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# DISCUSSION PAPER

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## Labor Market Integration of Asylum Seekers in Europe: Recent Trends and Barriers

# Labor Market Integration of Asylum Seekers in Europe: Recent Trends and Barriers\*

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## Abstract

The labor market integration of asylum seekers remains a contested issue. Using the EU-Labor-Force-Survey, we characterize the state of asylum seekers' labor market integration in Europe, and provide representative statistics on several dimensions of integration. We compare asylum seekers to natives and economic migrants and find that asylum seekers struggle to integrate across European states, exhibiting employment rates of 10 percentage points lower than that of natives, on average, as well as a notable gap in job-quality. Analyzing self-reported barriers to employment, we document that asylum seekers' lower employment rates and job-quality are likely the result of institutional hurdles.

**Keywords:** asylum seekers; refugees; labor market integration

**JEL:** F22; K37; J11

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# 1 Introduction

In the last decade, the EU has experienced unprecedented waves of humanitarian migration. The labor market integration of these migrants into European Union (EU) labor markets has emerged as a critical policy challenge, with implications not only for economic development at the regional and national level, but also for social cohesion, inequality, and the individual welfare of EU residents. As such, this inflow poses both opportunities and challenges for host economies. Understanding the dynamics and consequences of asylum seeker flows and integration is therefore of key importance for both policy-makers and other stakeholders.

In this study, we analyze the labor market integration of asylum seekers across Europe. We predominately focus on EU countries, but also, where the data allows, include non-EU countries to give a comprehensive overview of asylum seekers' labor market integration prospects across the continent. In particular, we analyze the employment prospects of asylum seekers and compare them to those of host-country native populations and other types of migrants. We then examine differences in job quality between these groups, and highlight distributional differences between EU member states. Furthermore, we go beyond quantifying the size of labor market integration indicators, and also investigate potential barriers to employment and the role of destination country language proficiency for employment take-up. Our study thereby contributes to the literature on labor market integration of migrants, which only recently began to contextualizing refugee outcomes in a broader setting (see, e.g., Borjas and Monras, 2017).

The lack of evidence on asylum seekers' labor market integration across countries is primarily due to data limitations. Not every asylum seeker is ultimately recognized as a refugee, though due to the length of the process, individuals often experience significant wait times while participating in early integration activities. Information on later outcomes is thus somewhat scarce, largely due to attrition. In addition, countries have differing reporting standards which limits international comparability. We solve these problems by employing a pan-European data set on labor market outcomes for millions of residents in the EU member states and associated countries: the European Labour Force Survey (henceforth, EU-LFS). The data set is based on a harmonized survey across EU member states, four EU candidate countries, and three non-EU EFTA members. Our analysis includes current EU members, Iceland, Norway, and Switzerland. The survey uses standardized methods and multi-stage stratified random sampling to ensure consistency and representativeness of the EU population's demographic and socio-economic diversity. We focus on the 2021 wave, wherein data from the ad hoc module on migration-related issues allows us to identify humanitarian migrants separately from other migrants.

Our key findings can be summarized as follows. First, using representative individual-level data, we compute the employment rates of asylum seekers across Europe. We document differences in these labor market statistics between EU-15 and non-EU-15 countries and also with respect to the employment rates of natives and other migrants. Overall, asylum seekers seem to struggle to find employment across Europe. We supplement these results by looking at the employment trajectories of asylum seekers. We find that the gap in employment rates between economic migrants and asylum seekers does not seem to close with a longer stay in the destination country. Second, we examine country-level differences in job quality between asylum seekers, migrants, and natives, and demonstrate a notable job-quality gap for asylum seekers that is almost ignorable for non-humanitarian migrants. At the individual level, this gap persists even after controlling for sociodemographic characteristics, as well as regional, occupational, and industry sorting.

To untangle the channels that drive these findings, we examine the role of destination country language proficiency in employment prospects, given it is often considered an important prerequisite for labor market success. We document that asylum seekers with better self-assessed language skills perform considerably better in terms of employment. Finally, we document potential barriers to employment. Evaluating questions on self-reported reasons for non-employment, we find that asylum seekers perceive notable institutional barriers to finding employment. Particularly in the EU-15 countries, recognition of foreign qualifications seems to be a critical issue for asylum seekers, with many not even applying due to perceived irrelevance of their previous qualifications or the complexity of the process.

This remainder of this paper proceeds as follows. We first give an account of humanitarian migration to Europe and discuss previous findings in the literature. We then characterize the labor market outcomes of asylum seekers across Europe and identify key integration challenges. Finally, we conclude and discuss potential avenues for policy makers to improve the integration of asylum seekers in the EU.

## **2 Humanitarian Migration to Europe**

Notwithstanding, Europe has been a primary destination for migrants for many decades since the end of the Second World War. According to Garcés-Mascreñas and Penninx (2016), we can distinguish between three main periods in the history of recent migration. In the first period, Europe was a frequent destination for economic migrants with the deployment of guest worker schemes and immigrants from former colonies.

This first period ended with the occurrence of the first oil crisis in 1973, which simultaneously

marked the beginning of the second period; lasting until the fall of the Iron Curtain. In this period, regular migration was often restricted, but the number of asylum applications increased, with migration inflows also slowly shifting towards countries in Southern Europe. The third period is characterized by the increased presence throughout the European Union of both intra-European and third-country migrants, along with associated control measures. This non-EU migration intensified in the last decade and reached a peak in 2015, with an estimated unprecedented one million refugees arriving in the EU, the majority of which were refugees fleeing the Syrian civil war (Sansus et al. 2020). This peak was also classified as a migration crisis by, amongst others, Baldwin-Edwards et al. (2019). While the number of non-EU immigrants decreased slightly with the onset of the COVID-19 pandemic in 2020, it has since risen to an all-time high of 5.1 million in 2022 (Eurostat, 2024), in part driven by the Russian invasion of Ukraine.

Given the steep increase in humanitarian migrants in Europe that has characterized the last decade, popular support for immigration has become fragile (Czymara and Schmidt-Catran, 2017, Vollmer and Karakayali, 2018, Dennison and Geddes, 2019, Dinas et al., 2019, Czymara, 2021). Among other issues, incumbent residents are oftentimes concerned about the net fiscal position of migrants, and in particular asylum seekers (Meidert and Rapp, 2019, Hooijer, 2021, Perocco and Della Puppa, 2023, Kortendiek and Oertel, 2023,). The labor market integration of asylum seekers has thus become a key policy issue.

Unsurprisingly, social scientists have taken an interest in this topic. There is a sizeable body of evidence suggesting that both refugees and asylum seekers are under-represented in employment statistics, or conversely, overrepresented in terms of social welfare recipients (for Finland, see Sarvimäki, 2011, 2017; for Denmark, see Husted et al., 2001, Bratsberg et al., 2014, 2016, 2017, and Schultz-Nielsen, 2017; for Sweden, see Lundborg, 2013, and Åslund et al., 2017; and for Ireland, see Privalko et al., 2023). Alongside Fasani et al. (2022), we study the labor market integration of asylum seekers across several countries, not just for a single country.

### 3 Data

We employ the EU-LFS to document the state of the labor market integration of asylum seekers across Europe. The data set is based on a harmonized survey conducted across the European Union (EU) member states, the four EU candidate countries, and the three non-EU European Free Trade Association (EFTA) members. Our analysis is based on the EU-LFS micro-data at the household level and is restricted to the current EU member states, with the addition of Iceland, Norway, and Switzerland. The EU-LFS relies on a standardized approach to data

collection, sampling, and the coding of responses, to ensure consistency and comparability of data across participating countries. Methodologically, multi-stage stratified random sampling is used wherein the units (private households) are selected systematically from national registers or household surveys. The survey aims to achieve a representative sample illustrative of the resident EU population’s demographic and socio-economic diversity. It comprises a comprehensive set of variables related to labor market participation, employment status, and socio-demographic background characteristics at the individual and household levels. We rely on the 2021 wave of the EU-LFS in particular, which records both additional information about migrant-related issues via an ad-hoc module, and allows us to directly identify humanitarian migrants. We focus on the main household respondent in the annual EU-LFS data.

### **3.1 Identifying Asylum Seekers**

In the following, we address issues that concern both refugees and asylum seekers, or so-called “forced migrants”, jointly. In the 2021 round of the EU-LFS, additional in-depth questions were included on the topic of migration. One of these questions enables the indirect joint identification of refugees and asylum seekers, specifically the question regarding the main reason for the respondents’ latest migration experience into the host country. Possible responses include “international protection or asylum”, in addition to employment, family reasons, education or training, and retirement. It should be noted that this category does not reflect the official migration status of the respondent, i.e., if the respondent has been formally recognized as a refugee or is currently applying for asylum. Responses to this question were recorded for all survey participants between the ages of 15 and 74 whose country of birth differs from their current country of residence. In our analysis, we therefore jointly refer to this category as asylum seekers with the understanding that it consists of eligible respondents who indicated seeking international protection or asylum as their primary reason for migrating to the host country, independent of whether or not the attempt to obtain recognized refugee status was successful.

