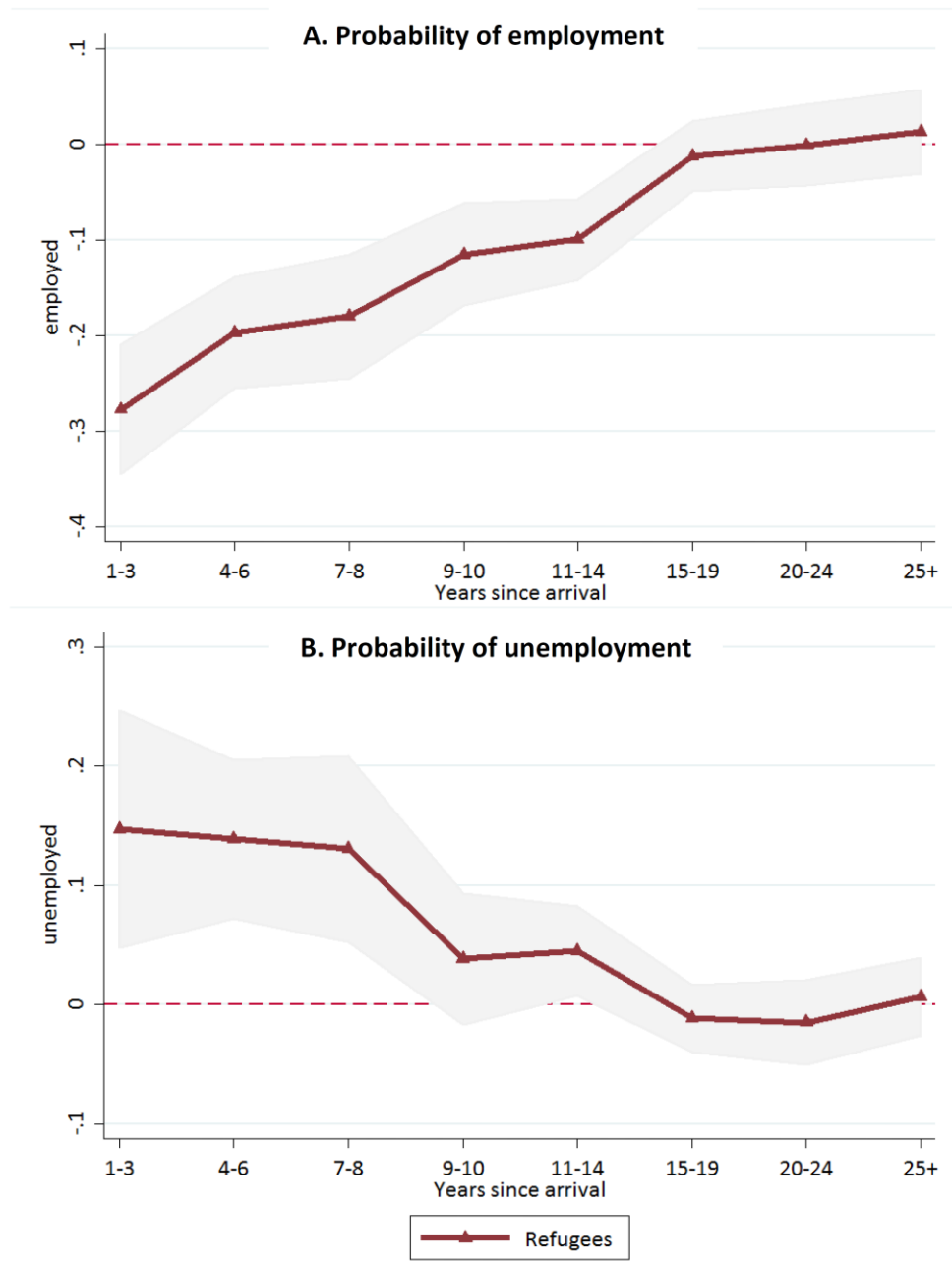
Notes. The figure graphs the evolution of the conditional gap in employment (top) and unemployment probability (bottom) between refugees and non-EU15 migrants by years in the host country. All regressions include age, gender, education, destination country–interview year fixed effects, and origin area fixed effects. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. We also report 90 percent confidence intervals based on robust standard errors.

