Online Appendix

A1 Statistics of origin-specific surveys

Table A1.1: Number of cases for Afghanistan by wave, gender and age

| Wave  | Up to 30 | Over 30 | Up to 30 | Over 30 | Total |
|-------|----------|---------|----------|---------|-------|
|       | Men      | Women   | Men      | Women   |       |
| 2011  | 1,475    | 2,028   | 1,309    | 1,444   | 6,156 |
|       | (12.7)   | (13.6)  | (10.8)   | (11.3)  | (12.2) |
| 2012  | 2,046    | 2,643   | 1,570    | 1,484   | 7,743 |
|       | (17.6)   | (17.7)  | (13.0)   | (12.5)  | (15.3) |
| 2013  | 2,230    | 2,896   | 1,509    | 1,592   | 8,227 |
|       | (19.2)   | (19.4)  | (12.5)   | (13.4)  | (16.3) |
| 2014  | 1,701    | 2,219   | 2,376    | 2,203   | 8,499 |
|       | (14.6)   | (14.8)  | (19.7)   | (18.5)  | (16.8) |
| 2015  | 1,811    | 2,205   | 2,345    | 2,342   | 8,703 |
|       | (15.6)   | (14.7)  | (19.3)   | (19.7)  | (17.2) |
| 2016  | 2,364    | 2,970   | 2,970    | 2,953   | 11,257|
|       | (20.3)   | (19.9)  | (24.6)   | (24.8)  | (22.3) |
| Total | 11,627   | 14,961  | 12,079   | 11,918  | 50,585|
|       | [23.0]   | [29.6]  | [23.9]   | [23.6]  | (100.0) |

Notes: Percentages by column are displayed in parentheses, whereas shares by line are given in brackets. Individuals aged below 18 and above 64 are not included.
Source: Author’s elaboration based on SAP (2011-16).

Table A1.2: Number of cases for Iraq by year, gender and age

| Year  | Up to 30 | Over 30 | Up to 30 | Over 30 | Total |
|-------|----------|---------|----------|---------|-------|
|       | Men      | Women   | Men      | Women   |       |
| 2012  | 19,800   | 23,005  | 18,772   | 23,020  | 84,597|
|       | (96.1)   | (95.9)  | (96.3)   | (96.1)  | (96.1)|
| 2013  | 798      | 975     | 724      | 946     | 3,443 |
|       | (3.9)    | (4.1)   | (3.7)    | (4.0)   | (3.9) |
| Total | 20,598   | 23,980  | 19,496   | 23,966  | 88,040|
|       | [23.4]   | [27.2]  | [22.1]   | [27.2]  | (100.0)|

Notes: Percentages by column are displayed in parentheses, whereas shares by line are given in brackets. Individuals aged below 18 and above 64 are not included.
Source: Author’s elaboration based on HSES (2012-13).
Table A1.3: Adjustments of PTS and FH indices

|           | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean | Total |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| PTS (US State Department) | 3    | 3    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 4.36 |       |
| FH (Civil Liberties)       | 6    | 6    | 6    | 6    | 6    | 7    | 7    | 7    | 7    | 7    | 7    | 6.55 |       |
| Number of cases            | 5,142| 4,931| 4,918| 5,023| 5,070| 5,005| 4,990| 5,079| 5,090| 5,023| 5,006| 55,277|

Note: Number of cases corresponds to individuals in MICS (2006). Source: Author’s elaboration based on Gibney et al. (2017) and Freedom House (2017), Civil Liberties.