### **3.2 Migrant Operationalization**

To be able to benchmark labor market statistics of asylum seekers against those of other migrants, we also identify migrants that arrived in destination countries for non-humanitarian reasons. One caveat is that the EU-LFS does not permit the recording of multiple citizenships, thus in the case that a respondent has multiple citizenships the survey records with preference the citizenship of the country in which they reside. This convention means that naturalized migrants who have

acquired citizenship, and local nationals born abroad (including those more than one generation removed) who have returned as adults, are not easily identified. Further, the second-generation offspring of migrants who have not themselves obtained local citizenship may be misidentified as migrants when migrants are identified on the basis of nationality. Often, statistics computed on this basis capture host country differences in naturalization processes and sending country rules about multiple citizenship. For this reason, we primarily rely on time since arrival for the identification of migrants, restricting the migrant sample to those not born in the host country.

### 3.3 Analytical Sample

Table A1 reports the number of asylum seekers in the 2021 wave of the EU-LFS by country of residence, as well as the relative share, with sample weights applied. These numbers are bench-marked against non-humanitarian migrants. In part due to selection on socio-economic background characteristics when deciding to migrate, and in part due to differences in the sending country’s socio-demographic composition, migrant populations typically possess different socio-demographic and economic backgrounds to host-country natives. This selection effect is typically more pronounced in humanitarian migrant populations (Connor, 2010, Juran and Broer, 2017, Bevelander and Irastorza 2020), given those fleeing crises or conflicts tend to have lower English language abilities (Chiswick et al., 2006, Tshabangu-Soko and Caron, 2011), on average possess less formal education (Connor, 2010), have differing family situations (Connor, 2010), and experience higher risks of poor mental health due to the increased likelihood of exposure to physical and mental trauma (Chiswick et al., 2008, Crager et al., 2013). Table A2 provides an overview of the socio-demographic composition, limited to those who are of working age.

Tables A1 and A2 reveal notable variation across Europe in terms of the relative stock of asylum seekers and the demographic composition of the asylum seeker sample. On average, asylum seekers in EU 15 countries tend to possess a lower level of education than those in non-EU 15 countries, though in part this is driven by a greater degree of variation among the non-EU 15. Among the EU 15, Spain has the highest share of tertiary educated migrants, followed by France and Luxembourg. There is also significant variation in the age distribution. Not only are asylum seekers in the EU 15 countries younger, on average, but for some countries in particular the working-age migrant population is skewed toward younger workers (e.g, in Italy, 38% are aged 25-34). Given the relatively small sample size of asylum seekers in some countries, however, we exclude Bulgaria, Estonia, Latvia, and Lithuania from the main analysis.

## 4 Results

### 4.1 Labor Market Integration of Asylum Seekers

One indicator of how well migrants are able to integrate into host economies is whether or not they are able to find employment. For the EU-15 and non-EU-15 countries respectively, Tables A3 and A4 report the average asylum seeker unemployment rate by country, and the between-group differences between migrants and natives, asylum seekers and natives, and asylum seekers and other migrant groups. These statistics confirm that asylum seekers fare considerably worse in terms of employment than natives in almost all EU-15 countries. For the non-EU-15 countries the issue is more mixed. In particular, in some Eastern European countries asylum seekers tend to outperform natives in terms of employment. There are also notable differences in the rate at which asylum seekers participate in some form of education or work-related training, and while the relative proportion of migrants engaging in education appears to be similar across much of Europe, participation rates are much more varied among asylum seekers.

In general, one key reason for asylum seekers' largely lower employment rates in most EU-15 countries could be restrictions from participating in local labor markets shortly after arrival (Fasani et al., 2021). At least in the initial arrival period, this presents a structural barrier to employment. Similarly, they may not qualify for work-based training during this period. We, therefore, re-compute the average asylum seeker employment rate and between-group differences for a restricted sample of migrants and asylum seekers that have been present in the host country for 4 years or more, i.e., the period after which employment restrictions are usually no longer binding. The results of this analysis are presented in Tables A5 and A6. Indeed, the asylum-seeker-to-natives employment gap decreases, but remains quite high at about ten percentage points, on average, for the EU-15 countries.

### 4.2 The Role of Destination Country Language Skills

The gap in employment between asylum seekers and natives or other migrants may be due to initial differences in human capital between asylum seekers and the host country's native-born population or economic migrants when they first arrive. Unlike economic migrants, asylum seekers typically have less time to plan a smooth migration transition, and may not even know in which country they will ultimately end up claiming international protections before migrating. These circumstances affect factors which are important for successful labor market integration such as, e.g., pre-departure language acquisition. There is a body of evidence that demonstrates better assimilation prospects are commensurate with improved host-nation language skills (i.e.

for asylum seekers in Germany, see Lange and Pfeiffer, 2019; for refugees in the Netherlands, see De Vroome and Van Tubergen 2010; for refugees in Austria, Verwiebe et al. 2019; for immigrants in Sweden, see Nekby et al., 2008, for refugees in the UK, see Cheung and Phillimore, 2013, among others), and “on-the-job” vocational language training has shown to be a particularly effective integration tool for many OECD countries (Liebig and Huddleston, 2014).

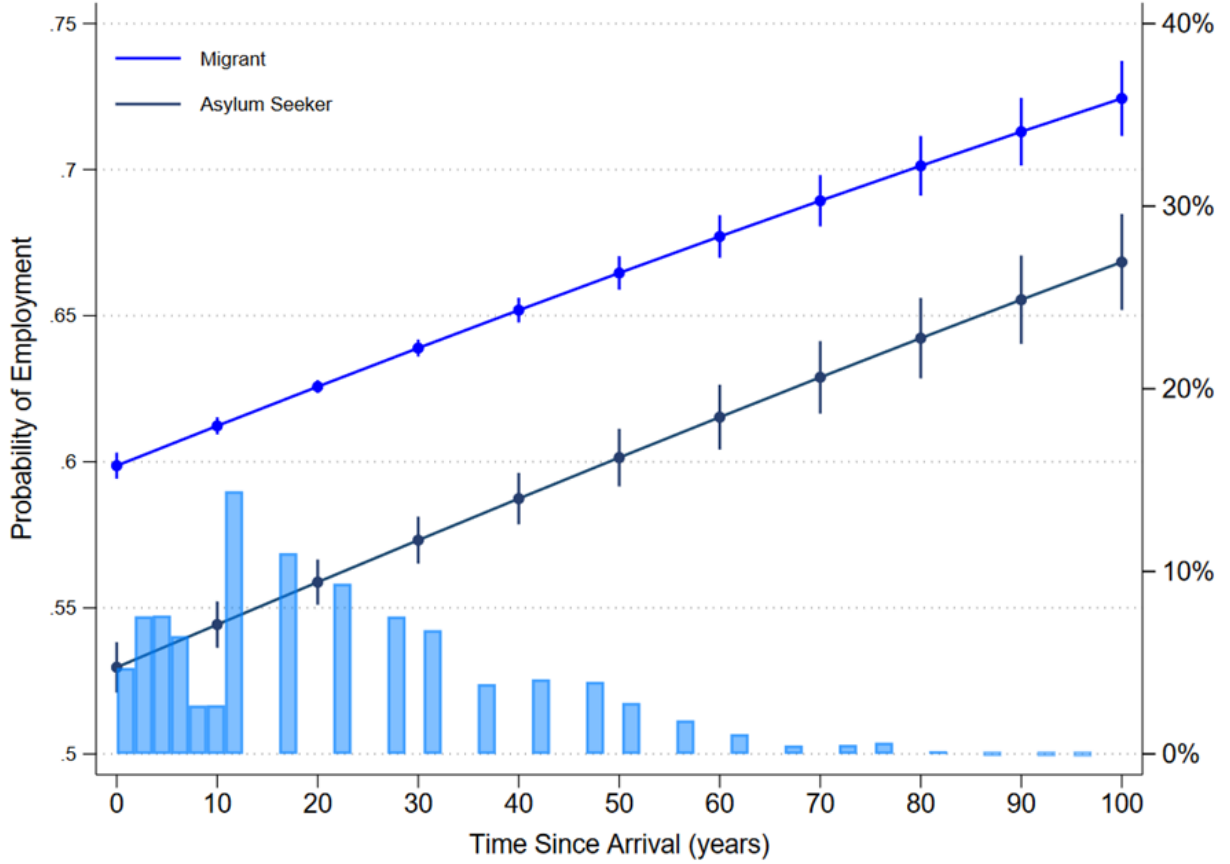
Using self-assessed language proficiency of the destination country language, we are able to compute the asylum seeker-native employment gap by host country language ability (see Tables A7 and A8, for the EU-15 and non-EU-15 countries, respectively). This exercise is particularly illustrative, and results are consistent with the previous literature. The gap in employment between asylum seekers and natives substantially decreases with improved language skills. Among the EU-15 countries, for those who report they are advanced users of the host nation language the employment gap is, on average, 11 percentage points. For those who report they are beginners, the gap is over 42 percentage points. Similarly, among the non-EU-15, the shares are 9 and 56 percentage points, respectively.