Figure 5 – Female versus male refugee–immigrant employment gaps by years since arrival
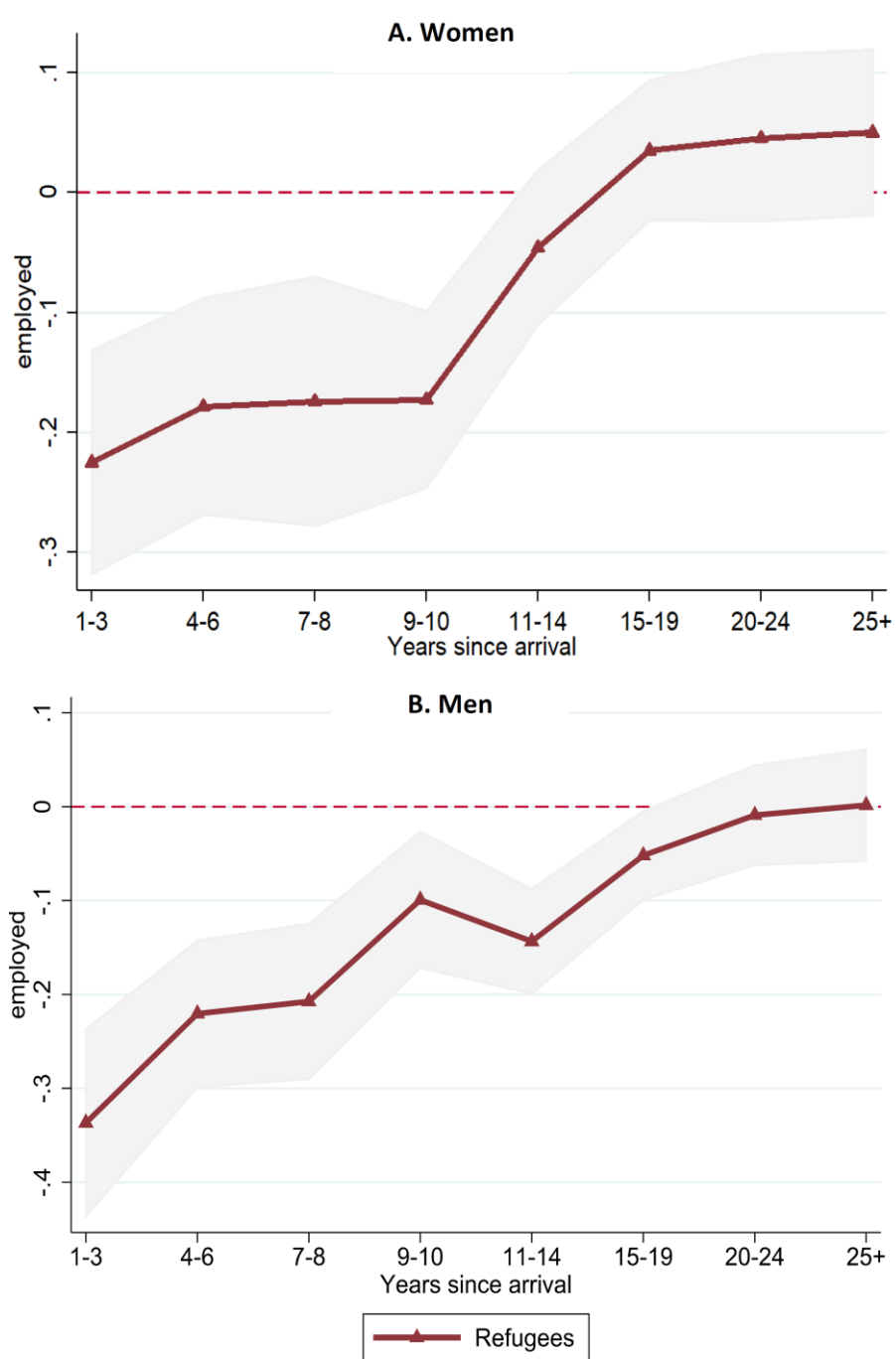
Notes. The figure illustrates the evolution of the conditional gap in employment probability between female (top) and male (bottom) refugees and non-EU15 migrants by years in the host country. All regressions include age, education, destination country–interview year fixed effects, and origin area fixed effects. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. We also report 90 percent confidence intervals based on robust standard errors.