Table A1.4: Number of cases for Serbia by wave, gender and age

| Wave | Men          | Women         |       |       |       |       |       |       |       |       |       |       |       |
|------|--------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|      | Up to 30     | Over 30       | Up to 30 | Over 30 | Up to 30 | Over 30 | Total |       |       |       |       |       |       |
| 2013 | 1,614        | 4,778         | 1,505 | 4,982 | 12,879| (34.1) | (34.9) |       |       |       |       |       |       |
| 2014 | 1,598        | 4,546         | 1,448 | 4,662 | 12,254| (33.7) | (33.2) |       |       |       |       |       |       |
| 2015 | 1,524        | 4,361         | 1,394 | 4,411 | 11,690| (32.2) | (31.9) |       |       |       |       |       |       |
|      | [12.9]       | [37.2]        | [11.8]| [38.2]| [100.0]|       |       |       |       |       |       |       |       |

Notes: Percentages by column are displayed in parentheses, whereas shares by line are given in brackets. Individuals aged below 18 and above 64 are not included. Source: Author’s elaboration based on EU-SILC (2013-15).

A2 Data harmonisation

A2.1 Level of education

The empirical analysis focuses on the selection of asylum seekers from the origin population with respect to education\(^1\). Two steps are implemented to combine available information on the educational attainment of individuals\(^2\). First, the answers about the level of education in each questionnaire are divided into six different categories, i.e. no formal education, primary, lower secondary, upper secondary education, vocational training and university. Tables A2.1.1 and A2.1.2 detail the procedure that has been followed to assign answers about education to each group for the asylum seekers and the origin population, respectively.

\(^1\) When discussing about the level of education of asylum seekers hosted by Germany, we only consider the education obtained in the origin country. The paper does not account for further education which might have been attended in the host country.

\(^2\) The analysis does not include individuals, who were attending education in the origin country at the time the surveys were carried out.
Nevertheless, the six categories are not included in every survey, e.g. studies carried out in Afghanistan and Syria do not contain information on vocational training. Therefore, the initial binary indicators are grouped, so that the final variable of interest is composed of three levels: (i) Primary education or less, which refers to cases without education and with primary education (ii) Secondary education, which contains individuals who attended lower, upper secondary education and vocational training and (iii) Tertiary education, which encloses those who went to university.

| Table A2.1.1: Level of education of asylum seekers |
|----------------------------------|----------------|
| **Question**                      | **Answers**         | **Frequency** | **Code** |
| **School certificate**  | In which year did you last attended a general school? | I did not attend school | 13.11 | A |
| Have you attended school in another country than Germany? | No | | A |
| With what kind of graduation you finished school there? | Left school with no qualifications | 23.57 | B |
| | Middle school leaving certificate | 20.87 | C |
| | Practical-based further education certificate | 8.08 | D |
| | General-based further education certificate | 23.44 | E |
| | Certificate from a different school | 2.47 | F |
| | No information | 8.46 |
| **Vocational training** | Were you in a country other than Germany in a vocational training or have you studied in another country than Germany? | No | 74.90 |
| What kind of vocational training was that? | (Long) training in a company | | |
| How did you finish this training? | Aborted prematurely | 0.33 | 1 |
| | Completed without certificate | 0.93 | 2 |
| | Completed with certificate | 2.73 | 3 |
| Attended a vocational school | Aborted prematurely | 0.19 | 4 |
| | Completed without certificate | 0.21 | 5 |
| | Completed with certificate | 1.83 | 6 |
| Other training | Aborted prematurely | 0.06 | 7 |
| | Completed without certificate | 0.31 | 8 |
| | Completed with certificate | 0.48 | 9 |
| University with practical or theoretical orientation visited / Graduate degree | Aborted prematurely | 4.49 | 10 |
| | Completed without certificate | 0.99 | 11 |
| | Completed with certificate | 10.69 | 12 |
| | No information | 1.86 |
| **Level of education** | No education | 36.45 | A,B |
| | Primary education | 17.24 | C |
| | Lower secondary | 17.66 | (D,E,F) + (1,2,4,5,7,8) |
| | Upper secondary | 5.04 | (C,D,E,F) + (10,11) |
| | Vocational | 5.04 | (3,6,9) |
| | University | 10.69 | 12 |
| | No information | 7.87 |