### 4.3 Employment Trajectories

Evidence from the U.S. suggests that refugees assimilate faster into the labor market than other types of migrants (Borjas, 1982; Cortes, 2004; and Chin and Cortes, 2015). However, evidence from Europe is more mixed. While results from 2008 and 2014 EU-LFS-based studies suggest that the employment gap between refugees and natives decreases over time, consistent with U.S. findings, there is also evidence that despite relatively high short-term gains in the employment rate, these effects level off between 10-15 years post-arrival, and in some cases even decline (Bratsberg et al., 2016, 2017). That is, refugees initially assimilate at a faster rate than other types of migrants, including economic migrants, yet a gap remains several years post-arrival (e.g., for Sweden, see Hansen and Loftstrom, 2003 and Lundborg, 2013).

We investigate the employment trajectories of economic migrants and asylum seekers by limiting the sample to adult migrants or asylum seekers who are in some form of waged (self-) employment or in some form of job-related education or training. Then, we use logistic regressions to regress an indicator of whether or not an individual is employed on time since arrival, controlling for a) socio-demographic characteristics (i.e., age and its square, gender, and level of education), and b) fixed effects for the country of residence. Plotting the marginal effects conditional on the distribution of time since arrival, we obtain the results presented in Figure 1. Conditional on the aforementioned covariates, we find that not only do asylum seekers have a lower probability of

Figure 1: Predictive Margins of Asylum Seeker and Migrant Employment Conditional on Time since Arrival in Host Country



Source: EU-LFS 2021, own calculations. Notes: 95% confidence interval.

being in employment than other types of migrants in terms of level effect, but this gap narrows only slightly over time. There is also a larger degree of variation compared to other types of migrants. This suggests that even many years after the process of seeking refugee status or other international protections, there are persistent long-term effects over the life course on labor market opportunities, above and beyond those experienced by other migrants.

#### 4.4 Issues of Job Quality

While the ability of migrants to obtain employment may suggest integration on one dimension, a related concern is whether or not these are so-called ‘low-quality’ jobs. That is, jobs that are a poor match for the individual’s skills (e.g., horizontal and vertical mismatch), jobs that have non-social working hours (e.g., shift work, night work, weekend work etc.), or jobs that are (by design) only partially covered by the social security system (e.g., part-time or temporary contracts).

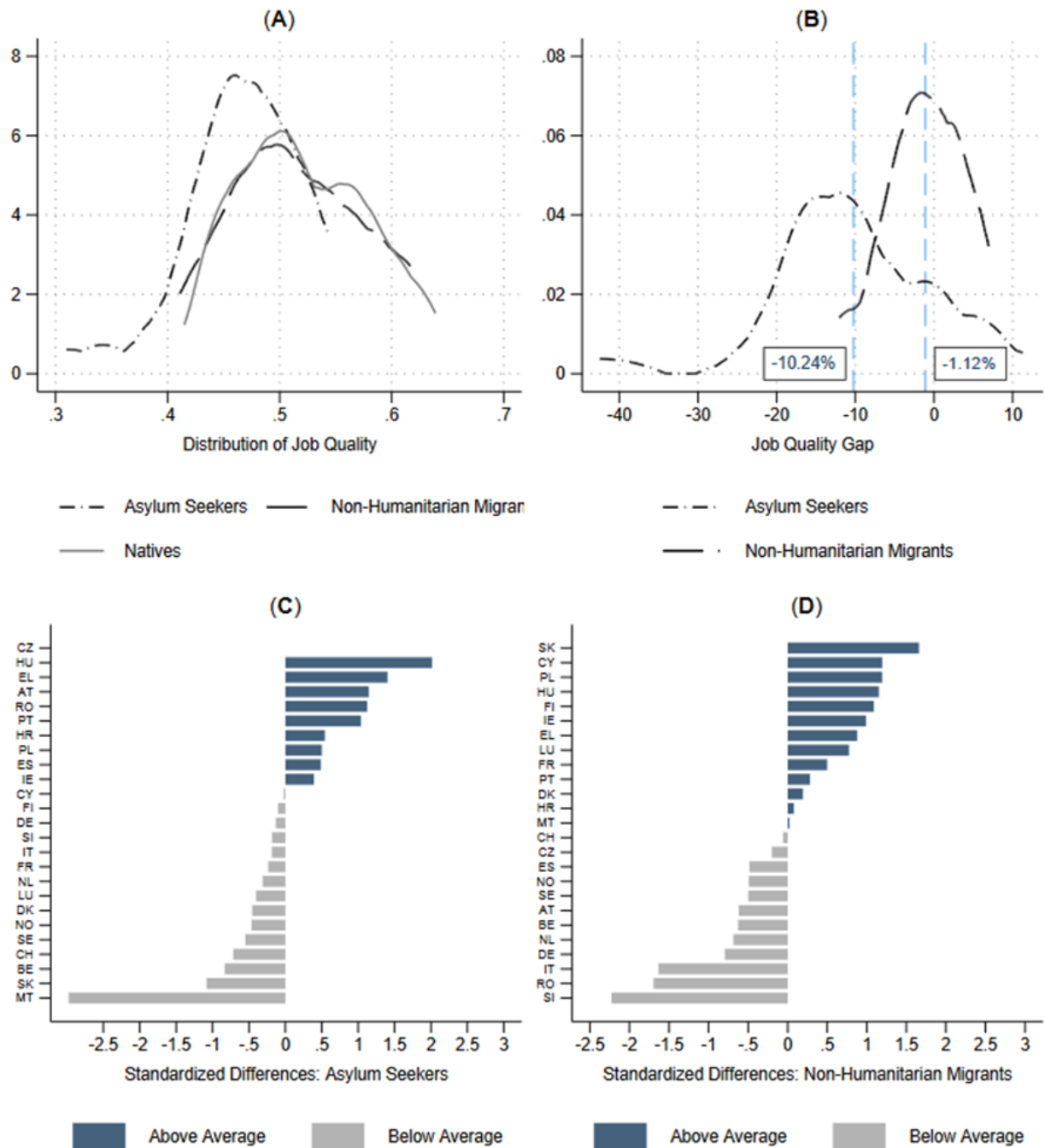
For those asylum seekers who find employment, there are notable differences in their distribution over economic sectors and occupations compared to both natives, and non-humanitarian migrants. Tables A9 and A10 report, respectively, the distribution of employed individuals by industry (NACE Rev 2, 1 digit), and occupation (ISCO-08, 1 digit). While migrants are distributed similarly to natives across both occupations and industries, and are most likely to work in professional occupations, asylum seekers are most likely to work in the service industry or elementary occupations, the so-called “low wage” sector. To examine potential differences in job quality in a systematic way, we construct a job-quality index (JQI) based on a modification of the parameters used to construct the European Job Quality Index, though with the exclusion of income parameters, as income deciles are not available in the EU-LFS from 2021 onward. Table A11 describes how responses to individual EU-LFS items were used to construct the various dimensions of the JQI, as well as the weight given to each sub-dimension. The index is constructed such that a higher value on each dimension implies better job quality and, for the purpose of later analysis, the composite score is rescaled on the unit interval.

In Figure 2, we compute weighted country-level averages of this index for asylum seekers, non-humanitarian migrants, and natives, and plot the relative distribution (Panel A). We then construct the distribution of the migrant-native gap in job quality in terms of percentage points (Panel B), and the ranked standardized differences for asylum seekers and non-humanitarian migrants (Panels C and D, respectively). We observe that, on average, asylum seekers have a JQI score approximately 10.24% lower than that of native workers while for non-humanitarian migrants the average difference is almost ignorable. Further, the countries in which non-humanitarian migrants are comparatively better off are not the same set of countries as for asylum seekers. For example, one of the countries with the smallest standardized gap in job quality for non-humanitarian migrants, Slovakia, simultaneously has one of the worst outcomes for asylum seekers. Conversely, while asylum seekers face comparatively fewer differences to natives in the Czech Republic, the same is not true for non-humanitarian migrants.

However, the results in Figure 2 do not control for compositional differences in terms of age, gender, education, or occupation, and thus only illustrate aggregate differences. In Table 1 we therefore regress the unit interval JQI score on an indicator of migration status, controlling for a) socio-demographic characteristics (i.e., age and its square, gender, and level of education), b) migrant-specific controls (i.e., time since migrating), and c) country fixed effects. We iteratively test the introduction of region fixed effects, occupational fixed effects, and industry fixed effects.

Conditional on the aforementioned covariates, we find that not only do asylum seekers experience worse employment conditions than both non-humanitarian migrants and natives, on

Figure 2: Differences in Job Quality between Asylum Seekers, Non-Humanitarian Migrants and Natives by Country of Residence



Source: EU-LFS 2021, own calculations. Notes: 95% confidence interval.