Tables

Table 1– Immigrants and refugees: share in population and distribution by origin area

	EU migrants	Non-EU migrants	Refugees	Total immigrants
Share in total population	3.9	7.8	0.6	12.4
		Distribution by origin		
EU15	54.2	0.0	0.0	2.1
NSM12 / NMS13	45.8	0.0	6.7	1.8
Other Europe	0.0	21.9	30.8	1.9
North Africa and Middle East	0.0	22.3	25.1	1.9
Other Africa	0.0	11.4	17.7	1.0
South-East Asia	0.0	16.9	16.8	1.4
North America and Oceania	0.0	3.2	0.0	0.3
Latin America	0.0	24.2	3.0	1.9
Total	100.0	100.0	100.0	12.4

Notes. The first row of the table reports the share of EU migrants (column 1), non-EU migrants (column 2), refugees (column 3) and immigrants overall (column 4) in the population. The other rows list the distributions of each group of immigrants by origin area. The sample includes all individuals aged 25–64 who are not in full-time education or military service, have no missing information on immigrant status, education, age or origin area, and interviewed in the EU countries for which the 2008 and 2014 EULFS *ad hoc* modules are available (N = 982,962).

Table 2 – Summary statistics

		Natives	EU migrants	Non-EU migrants	Refugees
Share men		0.50	0.48	0.47	0.60
Distribution by age group					
	55/64	0.24	0.18	0.14	0.17
	40/54	0.41	0.37	0.39	0.50
	25/39	0.35	0.45	0.47	0.33
Education					
	Share tertiary	0.28	0.32	0.26	0.24
	Share upper secondary	0.41	0.43	0.34	0.38
	Share lower secondary	0.31	0.26	0.41	0.38
Distribution by broad entry cohorts					
	Before 1995		0.36	0.35	0.44
	1995-2003		0.31	0.41	0.41
	2004-2007		0.22	0.17	0.09
	2008-2013		0.11	0.07	0.06
Employment rate		0.72	0.72	0.65	0.60
Participation rate		0.78	0.80	0.76	0.71
Unemployment rate		0.07	0.10	0.14	0.16
Share in skilled occupations		0.44	0.35	0.26	0.22
Share in top income decile		0.12	0.09	0.07	0.03
Share in bottom income decile		0.07	0.11	0.15	0.17
Share of observations in 2014		0.41	0.53	0.48	0.43
Observations		891,029	34,484	52,213	5,236
Observations on income		117,259	8,851	10,427	599

Notes. The table reports the following variables separately for all natives, all EU migrants, all non-EU migrants and all refugees in the sample: share of males; distribution by age group; educational distribution; distribution by broad entry cohorts; employment, participation and unemployment rates, as well as share of individuals employed in a skilled occupation out of all employed individuals and share of individuals in the top and bottom deciles of the national income distribution; and share of observations in 2014. The two bottom lines report the total number of observations, and the total number of observations for which data are available (from the 2014 survey only) on position in the national income distribution.

Table 3 – Refugee–immigrant gap: employment status

	(1)	(2)	(3)	(4)	(5)	(6)
Refugee	-0.064***	-0.095***	-0.088***	-0.072***	-0.076***	-0.078***
	(0.012)	(0.012)	(0.011)	(0.011)	(0.011)	(0.011)
Host country*Year	YES	YES	YES	YES	YES	YES
Gender and Age		YES	YES	YES	YES	YES
Education			YES	YES	YES	YES
Source Area FE				YES	YES	
Entry Cohort FE					YES	
Entry Cohort*Host Country FE						YES
Entry Cohort*Source Area FE						YES
Observations	69,128	69,128	69,128	69,128	69,128	69,128

Notes. The table reports the coefficients for a refugee migrant dummy, estimated by linear regression with an employment dummy as the dependent variable. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. The unconditional mean of the employment indicator for economic migrants is 0.67. All specifications include destination country–observation year interaction dummies. "Gender and age" are dummy variables for gender and for five–year age groups. "Education" are dummy variables for at most upper secondary or tertiary education, with at most lower secondary education as the excluded category. "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4 – Refugee–immigrant gap: other labour market outcomes

	Unemployment			Participation			Skilled occupation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Refugee	0.044***	0.045***	0.031***	-0.034***	-0.061***	-0.063***	-0.095***	-0.079***	-0.071***
	(0.010)	(0.010)	(0.011)	(0.011)	(0.010)	(0.010)	(0.013)	(0.012)	(0.012)
Host country*Year	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gender, Age, Education		YES	YES		YES	YES		YES	YES
Entry Cohort*Host Country FE			YES			YES			YES
Entry Cohort*Source Area FE			YES			YES			YES
Observations	52,900	52,900	52,900	69,128	69,128	69,128	46,359	46,359	46,359