Notes: Statistics reported in the fourth column are associated to the full sample of asylum seekers and are therefore not representative of the five selected origin countries. Figures are weighted to be representative of the (recent) asylum population in Germany.
Source: Author’s elaboration based on IAB-BAMF-SOEP Refugee Sample (2017).
| Origin      | Question                                                      | Answers                                      | Frequency | Categories   |
|------------|---------------------------------------------------------------|----------------------------------------------|-----------|--------------|
| Afghanistan| What is the highest level of school you completed?             | Never went to school                         | 55.87     | No education |
|            |                                                               | Islamic education at Madrassa                | 0.52      | No education |
|            |                                                               | Informal schooling at home or at a literacy class | 1.88    | No education |
|            |                                                               | Primary school, incomplete (classes 1 to 5)  | 8.22      | Primary      |
|            |                                                               | Primary school, complete (finished class 6)  | 4.71      | Primary      |
|            |                                                               | Secondary education, incomplete (classes 7 to 8) | 4.73  | Primary      |
|            |                                                               | Secondary education, complete (finished class 9) | 2.81 | Lower secondary |
|            |                                                               | High school (classes 10 to 12)               | 5.05      | Lower secondary |
|            |                                                               | High school incomplete (classes 10-11)       | 2.58      | Lower secondary |
|            |                                                               | High school complete (finished class 12)     | 7.79      | Upper secondary |
|            |                                                               | 14th grade incomplete (class 13)             | 0.66      | Upper secondary |
|            |                                                               | 14th grade complete (finished class 14)       | 2.18      | Upper secondary |
|            |                                                               | University education incomplete              | 0.54      | University   |
|            |                                                               | University education or above                | 2.42      | University   |
|            |                                                               | No information                              | 0.04      |              |
| Iraq       | What was the highest certificate you attained?                 | No certificate / Never went to school        | 40.04     | No education |
|            |                                                               | Elementary                                  | 25.31     | Primary      |
|            |                                                               | Intermediate                                | 8.39      | Lower secondary |
|            |                                                               | Basic                                       | 0.37      | Lower secondary |
|            |                                                               | Secondary                                   | 3.95      | Upper secondary |
|            |                                                               | Diploma from an institution                 | 6.00      | Upper secondary |
|            |                                                               | Vocational                                  | 1.23      | Vocational   |
|            |                                                               | Bachelor degree                             | 5.88      | University   |
|            |                                                               | Higher diploma                             | 0.09      | University   |
|            |                                                               | Master degree                               | 0.23      | University   |
|            |                                                               | PhD (Doctorate)                             | 0.10      | University   |
|            |                                                               | No information                              | 8.41      |              |
| Syria      | What is the highest level of school you attended?              | Pre-school / Never attended school           | 19.66     | No education |
|            |                                                               | Primary                                     | 32.14     | Primary      |
|            |                                                               | Preparatory                                 | 21.04     | Lower secondary |
|            |                                                               | Secondary                                   | 10.51     | Upper secondary |
|            |                                                               | Post secondary institute                    | 5.83      | Upper secondary |
|            |                                                               | University and higher                       | 5.18      | University   |
|            |                                                               | No information                              | 5.64      |              |
| Albania    | What is the highest grade you have completed in school?        | None                                        | 2.73      | No education |
|            |                                                               | 8 or 9 years school                         | 44.46     | Primary      |
|            |                                                               | Technicum < 2 years                         | 0.71      | Lower secondary |
|            |                                                               | Gymnasium (secondary general)               | 27.41     | Upper secondary |
|            |                                                               | Vocational 2-3 years                        | 1.94      | Vocational   |
|            |                                                               | Vocational 4/5 years                        | 2.80      | Vocational   |
|            |                                                               | University - Albania                        | 12.25     | University   |
|            |                                                               | University - Abroad                         | 0.15      | University   |
|            |                                                               | Master - Albania                            | 0.68      | University   |
|            |                                                               | Master - Abroad                             | 0.02      | University   |
|            |                                                               | Doctorate/PhD - Albania                     | 0.08      | University   |
|            |                                                               | Doctorate/PhD - Abroad                      | 0.01      | University   |
|            |                                                               | No information                              | 6.77      |              |
| Serbia     | Highest ISCED level attained                                  | No education                                | 1.11      | No education |
|            |                                                               | Pre-primary education                       | 2.04      | No education |
|            |                                                               | Primary education                           | 7.60      | Primary      |
|            |                                                               | Lower secondary education                   | 16.50     | Lower secondary |
|            |                                                               | Upper secondary education                   | 45.49     | Upper secondary |
|            |                                                               | Post-secondary non tertiary education        | 1.42      | Vocational   |
|            |                                                               | First and second stage of tertiary education| 16.72     | University   |
|            |                                                               | No information                              | 9.12      |              |