Table 1: Effects of Migration Status on JQI Score

|                           | (1)                   | (2)                   | (3)                   | (4)                   | (5)                   | (6)                   |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| NH Migrant                | -0.0152**<br>(0.006)  | -0.0192***<br>(0.004) | -0.0281***<br>(0.005) | -0.0338***<br>(0.006) | -0.0128**<br>(0.005)  | -0.0236***<br>(0.006) |
| Asylum Seeker             | -0.0672***<br>(0.008) | -0.0474***<br>(0.007) | -0.0561***<br>(0.007) | -0.0625***<br>(0.009) | -0.0344***<br>(0.006) | -0.0518***<br>(0.007) |
| Sociodemographic Controls |                       | X                     | X                     | X                     | X                     | X                     |
| Migrant-Specific Controls |                       |                       | X                     | X                     | X                     | X                     |
| Country F.E.              | X                     | X                     | X                     |                       | X                     | X                     |
| Reg F.E.                  |                       |                       |                       | X                     |                       |                       |
| Occupation F.E.           |                       |                       |                       |                       | X                     |                       |
| Industry F.E.             |                       |                       |                       |                       |                       | X                     |
| Observations              | 1028545               | 926547                | 926547                | 690711                | 923338                | 919722                |

*Source:* EU-LFS 2021, own calculations. *Notes:* Cluster robust standard errors computed at the country level. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

average, but for asylum seekers job quality differences are not explained by regional or industry sorting. Further, while a large part of the variation in non-humanitarian-migrant-native differences can be explained by occupational sorting, this is only partially true for asylum seekers.

#### 4.5 Barriers to (Quality) Employment

The previous sections document asylum seekers' struggle for labor market integration in Europe. But why do we see persistently lower employment rates among asylum seekers in European countries? And why do those who find employment tend to work in systematically worse jobs than both natives and non-humanitarian migrants, even after controlling for worker sorting and demographic differences? The existing literature highlights several issues, among which are institutional barriers to employment (Fasani et al., 2021), difficulty accessing job-related training (Park, 2011; Støren and Børing, 2018), differences in human capital upon arrival (Verwiebe et al., 2019), health issues (Reed and Barbosa, 2017), and discrimination (Jamil et al., 2012; Safi et al., 2024). As such, reasons are manifold.

In this section, we look at self-reported barriers to employment for asylum seekers. Tables 2 and 3 document these by EU-15 and non-EU-15 country of residence, respectively. Among the EU-15 countries, asylum seekers face notable institutional barriers to employment. Self-reported skill equivalence between pre- and post-migration jobs is mixed. A significant proportion of asylum seekers are either working in a lower-skilled position than their pre-migration job, or did not work

Table 2: Weighted Institutional Barriers to Employment for Asylum Seekers by EU-15 Country of Residence for 2021

|                                                 | AT    | BE    | DE    | DK    | EL    | ES    | FI    | FR    | IT    | LU    | PT    | SE    | Average |
|-------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| <i>Job Skill Equivalence Post-Migration (%)</i> |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Higher                                          | 12.91 | 7.44  | 19.31 | 9.63  | -     | 13.75 | 27.45 | 9.00  | 5.66  | 12.07 | 1.08  | 23.83 | 12.92   |
| Lower                                           | 16.46 | 11.63 | 14.64 | 9.63  | 6.67  | 37.50 | 17.65 | 19.00 | 16.98 | 10.34 | 2.15  | 8.81  | 14.29   |
| Same                                            | 16.46 | 13.49 | 13.40 | 11.85 | 17.78 | 28.75 | 9.80  | 10.00 | 20.75 | 12.07 | -     | 12.44 | 15.16   |
| Did Not Work Prior                              | 54.18 | 67.44 | 52.65 | 68.89 | 75.56 | 20.00 | 45.10 | 62.00 | 56.60 | 65.52 | 96.77 | 54.92 | 59.97   |
| <i>Job Satisfaction (%)</i>                     |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Satisfied to a Large Extent                     | 53.67 | 48.84 | 36.51 | 63.24 | 50.00 | 48.10 | 51.85 | 34.13 | 69.23 | 34.48 | 18.09 | 43.22 | 45.95   |
| Satisfied to Some Extent                        | 39.49 | 42.33 | 53.97 | 33.82 | 45.65 | 44.30 | 42.59 | 45.19 | 26.92 | 48.28 | 61.70 | 47.24 | 44.29   |
| Satisfied to a Small Extent                     | 6.08  | 7.91  | 6.80  | 1.47  | 4.35  | 3.80  | 3.70  | 12.50 | 3.85  | 3.45  | 17.02 | 7.04  | 6.50    |
| Not Satisfied At All                            | 0.76  | 0.93  | 2.72  | 1.47  | -     | 3.80  | 1.85  | 8.17  | -     | 13.79 | 3.19  | 2.51  | 3.92    |
| <i>Foreign Qualification Recognition (%)</i>    |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Applied: Partially/Fully Recognized             | 11.22 | 7.44  | 27.07 | 12.09 | 9.33  | 12.15 | 10.71 | 4.84  | 1.41  | 30.00 | 46.15 | 21.70 | 16.18   |
| Applied: Not Recognized                         | 2.15  | 5.95  | 9.61  | 2.20  | -     | 4.67  | 10.71 | 7.26  | 1.41  | 6.00  | 7.69  | 4.72  | 5.67    |
| Applied: Pending                                | 3.82  | 4.76  | 4.37  | 1.10  | -     | 7.48  | -     | 1.61  | -     | -     | -     | 1.89  | 3.57    |
| Not Applied: Not Needed                         | 47.26 | 33.93 | 20.52 | 38.46 | 70.67 | 13.08 | 50.00 | 16.53 | 57.75 | 10.00 | 7.69  | 22.64 | 32.38   |
| Not Applied: Not Aware How                      | 8.83  | 8.93  | 3.93  | 5.49  | 1.33  | 5.61  | 3.57  | 13.31 | 5.63  | 8.00  | 7.69  | 6.60  | 6.58    |
| Not Applied: Costs/Complexity                   | 12.17 | 5.06  | 11.35 | 5.49  | -     | 29.91 | 10.71 | 8.47  | 19.72 | 2.00  | 7.69  | 3.77  | 10.58   |
| Not Applied: Other Reason                       | 5.73  | 3.87  | 13.97 | 26.37 | 17.33 | 21.50 | 10.71 | 15.73 | -     | 20.00 | -     | 33.02 | 16.82   |
| Not Possible                                    | 8.83  | 4.76  | 9.17  | 8.79  | 1.33  | 4.67  | 3.57  | 11.69 | 9.86  | 2.00  | -     | 5.66  | 6.39    |
| No Formal Education                             | -     | 25.30 | -     | -     | -     | 0.93  | -     | 20.56 | 4.23  | 22.00 | 23.08 | -     | 16.02   |
| <i>Barriers to Work (%)</i>                     |       |       |       |       |       |       |       |       |       |       |       |       |         |
| Lack of Language Skills                         | 13.70 | 9.31  | 11.41 | 10.13 | 1.98  | 1.52  | 15.15 | 9.66  | 6.17  | 24.42 | -     | 10.32 | 10.34   |
| Lack of Qualification Recognition               | 5.28  | 4.21  | 7.40  | 3.08  | 1.98  | 12.88 | 4.04  | 7.87  | 4.94  | 5.81  | 1.57  | 6.13  | 5.43    |
| Restricted Right to Work                        | 4.79  | 7.10  | 1.29  | 0.88  | -     | 9.09  | -     | 9.89  | 2.47  | 4.65  | -     | 1.29  | 4.60    |
| Discrimination                                  | 3.14  | 2.44  | 1.29  | 2.64  | 1.98  | 0.76  | 7.07  | 2.02  | 3.70  | 4.65  | 0.79  | 7.42  | 3.16    |
| No Suitable Job                                 | 3.30  | 4.21  | 4.98  | 3.96  | 4.95  | 9.09  | 1.01  | 2.02  | 3.70  | 4.65  | 9.45  | 6.77  | 4.84    |
| Other Obstacle                                  | 1.49  | 3.10  | 4.50  | 6.17  | 4.95  | 9.85  | 7.07  | 11.46 | 23.46 | 6.98  | 3.15  | 14.52 | 8.06    |
| No Obstacles                                    | 55.12 | 42.79 | 40.19 | 63.00 | 63.37 | 45.45 | 58.59 | 41.12 | 48.15 | 36.05 | 83.46 | 50.00 | 52.27   |
| Never Looked for Work                           | 13.20 | 26.83 | 28.94 | 10.13 | 20.79 | 11.36 | 7.07  | 15.96 | 7.41  | 12.79 | 1.57  | 3.55  | 13.30   |

Source: EU-LFS 2021, own calculations.

prior to migrating. Recognition of foreign qualifications is a critical issue, with many not applying due to perceived irrelevance or the complexity of the process. Over 10 percent of those who did not applied for qualification recognition did so due to the complexity of the process. Language skills and formal qualification recognition are identified as primary barriers to employment, along with restricted rights to work and discrimination. However interestingly, the largest proportion of asylum seekers report facing no obstacles to finding employment—which by and large corresponds to the share of asylum seekers that already have found work in their country of residence. Among the non-EU-15 countries (see Table 3), asylum seekers similarly encounter substantial barriers, though there are several notable differences. The share of those who do not need qualification recognition varies greatly between EU-15 (32%) and non-EU-15 (74%) host countries. Language