Notes. The table reports the coefficients for a refugee migrant dummy, estimated by linear regressions with either an unemployment dummy, a participation dummy or a skilled occupation dummy (whether employed in a high-skilled or other occupation) as the dependent variable. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. The unconditional means of the outcome variables for economic migrants are as follows: unemployment = 0.14; participation = 0.78; skilled occupation = 0.24. All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category). "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5 – Refugee–immigrant gap: position in the income distribution

	Bottom decile			Top decile		
	(1)	(2)	(3)	(4)	(5)	(6)
Refugee	0.058***	0.066***	0.060***	-0.052***	-0.053***	-0.048***
	(0.020)	(0.020)	(0.021)	(0.014)	(0.013)	(0.013)
Host Country	YES	YES	YES	YES	YES	YES
Gender, Age, Education		YES	YES		YES	YES
Entry Cohort*Host Country FE			YES			YES
Entry Cohort*Source Area FE			YES			YES
Observations	13,847	13,847	13,847	13,847	13,847	13,847

Notes. The table reports the coefficients for a refugee migrant dummy, estimated by linear regression with either a bottom or top income decile dummy as dependent variable. The sample comprises employed non-EU15 immigrants aged 25–64 surveyed in 2014 All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category) "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6 – Three-way fixed effects

	Employment	Unemployment	Participation	Skilled occupation	Bottom decile	Top decile
	(1)	(2)	(3)	(4)	(5)	(6)
Refugee	-0.069***	0.027**	-0.056***	-0.079***	0.038*	-0.045***
	(0.012)	(0.011)	(0.011)	(0.013)	(0.022)	(0.014)
Host Country*Year	YES	YES	YES	YES	YES	YES
Gender, Age, Education	YES	YES	YES	YES	YES	YES
Entry Cohort*Host Country*Source Area FE	YES	YES	YES	YES	YES	YES
Observations	69,128	52,900	69,128	46,359	13,847	13,847

Notes. The table reports the coefficients for a refugee migrant dummy, estimated by linear regressions with either (un)employment, participation, skilled occupation, or bottom or top income decile as the dependent variable. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014 (columns 1–4) or only in 2014 (columns 5–6 All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category) "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 7– Refugee-immigrant gaps by gender

	Employment		Unemployment		Participation		Skilled occupation	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Refugee - Women	-0.051***	-0.050***	0.019	0.010	-0.041**	-0.046***	-0.085***	-0.068***
	(0.019)	(0.018)	(0.016)	(0.016)	(0.018)	(0.017)	(0.021)	(0.020)
Observations - Women	37,533	37,533	24,865	24,865	37,533	37,533	21,581	21,581
Refugee - Men	-0.122***	-0.108***	0.059***	0.043***	-0.083***	-0.087***	-0.101***	-0.067***
	(0.015)	(0.015)	(0.014)	(0.014)	(0.013)	(0.012)	(0.016)	(0.015)
Observations - Men	31,595	31,595	28,035	28,035	31,595	31,595	24,778	24,778
Host Country*Year	YES	YES	YES	YES	YES	YES	YES	YES
Age, Education		YES		YES		YES		YES
Entry Cohort*Host Country FE		YES		YES		YES		YES
Entry Cohort*Source Area FE		YES		YES		YES		YES
Baseline Probability Women	0.584		0.134		0.674		0.283	
Baseline Probability Men	0.779		0.122		0.888		0.304	

Notes. The table reports the coefficients for a refugee migrant dummy, estimated using separate linear regressions for women and men with either an employment dummy , an unemployment dummy, a participation dummy, or a skilled occupation dummy (whether employed in a high-skilled or other occupation) as the dependent variable. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. The two bottom rows report the unconditional means of the outcome variables for female and male non-refugee migrants. All specifications include destination country–observation year interaction dummies. "Age and education" are dummy variables for five–year age groups and for at most upper secondary or tertiary education (with at most lower secondary education as the excluded category). "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 8 – Entry conditions and scarring effects