Notes: For Syria, an individual is assigned to one category if at least one grade has been completed at a given level of education, otherwise the level immediately below is attributed. For Serbia, the original questionnaire (2013) asked the acquired education level, with the following answers: (i) No school, (ii) 4th grade of primary school, (iii) 5th-8th grade of primary school, (iv) Primary school, (v) 3-year secondary school, (vi) 4-year secondary school, (vii) Specialisation after secondary school, (viii) College - 1st faculty degree, (ix) Higher education and (x) Doctoral studies. However, figures related to this classification are not accessible. Source: Author’s elaboration based on the full sample (i.e., without restriction on individuals’ age) of the following datasets: SAP (2011-16), HSIs (2012-13), MICS (2006), LSMS (2012) and EU-SILC (2013-15).
### A2.2 Insecurity in the home country

The subjective perceptions on insecurity (labelled *Insecurity*) in the origin site are reported in three samples (Afghanistan, Iraq and Serbia). The starting point to match information among the different data sources is the answers collected in the IAB-BAMF-SOEP Refugee Sample. Asylum seekers were asked the following semi-open query: “What were the reasons for leaving your country of origin?” and, among all propositions, four of them are retained to build a binary variable indicating whether people felt threatened (at least, by one of the selected propositions) before the migration to Germany. The possible answers are: (i) “Fear or violent conflicts or war”, (ii) “Fear or forced recruitment by military or armed groups”, (iii) “Persecution” and (iv) “Discrimination (ethnic, religious, etc.)”.

| Country     | Question                                                                 | Available answers                                      |
|-------------|--------------------------------------------------------------------------|--------------------------------------------------------|
| Afghanistan | How often do you fear for your own personal safety or security or for that of your family these days? | Never, rarely → Insecurity = 0  
|             |                                                                          | Sometimes, often, always → Insecurity = 1              |
| Iraq        | In general, how satisfied or unsatisfied are you with your local security level? | Very satisfied → Insecurity = 0  
|             |                                                                          | Fairly, not very, not at all satisfied → Insecurity = 1 |
| Serbia      | How safe do you feel in the area where you live?                         | Very safe → Insecurity = 0  
| (only 2013) |                                                                          | Mostly, not feel quite safe, not feel safe at all → Insecurity = 1 |

Source: Author’s elaboration based on SAP (2011-16), HSES (2012-13) and EU-SILC (2013).

Then, the variable is combined with relevant individual characteristics encompassed in the three originspecific data sets. For each case, a binary indicator has been derived from the ordinal answers that were available for the respondents. Table A2.2 presents the question about insecurity and the procedure followed to assign the replies to the variable.
A3 Definition of the variables