Table 3: Weighted Institutional Barriers to Employment for Asylum Seekers by Non-EU-15 Country of Residence for 2021

|                                                 | CH    | CY    | HR    | HU    | NO    | PL     | SI    | Average |
|-------------------------------------------------|-------|-------|-------|-------|-------|--------|-------|---------|
| <i>Job Skill Equivalence Post-Migration (%)</i> |       |       |       |       |       |        |       |         |
| Higher                                          | -     | 14.29 | 5.88  | 44.44 | 8.42  | -      | 12.12 | 17.03   |
| Lower                                           | -     | 22.86 | 10.78 | 11.11 | 12.28 | -      | -     | 21.41   |
| Same                                            | 11.11 | 42.86 | 19.61 | 22.22 | 13.33 | -      | 18.18 | 25.33   |
| <i>Job Satisfaction (%)</i>                     |       |       |       |       |       |        |       |         |
| Did Not Work Prior                              | 88.89 | 20.00 | 63.73 | 22.22 | 65.96 | -      | 69.70 | 61.50   |
| Satisfied to a Large Extent                     | 64.18 | 40.00 | 48.04 | 66.67 | 45.95 | -      | 66.67 | 60.19   |
| Satisfied to Some Extent                        | 31.34 | 51.43 | 43.14 | 22.22 | 43.37 | 50.00  | 27.27 | 39.85   |
| Satisfied to a Small Extent                     | 1.49  | 8.57  | 7.84  | 11.11 | 9.06  | 50.00  | 3.03  | 13.02   |
| Not Satisfied At All                            | 2.99  | -     | 0.98  | -     | 1.62  | -      | 3.03  | 2.15    |
| <i>Foreign Qualification Recognition (%)</i>    |       |       |       |       |       |        |       |         |
| Applied: Partially/Fully Recognized             | 7.55  | 2.15  | 27.35 | 14.29 | 21.61 | -      | 14.81 | 14.63   |
| Applied: Not Recognized                         | 5.66  | -     | 1.71  | -     | 4.52  | -      | -     | 3.96    |
| Applied: Pending                                | 1.89  | -     | -     | -     | 1.51  | -      | -     | 1.70    |
| Not Applied: Not Needed                         | 33.96 | 80.65 | 64.96 | 85.71 | 23.62 | 100.00 | 77.78 | 74.07   |
| Not Applied: Not Aware How                      | 5.66  | 2.15  | 1.71  | -     | 4.02  | -      | -     | 3.39    |
| Not Applied: Costs/Complexity                   | 7.55  | -     | -     | -     | 6.03  | -      | -     | 6.79    |
| Not Applied: Other Reason                       | 28.30 | 1.08  | 2.56  | -     | 16.58 | -      | 7.41  | 11.19   |
| Not Possible                                    | 5.66  | -     | 0.85  | -     | 4.02  | -      | -     | 3.51    |
| No Formal Education                             | 3.77  | 13.98 | 0.85  | -     | 18.09 | -      | -     | 9.17    |
| <i>Barriers to Work (%)</i>                     |       |       |       |       |       |        |       |         |
| Lack of Language Skills                         | 11.11 | 7.37  | 1.14  | 7.69  | 9.00  | 50.00  | -     | 26.62   |
| Lack of Qualification Recognition               | 8.89  | 3.16  | 1.71  | -     | 3.07  | -      | -     | 4.21    |
| Restricted Right to Work                        | 2.22  | 2.11  | 0.57  | -     | 0.20  | -      | 2.38  | 1.50    |
| Discrimination                                  | 2.22  | 1.05  | 0.57  | -     | 1.43  | -      | 4.76  | 2.01    |
| No Suitable Job                                 | 2.22  | 4.21  | 16.00 | 23.08 | 6.95  | -      | 2.38  | 9.14    |
| Other Obstacle                                  | 8.89  | 5.26  | 2.86  | -     | 22.90 | -      | 4.76  | 8.93    |
| No Obstacles                                    | 57.78 | 43.16 | 65.14 | 61.54 | 40.49 | 50.00  | 80.95 | 62.38   |
| Never Looked for Work                           | 6.67  | 33.68 | 12.00 | 7.69  | 15.95 | -      | 4.76  | 13.46   |

Source: EU-LFS 2021, own calculations.

skills and formal qualification recognition are again primary barriers, alongside discrimination and a lack of suitable jobs. Despite these challenges, a significant proportion of asylum seekers report no barriers to employment—again corresponding to the employment rates of asylum seekers in Non-EU-15 countries. Across the EU job satisfaction varies widely, with moderate levels of satisfaction generally prevailing, though generally higher among the non-EU-15 countries—with many participants reporting they are satisfied to a large or some extent.

The result on job satisfaction is interesting given the previous findings on job quality. To explore the extent to which job satisfaction responds to differences in our measure of job quality, we use `binscatter` to regress job satisfaction on 100 quantiles of the unit interval JQI score, controlling for a) socio-demographic characteristics (i.e., age and its square, gender, and level of education), b) migrant-specific controls (i.e., time since migrating), and c) country, occupation, and industry fixed effects, applying analytic weights. We do this separately for migrants and asylum seekers and additionally distinguish between those born inside and outside of Europe, independent of nationality. The results of this exercise are reported in Figure B1. The estimated reaction functions indicate job satisfaction is more responsive to differences in job quality for EU-born individuals, and converges at higher levels of job quality for non-EU-born non-humanitarian migrants. However, it is concave for non-EU-born asylum seekers, indicating saturation of the relationship between the factors used to construct the JQI and asylum seekers perceptions about the “quality” of their employment at higher levels of JQI, with no additional marginal benefit beyond a given point.

In part, this may speak to differences in cultural context when evaluating the various dimensions of “quality” work. For example, though European measures of job quality typically consider whether the job requires weekend or evening work, this is rooted in the European cultural context wherein the weekend, and in particular Sunday, are considered days of rest. However, the same is not true worldwide.<sup>1</sup> Similarly, there may be cultural differences regarding evening work.

## 5 Conclusions and Discussion

This study documents the recent state of labor market integration for asylum seekers residing in Europe. In addition, it elucidates the struggles asylum seekers face when seeking employment. Our results highlight the ongoing problems asylum seekers face on the labor market and may serve as a guide to policymakers when drafting promising policy responses to improve the labor market position of asylum seekers.

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<sup>1</sup>For example, in many Muslim countries the traditional day of rest is Friday.

Based on our findings, we would like to encourage policymakers to focus on enhancing the recognition of foreign qualifications by simplifying and standardizing the process across the EU, which would likely facilitate faster labor market integration both among asylum seekers and other migrants. Furthermore, reducing institutional barriers for asylum seekers, such as allowing them to work while their applications are processed and shortening wait times for work permits, will on the one hand better utilize their labor market potential, and on the other improve their host-nation specific human capital and institutional knowledge. In the long run, this could serve to reduce the persistent employment penalty over the life-cycle. Implementing these recommendations would likely significantly improve the labor market integration of asylum seekers in the EU.

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# Appendix A

Table A1: Weighted Sample Frequency and Share of Asylum Seekers, Non-Humanitarian Migrants, and Natives by Country of Residence

| <i>EU-15</i>                   |           |          |           |          |          |           |          |          |           |           |           |          |          |
|--------------------------------|-----------|----------|-----------|----------|----------|-----------|----------|----------|-----------|-----------|-----------|----------|----------|
|                                | AT        | BE       | DE        | DK       | EL       | ES        | FI       | FR       | IT        | LU        | PT        | SE       | Average  |
| # asylum seekers               | 831.57    | 522.43   | 2412.91   | 863.65   | 132.49   | 398.34    | 161.35   | 528.56   | 207.34    | 113.08    | 147.62    | 4975.80  | 941.26   |
| # non-humanitarian migrants    | 40504.88  | 5979.36  | 34968.47  | 10498.49 | 2433.02  | 16579.49  | 2554.00  | 9949.21  | 52123.06  | 2832.38   | 4021.83   | 16334.99 | 16564.93 |
| # host-country natives         | 132307.55 | 31305.21 | 149207.62 | 92700.87 | 24076.48 | 77412.17  | 14476.65 | 55780.23 | 446673.60 | 6575.54   | 23565.54  | 61858.21 | 92994.98 |
| asylum seeker share            | 0.48      | 1.38     | 1.29      | 0.83     | 0.50     | 0.42      | 0.94     | 0.80     | 0.04      | 1.19      | 0.53      | 5.98     | 1.20     |
| non-humanitarian migrant share | 23.33     | 15.82    | 18.74     | 10.09    | 9.13     | 17.56     | 14.86    | 15.02    | 10.45     | 29.75     | 14.50     | 19.64    | 16.57    |
| <i>Non-EU 15</i>               |           |          |           |          |          |           |          |          |           |           |           |          |          |
|                                | BG        | CH       | CY        | EE       | HR       | HU        | LT       | LV       | NO        | PL        | RO        | SI       | Average  |
| # asylum seekers               | 2.22      | 1113.25  | 379.39    | 1.39     | 627.06   | 174.81    | 1.90     | 2.61     | 799.87    | 21.08     | 17.56     | 106.58   | 270.64   |
| # non-humanitarian migrants    | 389.38    | 25289.70 | 15218.69  | 4809.42  | 3899.36  | 9031.34   | 5154.52  | 1300.99  | 8385.95   | 5748.56   | 3199.91   | 6675.05  | 7425.24  |
| # host-country natives         | 31026.40  | 42265.05 | 22199.92  | 24396.19 | 33629.59 | 215800.85 | 44977.58 | 7849.41  | 17504.18  | 263277.36 | 210764.53 | 67476.37 | 81763.95 |
| asylum seeker share            | 0.01      | 1.62     | 1.00      | 0.00     | 1.64     | 0.08      | 0.00     | 0.03     | 3.00      | 0.01      | 0.01      | 0.14     | 0.63     |
| non-humanitarian migrant share | 1.24      | 36.83    | 40.26     | 16.47    | 10.22    | 4.01      | 10.28    | 14.21    | 31.42     | 2.14      | 1.50      | 8.99     | 14.80    |