	(1)	(2)	(3)	(4)	(5)
Refugee	-0.150***	-0.152***	-0.152***	-0.149***	-0.148***
	(0.019)	(0.018)	(0.019)	(0.019)	(0.019)
Recession Indicator$_T$		-0.066***	-0.066***		
		(0.017)	(0.017)		
Refugee*Recession Indicator$_T$			-0.003	-0.008	0.013
			(0.048)	(0.048)	(0.046)
Host Country*Year	YES	YES	YES	YES	YES
Gender, Age, Education	YES	YES	YES	YES	YES
Source Area	YES	YES	YES	YES	
Entry Cohort*HostCountry FE				YES	YES
Entry Cohort*Source Area FE					YES
Observations	44,484	44,484	44,484	44,484	44,484

Notes. The table reports the coefficients for a refugee migrant dummy, a dummy for migrant entry during a recession, and a dummy for the interaction between the two, estimated by linear regression with an employment dummy as the dependent variable. The recession dummy is equal to one for years in which real GDP per capita growth is negative, and zero otherwise. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category) "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Standard errors (in parentheses) are clustered at the entry cohort–host country level: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 9 – Health and language

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A - Health					
	LM status: permanently disabled			**Reason for not searching an employment: health or disability**		
Refugee	0.014**	0.016***	0.018***	0.096***	0.086***	0.090***
	(0.006)	(0.005)	(0.005)	(0.028)	(0.028)	(0.027)
Observations	58,014	58,014	58,014	10,645	10,645	10,645
	Panel B - Host Country Language					
	Obstacle to employability: lack of proficiency			**Low proficiency**		
Refugee	0.053***	0.046***	0.044***	0.043***	0.027*	0.030**
	(0.019)	(0.018)	(0.016)	(0.016)	(0.015)	(0.013)
Observations	38,940	38,940	38,940	31,693	31,693	31,693
Host Country*Year	YES	YES	YES	YES	YES	YES
Gender, Age, Education	YES	YES	YES	YES	YES	YES
Source Area	YES	YES		YES	YES	
Entry Cohort*Host Country FE		YES	YES		YES	YES
Entry Cohort*Source Area FE			YES			YES

Notes. The table reports the coefficients for a refugee migrant dummy, estimated in linear probability regressions in which the dependent variables are dummies equal to one if the respondent reports (a) a permanent disability (Panel A, columns 1–3); (b) health or disability issues as the main reason for not actively job hunting (columns 4–6); (c) a lack of fluency in the host country language as an obstacle to employability (Panel B, columns 1–3); and/or (d) a "beginner or less" level of proficiency in the host country language. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category). "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 10 – Dispersal policies

	Employment			Unemployment	Participation	Skilled Occupation
	(1)	(2)	(3)	(4)	(5)	(6)
Refugee	-0.079***	-0.057***	-0.060***	0.028**	-0.046***	-0.062***
	(0.018)	(0.019)	(0.018)	(0.014)	(0.015)	(0.017)
Refugee * Dispersal policy$_T$		-0.092***	-0.088***	0.022	-0.080***	-0.047**
		(0.034)	(0.033)	(0.020)	(0.028)	(0.020)
Host country*year	YES	YES	YES	YES	YES	YES
Gender, age, education	YES	YES	YES	YES	YES	YES
Source Area	YES	YES				
Entry Cohort*Host Country FE	YES	YES	YES	YES	YES	YES
Entry Cohort*Source Area FE			YES	YES	YES	YES
Observations	64,890	64,890	64,890	50,458	64,890	44,111

Notes. The table reports the coefficients for a refugee migrant dummy, as well as its interaction with an indicator of a refugee dispersal policy being active in the destination country at the migrant's time of arrival (*T*), estimated by linear regression with either an employment dummy, an unemployment dummy, a participation dummy, or a skilled occupation dummy as dependent variable. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category) "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Standard errors (in parentheses) are clustered at the entry cohort–host country level: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 11 – Dynamic effects of dispersal policy