Table A3: Definition of the variables

| Variable      | Definition                                                                 | Additional comments                                                                 |
|---------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Age           | Age at the time of the survey (18 to 64)                                  | Include age squared in the regressions                                              |
| Education*    | Level of education. Divided into 3 binary categories: primary or less, secondary and tertiary education |                                                                                     |
| Speaks German*| 1 if an individual is able to speak German, 0 otherwise                  | Available only for Afghanistan and Albania                                          |
| Male          | 1 if an individual is a male, 0 otherwise                                 |                                                                                     |
| Married       | 1 if an individual is married, 0 otherwise                                | Not available for Syria                                                             |
| Insecurity*   | 1 if an individual feels unsafe in the origin country, 0 otherwise        | Not available for Syria and Albania. Replaced by PTS and FH indices for Syria       |
| Religion      | Religious affiliation. Divided into 4 binary categories: Atheist, Muslim, Orthodox/Other and Catholic | Available only for Albania                                                          |
| Occupational status* | Divided into 4 dummies: never worked, worker, self-employed and employee | Available only for Serbia                                                           |

Notes: Variables with a star superscript denote characteristics of asylum seekers that refer to the pre-migration period. For instance, the occupational status corresponds to the position held before they left the origin country.

A4 List of variables and summary statistics

Table A4.1: List of variables and summary statistics - Afghanistan

| Mig | Variable        | Mean  | SD   | N   | Mig | Variable        | Mean  | SD   | N   |
|-----|----------------|-------|------|-----|-----|----------------|-------|------|-----|
|     | Level of education |      |      |     |     | Level of education |      |      |     |
| 0   | Primary or less | 0.76  | 0.43 | 50,406 | 1   | Primary or less | 0.70  | 0.46 | 442 |
|     | Secondary      | 0.21  | 0.41 | 50,406 |     | Secondary      | 0.26  | 0.44 | 442 |
|     | Tertiary       | 0.03  | 0.17 | 50,406 |     | Tertiary       | 0.04  | 0.20 | 442 |
| 0   | Age            | 33.70 | 11.59 | 50,406 | 1   | Age            | 27.93 | 8.79 | 442 |
|     | Speaks German | 0.00  | 0.03 | 50,406 |     | Speaks German | 0.05  | 0.22 | 442 |
|     | Male           | 0.52  | 0.50 | 50,406 |     | Male           | 0.77  | 0.42 | 442 |
|     | Married        | 0.79  | 0.40 | 50,406 |     | Married        | 0.40  | 0.49 | 442 |
|     | Insecurity     | 0.63  | 0.48 | 50,406 |     | Insecurity     | 0.94  | 0.24 | 442 |

Notes: Mig refers to the migration status. It takes the value 0 for the origin population and 1 for asylum seekers. Source: Author’s elaboration based on SAP (2011-16) and IAB-BAMP-SOEP Refugee Sample (2017).
### Table A4.2: List of variables and summary statistics - Iraq

| Mig Variable   | Mean  | SD    | N    |
|----------------|-------|-------|------|
| Level of education |       |       |      |
| Primary or less  | 0.70  | 0.46  | 80,722 |
| Secondary       | 0.23  | 0.42  | 80,722 |
| Tertiary        | 0.07  | 0.26  | 80,722 |
| Age             | 35.88 | 12.21 | 80,722 |
| Male            | 0.49  | 0.50  | 80,722 |
| Married         | 0.74  | 0.44  | 80,722 |
| Insecurity      | 0.60  | 0.49  | 80,722 |

Notes: Mig refers to the migration status. It takes the value 0 for the origin population and 1 for asylum seekers. Source: Author’s elaboration based on HSES (2012-13) and IAB-BAMP-SOEP Refugee Sample (2017).

### Table A4.3: List of variables and summary statistics - Syria

| Mig Variable   | Mean  | SD    | N    |
|----------------|-------|-------|------|
| Level of education |       |       |      |
| Primary or less  | 0.52  | 0.50  | 51,968 |
| Secondary       | 0.42  | 0.49  | 51,968 |
| Tertiary        | 0.06  | 0.23  | 51,968 |
| Age             | 35.28 | 12.50 | 51,968 |
| Male            | 0.51  | 0.50  | 51,968 |
| PTS             | 4.36  | 0.77  | 51,968 |
| FH CL           | 6.55  | 0.50  | 51,968 |