Source: EU-LFS 2021, own calculations.

Table A2: Weighted Sociodemographic Characteristics of Working Age Asylum Seeker Sample

|                                           | <i>EU-15</i>     |       |       |        |       |       |        |        |       |       |       |       |         |
|-------------------------------------------|------------------|-------|-------|--------|-------|-------|--------|--------|-------|-------|-------|-------|---------|
|                                           | AT               | BE    | DE    | DK     | EL    | ES    | FI     | FR     | IT    | LU    | PT    | SE    | Average |
| Avg. Time Since Employment (months, avg.) | 49.43            | 62.36 | 51.68 | 65.41  | 79.77 | 20.54 | 38.53  | 63.26  | 45.98 | 76.68 | 91.21 | 41.90 | 57.23   |
| Time Since Arrival (years, avg.)          | 16.82            | 13.06 | 12.39 | 19.13  | 25.33 | 6.76  | 14.10  | 21.39  | 13.45 | 15.58 | 45.25 | 13.44 | 18.06   |
| <i>Age (%)</i>                            |                  |       |       |        |       |       |        |        |       |       |       |       |         |
| 15-25                                     | 11.12            | 11.48 | 15.86 | 9.10   | 1.92  | 20.21 | 19.77  | 8.74   | 10.38 | 9.83  | 0.00  | 17.38 | 11.32   |
| 25-34                                     | 23.66            | 29.11 | 26.12 | 21.77  | 20.90 | 30.34 | 28.50  | 16.81  | 38.15 | 25.89 | 0.00  | 24.48 | 23.81   |
| 35-44                                     | 23.18            | 24.85 | 22.55 | 27.96  | 21.19 | 23.45 | 29.06  | 25.57  | 18.93 | 30.10 | 7.76  | 23.04 | 23.14   |
| 45-54                                     | 25.30            | 23.00 | 19.68 | 20.48  | 27.72 | 12.45 | 14.06  | 20.97  | 18.66 | 25.07 | 57.61 | 18.48 | 23.62   |
| 55-64                                     | 16.74            | 11.57 | 15.79 | 20.69  | 28.27 | 13.56 | 8.60   | 27.90  | 13.88 | 9.11  | 34.63 | 16.62 | 18.11   |
| <i>Gender (%)</i>                         |                  |       |       |        |       |       |        |        |       |       |       |       |         |
| Male                                      | 59.94            | 57.44 | 62.02 | 62.90  | 34.15 | 47.26 | 52.11  | 50.13  | 81.37 | 53.04 | 40.54 | 59.47 | 55.03   |
| Female                                    | 40.06            | 42.56 | 37.98 | 37.10  | 65.85 | 52.74 | 47.89  | 49.87  | 18.63 | 46.96 | 59.46 | 40.53 | 44.97   |
| <i>Level of Education (%)</i>             |                  |       |       |        |       |       |        |        |       |       |       |       |         |
| Low                                       | 43.00            | 49.12 | 57.18 | 50.80  | 13.98 | 14.99 | 34.89  | 37.33  | 53.54 | 46.60 | 40.77 | 47.21 | 40.78   |
| Medium                                    | 37.40            | 28.13 | 28.29 | 28.37  | 53.33 | 34.39 | 59.16  | 34.89  | 30.18 | 25.78 | 31.97 | 25.45 | 34.78   |
| High                                      | 19.60            | 22.75 | 14.53 | 20.83  | 32.70 | 50.62 | 5.95   | 27.78  | 16.28 | 27.62 | 27.26 | 27.34 | 24.44   |
|                                           | <i>Non-EU 15</i> |       |       |        |       |       |        |        |       |       |       |       |         |
|                                           | BG               | CH    | CY    | EE     | HR    | HU    | LT     | LV     | NO    | PL    | RO    | SI    | Average |
| Avg. Time Since Employment (months, avg.) | -                | 61.31 | 30.53 | 36.00  | 85.91 | 22.14 | -      | -      | 57.24 | 58.21 | 48.00 | 51.19 | 50.06   |
| Time Since Arrival (years, avg.)          | 17.78            | 20.63 | 3.98  | 42.00  | 26.71 | 26.77 | 42.00  | 7.00   | 15.19 | 7.39  | 4.00  | 23.25 | 19.73   |
| <i>Age (%)</i>                            |                  |       |       |        |       |       |        |        |       |       |       |       |         |
| 15-25                                     | 0.00             | 7.05  | 28.92 | 0.00   | 0.52  | 0.00  | 0.00   | 0.00   | 12.09 | 19.05 | 50.00 | 1.06  | 9.89    |
| 25-34                                     | 0.00             | 18.13 | 40.92 | 0.00   | 12.47 | 16.68 | 0.00   | 0.00   | 25.80 | 16.47 | 0.00  | 12.52 | 11.92   |
| 35-44                                     | 0.00             | 23.69 | 21.03 | 0.00   | 22.88 | 13.03 | 0.00   | 100.00 | 27.30 | 24.70 | 0.00  | 35.91 | 22.38   |
| 45-54                                     | 71.10            | 26.27 | 6.67  | 100.00 | 33.39 | 30.49 | 0.00   | 0.00   | 19.28 | 13.68 | 50.00 | 25.87 | 31.40   |
| 55-64                                     | 28.90            | 24.87 | 2.46  | 0.00   | 30.74 | 39.80 | 100.00 | 0.00   | 15.52 | 26.09 | 0.00  | 24.64 | 24.42   |
| <i>Gender (%)</i>                         |                  |       |       |        |       |       |        |        |       |       |       |       |         |
| Male                                      | 100.00           | 61.96 | 69.10 | 100.00 | 48.53 | 43.35 | 0.00   | 50.00  | 62.96 | 58.08 | 75.00 | 42.68 | 59.30   |
| Female                                    | 0.00             | 38.04 | 30.90 | 0.00   | 51.47 | 56.65 | 100.00 | 50.00  | 37.04 | 41.92 | 25.00 | 57.32 | 40.70   |
| <i>Level of Education (%)</i>             |                  |       |       |        |       |       |        |        |       |       |       |       |         |
| Low                                       | 0.00             | 50.53 | 58.20 | 100.00 | 19.02 | 11.63 | 0.00   | 0.00   | 49.53 | 0.00  | 37.41 | 21.63 | 29.00   |
| Medium                                    | 100.00           | 31.90 | 25.62 | 0.00   | 68.07 | 63.51 | 0.00   | 0.00   | 24.75 | 20.05 | 12.59 | 56.72 | 33.60   |
| High                                      | 0.00             | 17.57 | 16.17 | 0.00   | 12.91 | 24.86 | 100.00 | 100.00 | 25.72 | 79.95 | 50.00 | 21.66 | 37.40   |

Source: EU-LFS 2021, own calculations.