Years since migration:	5 or less	6-14	15 or more
	(1)	(2)	(3)
Panel A: Employment			
Refugee	-0.185***	-0.109***	-0.005
	(0.040)	(0.019)	(0.020)
Refugee * Dispersal policy$_T$	-0.171***	-0.055*	-0.033
	(0.054)	(0.028)	(0.024)
Observations	13,001	28,570	23,319
Panel B: Unemployment			
Refugee	0.114**	0.070***	-0.006
	(0.055)	(0.017)	(0.015)
Refugee * Dispersal policy$_T$	0.109	-0.020	0.025
	(0.068)	(0.022)	(0.021)
Observations	9,891	22,576	17,991
Panel C: Participation			
Refugee	-0.155***	-0.063***	-0.011
	(0.050)	(0.023)	(0.015)
Refugee * Dispersal policy$_T$	-0.129**	-0.082**	-0.013
	(0.065)	(0.032)	(0.023)
Observations	13,001	28,570	23,319
Panel D: Skilled occupation			
Refugee	-0.052	-0.063**	-0.062**
	(0.059)	(0.024)	(0.024)
Refugee * Dispersal policy$_T$	-0.132	-0.068*	-0.017
	(0.080)	(0.035)	(0.024)
Observations	8,641	19,530	15,940
Host Country*Year	YES	YES	YES
Gender, Age, Education	YES	YES	YES
Entry Cohort*Host Country FE	YES	YES	YES
Entry Cohort*Source Area FE	YES	YES	YES

Notes. To assess the heterogeneity of the dispersal policy effect on various labour market outcomes for refugees with different number years of experience in the destination country, the table reports the estimated coefficients for a refugee migrant dummy and its interaction with an indicator for whether a such a policy was active in the destination country at the migrant's time of arrival (T). These coefficients are calculated using linear regressions that all include dummies for destination country–observation year interaction together with entry cohort–host country fixed effects, and entry cohort–source area fixed effects. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category) "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Standard errors (in parentheses) are clustered at the entry cohort–host country level: *** $p<0.01$, ** $p<0.05$, * $p<0$.

Table 12 – Heterogeneous dispersal policy effect across countries

Refugee * Dispersal Policy$_T$	Employment	Unemployment	Participation	Skilled Occupation
	(1)	(2)	(3)	(4)
Netherlands	-0.104**	-0.012	-0.126**	0.010
	(0.052)	(0.025)	(0.058)	(0.127)
Norway	-0.085	0.080	-0.044	-0.035
	(0.094)	(0.057)	(0.078)	(0.064)
Ireland	-0.314***	0.048	-0.395***	-0.307***
	(0.065)	(0.102)	(0.024)	(0.068)
UK	-0.126**	0.077***	-0.086**	-0.072**
	(0.050)	(0.029)	(0.038)	(0.032)
Sweden	0.034	-0.060	-0.026	0.041
	(0.048)	(0.056)	(0.038)	(0.038)
Host Country*Year	YES	YES	YES	YES
Gender, Age, Education	YES	YES	YES	YES
Entry Cohort*Host Country FE	YES	YES	YES	YES
Entry Cohort*Source Area FE	YES	YES	YES	YES
Observations	64,890	50,458	64,890	44,111

Notes. The table reports the coefficients for the triple interaction of a refugee migrant dummy with a destination country dummy and with an indicator of a refugee dispersal policy being active in the destination country at the migrant's time of arrival (*T*), estimated by linear regression with either an employment dummy, an unemployment dummy, a participation dummy, or a skilled occupation dummy as dependent variable. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. All specifications include destination country–observation year interaction dummies. "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category). "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. Standard errors (in parentheses) are clustered at the entry cohort–host country level: *** p<0.01, ** p<0.05, * p<0.1

Table 13 – UNHCR asylum policy indicators

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
					Panel A: Employment					
Refugee	-0.220***	-0.253***	-0.243***	-0.237***	-0.229***	-0.214***	-0.218***	-0.267***	-0.255***	-0.245***
	(0.025)	(0.036)	(0.044)	(0.047)	(0.030)	(0.037)	(0.038)	(0.040)	(0.044)	(0.046)
Refugee * High_Rec_Rate$_T$		0.070	0.069	0.046				0.074*	0.073*	0.049
		(0.044)	(0.043)	(0.044)				(0.044)	(0.044)	(0.043)
Refugee * High_Dec_Rate$_T$					0.029	0.032	0.023	0.039	0.041	0.029
					(0.052)	(0.052)	(0.054)	(0.051)	(0.051)	(0.052)
Observations	17,750	17,750	17,750	17,750	17,750	17,750	17,750	17,750	17,750	17,750
					Panel B: Unemployment					
Refugee	0.143***	0.191***	0.218***	0.213***	0.145***	0.162***	0.170***	0.197***	0.221***	0.217***
	(0.030)	(0.040)	(0.044)	(0.045)	(0.042)	(0.041)	(0.042)	(0.053)	(0.051)	(0.051)
Refugee * High_Rec_Rate$_T$		-0.111**	-0.114**	-0.091*				-0.112*	-0.115**	-0.092*
		(0.056)	(0.055)	(0.052)				(0.058)	(0.057)	(0.054)
Refugee * High_Dec_Rate$_T$					-0.006	-0.002	-0.007	-0.016	-0.010	-0.013
					(0.059)	(0.064)	(0.060)	(0.062)	(0.066)	(0.061)
Observations	13,566	13,566	13,566	13,566	13,566	13,566	13,566	13,566	13,566	13,566
Host Country*Year	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gender, Age, Education	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Source Area	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Entry Cohort*Host Country	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Entry Cohort*Source Area				YES			YES			YES
Refugee * (Asylum Flow)$_T$			YES	YES		YES	YES		YES	YES