Table A3: Weighted Employment and Training Shares for Working Age Asylum Seekers by EU-15 Country of Residence

|                                                      | AT    | BE    | DE     | DK    | EL    | ES    | FI     | FR    | IT    | LU     | PT    | SE    | Average |
|------------------------------------------------------|-------|-------|--------|-------|-------|-------|--------|-------|-------|--------|-------|-------|---------|
| Asylum Seekers Employed (%)                          | 55.69 | 46.75 | 47.69  | 54.98 | 46.54 | 64.82 | 44.69  | 44.90 | 57.58 | 44.57  | 61.42 | 49.10 | 51.56   |
| Asylum Seekers in Education or Training (%)          | 8.29  | 11.47 | 9.18   | 11.77 | 2.96  | 9.14  | 24.61  | 4.38  | 2.96  | 12.74  | 0.00  | 19.64 | 9.76    |
| Migrant-Native Employment Gap (pp)                   | 1.90  | 0.13  | 2.94   | 8.15  | 3.60  | 4.33  | 10.64  | -3.21 | 11.51 | 10.18  | -3.55 | 0.70  | 3.94    |
| Asylum Seeker-Native Employment Gap (pp)             | 2.52  | -2.73 | -7.81  | 1.14  | 2.51  | 14.03 | -3.64  | -5.91 | 14.15 | -21.01 | 7.42  | -6.77 | -0.51   |
| Asylum Seeker-Migrant Employment Gap (pp)            | 0.62  | -2.85 | -10.75 | -7.01 | -1.09 | 9.70  | -14.29 | -2.70 | 2.64  | -31.19 | 10.96 | -7.46 | -4.45   |
| Migrant-Native Education or Training Gap (pp)        | -1.67 | -4.11 | -2.35  | -2.11 | -8.07 | -3.60 | -1.85  | -5.90 | -4.22 | -10.77 | -7.53 | 1.94  | -4.19   |
| Asylum Seeker-Native Education or Training Gap (pp)  | -0.06 | -0.33 | 0.85   | -0.45 | -7.71 | -1.25 | 13.19  | -6.50 | -6.42 | -4.78  | -9.72 | 7.94  | -1.27   |
| Asylum Seeker-Migrant Education or Training Gap (pp) | 1.60  | 3.78  | 3.21   | 1.65  | 0.36  | 2.35  | 15.04  | -0.60 | -2.20 | 5.99   | -2.19 | 6.00  | 2.92    |

Source: EU-LFS 2021, own calculations.

Table A4: Weighted Employment and Training Shares for Working Age Asylum Seekers by Non-EU-15 Country of Residence

|                                                      | CH    | CY     | HR    | HU    | NO     | PL     | RO     | SI     | Average |
|------------------------------------------------------|-------|--------|-------|-------|--------|--------|--------|--------|---------|
| Asylum Seekers Employed (%)                          | 55.64 | 40.59  | 54.69 | 69.93 | 46.24  | 34.44  | 25.00  | 77.13  | 55.55   |
| Asylum Seekers in Education or Training (%)          | 5.75  | 1.29   | 0.19  | 0.00  | 18.59  | 9.32   | 50.00  | 0.00   | 7.10    |
| Migrant-Native Employment Gap (pp)                   | 3.05  | 15.54  | -8.66 | 8.22  | 8.44   | 6.94   | 12.87  | -2.11  | 1.06    |
| Asylum Seeker-Native Employment Gap (pp)             | -0.83 | -10.80 | 7.19  | 14.04 | -13.59 | -20.91 | -24.71 | 23.17  | 0.45    |
| Asylum Seeker-Migrant Employment Gap (pp)            | -3.88 | -26.34 | 15.85 | 5.82  | -22.04 | -27.85 | -37.59 | 25.29  | -0.61   |
| Migrant-Native Education or Training Gap (pp)        | -4.04 | -8.43  | -8.30 | -3.90 | -3.26  | -5.51  | -5.04  | -5.89  | -5.60   |
| Asylum Seeker-Native Education or Training Gap (pp)  | -3.73 | -10.47 | -9.46 | -8.25 | 5.58   | 1.46   | 41.86  | -10.58 | -2.18   |
| Asylum Seeker-Migrant Education or Training Gap (pp) | 0.30  | -2.04  | -1.16 | -4.35 | 8.84   | 6.97   | 46.89  | -4.70  | 3.42    |

Source: EU-LFS 2021, own calculations.

Table A5: Weighted Employment and Training Shares for Working Age Asylum Seekers with Residency Period of At Least 4 Years by EU-15 Country of Residence

|                                                   | AT    | BE    | DE    | DK    | EL    | ES    | FI     | FR    | IT    | LU     | PT    | SE    | Average |
|---------------------------------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|---------|
| Asylum Seekers Employed (%)                       | 59.16 | 49.46 | 51.54 | 55.99 | 46.61 | 56.89 | 46.98  | 45.82 | 56.42 | 48.74  | 61.42 | 54.77 | 52.82   |
| Asylum Seekers in Education/Training (%)          | 6.67  | 9.09  | 6.67  | 10.97 | 2.96  | 16.24 | 19.85  | 4.13  | 2.22  | 10.85  | 0.00  | 13.51 | 8.60    |
| Migrant-Native Employment Gap (pp)                | 1.77  | -1.30 | 2.61  | 8.37  | 4.49  | 5.43  | 11.14  | -3.59 | 12.90 | 9.78   | -4.94 | 0.92  | 3.97    |
| Asylum Seeker-Native Employment Gap (pp)          | 5.99  | -0.02 | -3.96 | 2.15  | 2.57  | 6.10  | -1.36  | -4.99 | 12.99 | -16.84 | 7.42  | -1.10 | 0.75    |
| Asylum Seeker-Migrant Employment Gap (pp)         | 4.21  | 1.28  | -6.58 | -6.22 | -1.91 | 0.67  | -12.50 | -1.39 | 0.10  | -26.62 | 12.36 | -2.02 | -3.22   |
| Migrant-Native Education/Training Gap (pp)        | -3.46 | -5.34 | -4.39 | -4.51 | -8.41 | -4.72 | -3.55  | -7.21 | -4.67 | -11.01 | -7.78 | -0.44 | -5.46   |
| Asylum Seeker-Native Education/Training Gap (pp)  | -1.69 | -2.70 | -1.66 | -1.25 | -7.71 | 5.84  | 8.44   | -6.75 | -7.15 | -6.67  | -9.72 | 1.81  | -2.43   |
| Asylum Seeker-Migrant Education/Training Gap (pp) | 1.77  | 2.64  | 2.73  | 3.26  | 0.71  | 10.55 | 11.99  | 0.46  | -2.48 | 4.34   | -1.94 | 2.24  | 3.02    |

Source: EU-LFS 2021, own calculations.

Table A6: Weighted Employment and Training Shares for Working Age Asylum Seekers with Residency Period of At Least 4 Years by Non-EU-15 Country of Residence

|                                                   | CH    | CY     | HR    | HU    | NO     | PL     | SI     | Average |
|---------------------------------------------------|-------|--------|-------|-------|--------|--------|--------|---------|
| Asylum Seekers Employed (%)                       | 57.68 | 50.53  | 54.69 | 70.06 | 47.47  | 8.65   | 77.13  | 57.20   |
| Asylum Seekers in Education/Training (%)          | 3.55  | 0.00   | 0.19  | 0.00  | 16.14  | 0.00   | 0.00   | 1.81    |
| Migrant-Native Employment Gap (pp)                | 1.01  | 13.76  | -8.40 | 8.36  | 8.16   | 3.98   | -3.81  | 0.64    |
| Asylum Seeker-Native Employment Gap (pp)          | 1.22  | -0.86  | 7.19  | 14.17 | -12.37 | -46.70 | 23.17  | 1.60    |
| Asylum Seeker-Migrant Employment Gap (pp)         | 0.20  | -14.62 | 15.59 | 5.82  | -20.53 | -50.69 | 26.99  | 2.32    |
| Migrant-Native Education/Training Gap (pp)        | -5.28 | -9.89  | -8.43 | -5.48 | -3.75  | -6.15  | -6.68  | -6.24   |
| Asylum Seeker-Native Education/Training Gap (pp)  | -5.93 | -11.77 | -9.46 | -8.25 | 3.14   | -7.87  | -10.58 | -7.57   |
| Asylum Seeker-Migrant Education/Training Gap (pp) | -0.65 | -1.88  | -1.03 | -2.77 | 6.89   | -1.72  | -3.90  | -1.10   |

Source: EU-LFS 2021, own calculations.

Table A7: Weighted Asylum Seeker-Native Employment Gap for Working Age Asylum Seekers by Host Nation Language Ability and EU-15 Country of Residence

|                 | AT     | BE     | DE     | DK     | EL     | ES     | FI     | FR     | IT     | LU     | PT     | SE     | Average |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Mother Tongue   | -12.87 | 2.29   | -15.43 | -2.26  | -31.52 | -2.39  | 3.33   | -2.24  | 19.25  | -6.44  | -9.27  | 0.12   | -4.79   |
| Advanced        | 3.55   | -8.88  | -7.41  | -5.77  | -16.74 | -3.61  | -11.60 | -8.50  | -7.13  | -24.70 | -90.22 | -0.85  | -15.15  |
| Intermediate    | -9.45  | -17.00 | -18.84 | -21.87 | -8.75  | 0.21   | -16.95 | -26.98 | -0.95  | -33.89 | -      | -23.34 | -16.16  |
| Beginner        | -32.88 | -42.18 | -49.28 | -38.54 | -67.45 | -68.56 | 0.12   | -48.34 | -53.33 | -73.59 | -      | -39.18 | -46.66  |
| Hardly Any/None | -62.30 | -58.79 | -67.69 | -33.64 | 7.22   | -      | -78.67 | -80.43 | 22.30  | -58.71 | -      | -76.98 | -48.77  |

Source: EU-LFS 2021, own calculations.

Table A8: Weighted Asylum Seeker-Native Employment Gap for Working Age Asylum Seekers by Host Nation Language Ability and Non-EU-15 Country of Residence

|                 | CH     | CY     | HR     | HU     | NO     | PL    | SI     | Average |
|-----------------|--------|--------|--------|--------|--------|-------|--------|---------|
| Mother Tongue   | 20.11  | -      | -13.73 | 23.23  | -3.20  | 6.16  | 13.02  | 7.60    |
| Advanced        | 19.60  | -22.13 | -17.17 | -      | -13.02 | -     | -4.61  | -4.80   |
| Intermediate    | -15.37 | -10.98 | -17.21 | -89.45 | -27.81 | 11.52 | -11.21 | -19.00  |
| Beginner        | -40.94 | -52.02 | -      | 10.55  | -27.27 | -     | 13.02  | -13.51  |
| Hardly Any/None | -80.27 | -73.11 | -      | -      | -33.65 | -     | -86.98 | -68.50  |

Source: EU-LFS 2021, own calculations.

Table A9: Distribution of (Self-) Employed Asylum Seekers, Non-Humanitarian Migrants, and Natives by Industry (NACE Rev 2, 1 digit) in Percent

|                                                                                | Asylum Seekers | Non-Humanitarian Migrants | Natives |
|--------------------------------------------------------------------------------|----------------|---------------------------|---------|
| Agriculture, Forestry and Fishing                                              | 0.79           | 2.33                      | 3.91    |
| Manufacturing, Mining and Quarrying                                            | 14.89          | 16.80                     | 18.74   |
| Construction                                                                   | 7.76           | 7.78                      | 6.71    |
| Information & Communications                                                   | 2.35           | 4.15                      | 3.41    |
| Financial & Insurance Activities                                               | 1.58           | 2.37                      | 3.08    |
| Real Estate                                                                    | 0.96           | 0.77                      | 0.84    |
| Professional, Scientific, Technical, Admin/Support Services                    | 11.08          | 12.20                     | 9.26    |
| Public Admin, Defence, Education, Health/Social Work                           | 23.99          | 20.87                     | 27.16   |
| Other Services                                                                 | 6.14           | 8.53                      | 4.58    |
| Wholesale/Retail Trade, Transportation & Storage, Accommodation & Food Service | 30.46          | 24.20                     | 22.31   |

Source: EU-LFS 2021, own calculations.

Table A10: Distribution of (Self-) Employed Asylum Seekers, Non-Humanitarian Migrants, and Natives by Occupation (ISCO-08, 1 digit) in Percent

|                                          | Asylum Seekers | Non-Humanitarian Migrants | Natives |
|------------------------------------------|----------------|---------------------------|---------|
| Armed Forces                             | 0.09           | 0.30                      | 0.69    |
| Managers                                 | 3.35           | 5.37                      | 5.11    |
| Professionals                            | 11.08          | 22.99                     | 21.89   |
| Technicians & Associate Professionals    | 10.63          | 12.63                     | 17.23   |
| Clerical Support                         | 7.28           | 7.16                      | 10.88   |
| Service & Sales                          | 23.78          | 16.04                     | 14.75   |
| Skilled Agricultural, Forestry & Fishery | 0.71           | 1.39                      | 3.28    |
| Craft & Related Trades                   | 13.53          | 12.02                     | 12.06   |
| Plant & Machine Operators/Assemblers     | 10.55          | 7.45                      | 7.49    |
| Elementary Occupations                   | 19.00          | 14.65                     | 6.61    |

Source: EU-LFS 2021, own calculations.

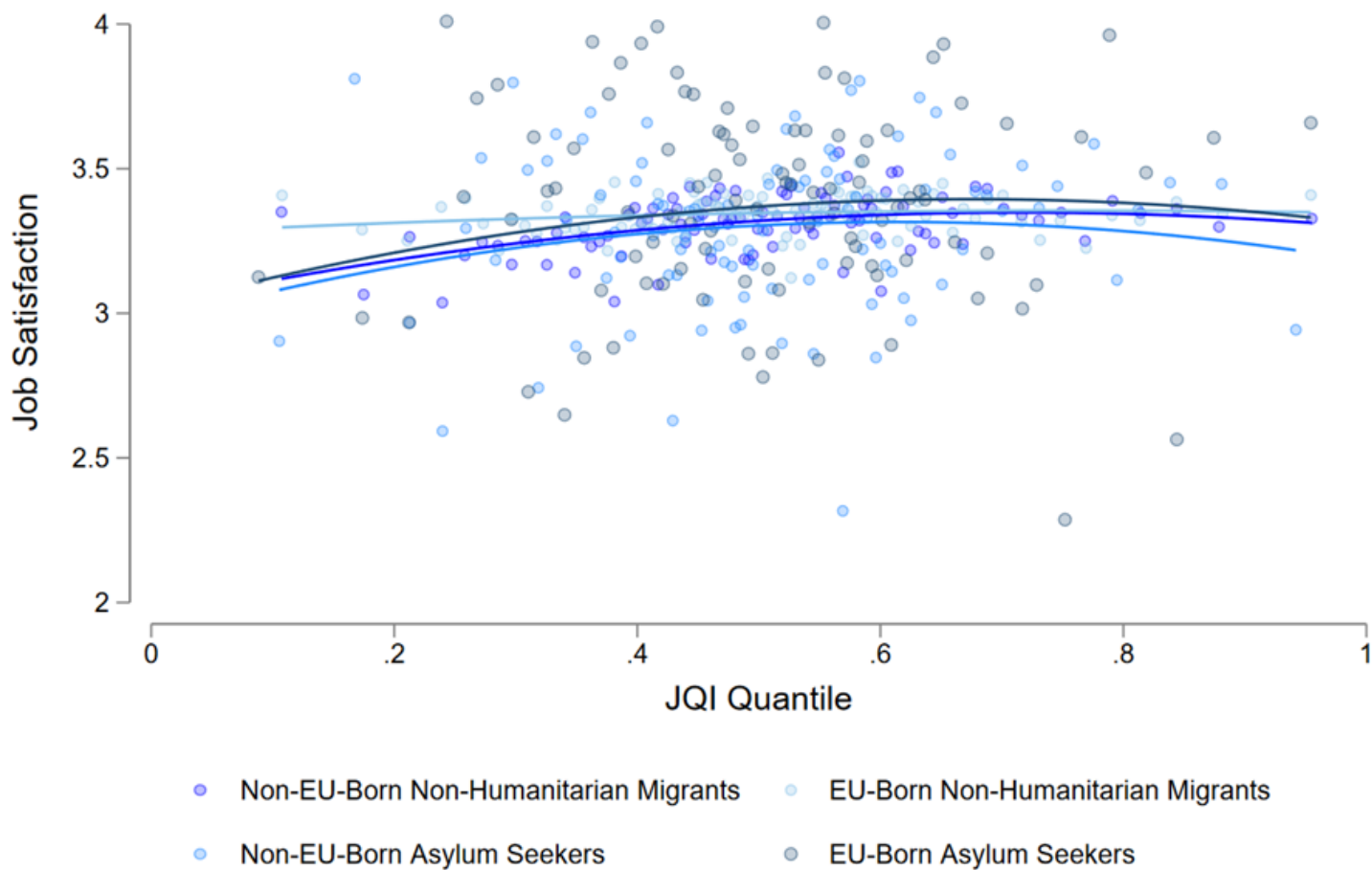
Table A11: Individual Job-Quality Index (JQI) Criteria and their Weighting Factors

| Dimension                   | Criteria                                                                                                                                                              | Weight* | Variables                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------|
| Type of Employment          | The individual is not in temporary employment (for reasons other than education, training, not wanting a permanent job or probation).                                 | 0.5     | TEMP (qualified using TEMPREAS)        |
|                             | The individual is not involuntarily part-time employed (for reasons other than education or personal circumstances e.g., health and family-related responsibilities). | 0.5     | FTPPT (qualified using FTPTREAS)       |
| Work-Life Balance           | The individual is not working more than 48 hours per week.                                                                                                            | 0.5     | HWUSUAL, HWUSU2J                       |
|                             | The individual never works unsocial hours, e.g., shift work, on weekend days, nights or evenings. The score is averaged across the 5 types.                           | 0.5     | NIGHTWK, EVENWK, SHIFTWK, SATWK, SUNWK |
| Working Conditions          | Work autonomy—the individual is able to work from home.                                                                                                               | 1       | HOMEWORK                               |
| Skills & Career Development | The individual participated in education/training, either formal or informal, in the 4 weeks prior to the survey.                                                     | 1       | EDUC4WEEKS                             |

*Source:* All variables from EU-LFS 2021, own calculations. *Notes:* \* weight within dimension.

## Appendix B

Figure B1: Individual Job-Quality Index (JQI) and Job Satisfaction



*Source:* EU-LFS 2021, own calculations. *Notes:* Constructed using binscatter with 100 quantiles, controls included for sociodemographic characteristics (age and its square, gender, level of education), time spent in host country, and country, occupation, and industry fixed effects. Country of birth used to determine EU/Non-EU status.



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