Notes. The table reports the coefficients for a refugee migrants dummy and its interaction with UNHCR indicators estimated by linear regression with either an employment dummy (Panel A) or an unemployment dummy (Panel B) as the dependent variable. The $High\_Rec\_Rate_T$ ($High\_Dec\_Rate_T$) indicator identifies source areas, host country and arrival years for which the recognition rate (decision rate) was above the 75th percentile of the EU distribution. The sample comprises non-EU15 immigrants aged 25–64 surveyed in 2008 or 2014. All specifications include destination country–observation year interaction dummies. . "Gender, Age, Education" are dummy variables for gender, five–year age groups and at most upper secondary or tertiary education (with at most lower secondary education as the excluded category). "Source Area" are dummy variables covering the seven major source regions (13 EU new member states; other European countries; North Africa and Middle East; other African countries; South and East Asia; North America and Oceania; Latin America). "Entry cohort" are dummy variables for year (or groups of years) of arrival in the host country. In columns 3–4, 6-7 and 9-10, we condition on the total number of asylum applications received from the same origin area by the host country at the time of arrival (also interacted with the refugee dummy). Standard errors (in parentheses) are clustered at the entry cohort–host country level: *** p<0.01, ** p<0.05, * p<0.1.

Appendix Tables

Table A 1 – Sample of immigrants and refugees by host country

	EU migrants	Non-EU migrants	Refugees	Total
AT	2,108	2,855	625	5,588
BE	1,903	1,763	373	4,039
CH	1,924	1,064	47	3,035
CY	434	551	49	1,034
DE	572	1,021	258	1,851
ES	3,475	8,783	52	12,310
FI	278	320	49	647
FR	1,245	3,362	207	4,814
GR	1,062	4,070	438	5,570
HR	57	408	96	561
HU	890	264	32	1,186
IE	2,788	874	66	3,728
IT	4,379	9,539	72	13,990
LU	4,717	825	62	5,604
NL	1,996	5,420	944	8,360
NO	971	811	278	2,060
PT	458	1,340	52	1,850
SE	1,435	1,737	940	4,112
SI	261	700	30	991
UK	3,531	6,506	566	10,603
Total	34,484	52,213	5,236	91,933

Notes. The table reports the number of EU migrants, non-EU migrants (col. 2), refugees (col. 3), and overall immigrants (col.4) in our estimating sample by destination country. The sample comprises all individuals aged 25–64 not in full-time education or military service for whom no information is missing on their education, in the EU countries for which the 2008 and 2014 EULFS *ad hoc* modules are available (N= 982,962).

Table A 2 – Employment Refugee Gap: Gelbach Decomposition

	Specification		Difference:
	Base	**Full**	**Base-Full**
Refugee gap	-0.064	-0.076	0.012
	(0.012)	(0.011)	(-0.004)
Controls:			
Gender and Age	**NO**	**YES**	0.029
			(0.003)
Education	**NO**	**YES**	-0.006
			(0.002)
Source Area FE	**NO**	**YES**	-0.021
			(0.002)
Entry Cohort FE	**NO**	**YES**	0.010
			(0.002)

Notes. The table reports estimates from a Gelbach decomposition of the employment refugee gap reported in Table 3. The "base" specification exclusively condition on country–year fixed effects (corresponding to column 1 in Table 3). The "full" specification further conditions on dummies for gender, age, education, source area and entry cohort (corresponding to column 5 in Table 3).