Notes: Mig refers to the migration status. It takes the value 0 for the origin population and 1 for asylum seekers. PTS corresponds to Political Terror Scale, while FH CL is the Civil Liberties index from Freedom House. Source: Author’s elaboration based on MICS (2006), Gibney et al. (2017), Freedom House (2017) and IAB-BAMP-SOEP Refugee Sample (2017).
Table A4.4: List of variables and summary statistics - Albania

| Mig Variable | Mean | SD  | N   |
|--------------|------|-----|-----|
| Level of education |      |     |     |
| Primary or less | 0.46 | 0.50 | 14,829 |
| Secondary | 0.38 | 0.49 | 14,829 |
| Tertiary | 0.16 | 0.36 | 14,829 |
| Age | 41.23 | 13.14 | 14,829 |
| Speaks German | 0.01 | 0.08 | 14,829 |
| Male | 0.50 | 0.50 | 14,829 |
| Married | 0.76 | 0.43 | 14,829 |

| Mig Variable | Mean | SD  | N   |
|--------------|------|-----|-----|
| Level of education |      |     |     |
| Primary or less | 0.48 | 0.50 | 46 |
| Secondary | 0.52 | 0.51 | 46 |
| Tertiary | 0.00 | 0.05 | 46 |
| Age | 30.23 | 10.09 | 46 |
| Speaks German | 0.20 | 0.40 | 46 |
| Male | 0.72 | 0.45 | 46 |
| Married | 0.42 | 0.50 | 46 |

Notes: Mig refers to the migration status. It takes the value 0 for the origin population and 1 for asylum seekers.
Source: Author’s elaboration based on LSMS (2012) and IAB-BAMP-SOEP Refugee Sample (2017).

Table A4.5: List of variables and summary statistics - Serbia

| Mig Variable | Mean | SD  | N   |
|--------------|------|-----|-----|
| Level of education |      |     |     |
| Primary or less | 0.04 | 0.20 | 33,395 |
| Secondary | 0.76 | 0.43 | 33,395 |
| Tertiary | 0.20 | 0.40 | 33,395 |
| Age | 44.07 | 12.57 | 33,395 |
| Male | 0.50 | 0.50 | 33,395 |
| 0 Married | 0.61 | 0.49 | 33,395 |

| Mig Variable | Mean | SD  | N   |
|--------------|------|-----|-----|
| Level of education |      |     |     |
| Primary or less | 0.81 | 0.39 | 43 |
| Secondary | 0.19 | 0.39 | 43 |
| Tertiary | 0.00 | 0.00 | 43 |
| Age | 28.24 | 7.40 | 43 |
| Male | 0.50 | 0.50 | 43 |
| Married | 0.58 | 0.50 | 43 |

| Mig Variable | Mean | SD  | N   |
|--------------|------|-----|-----|
| Occupation |      |     |     |
| Never worked | 0.15 | 0.35 | 33,395 |
| Worker | 0.03 | 0.17 | 33,395 |
| Self-employed | 0.13 | 0.34 | 33,395 |
| Employee | 0.69 | 0.46 | 33,395 |
| Insecurity | 0.60 | 0.49 | 8,358 |

Notes: Mig refers to the migration status. It takes the value 0 for the origin population and 1 for asylum seekers.
Source: Author’s elaboration based on EU-SILC (2013-15) and IAB-BAMP-SOEP Refugee Sample (2017).

A5 Consistency of language proficiency

This section addresses a potential concern associated to retrospective (i.e., linked to the pre-migration period) questions that were asked in the Refugee Sample. For instance, the ability to speak German is defined from the following question: “How well could you speak the German language before you move
to Germany?”. An issue will arise if the answers are a function of the time spent in Germany, so that they will be contaminated by the current language aptitude of asylum seekers. To evaluate whether this problem might exist in the empirical investigation, the relevant variable is regressed on the years and months since arrival in Germany. The results obtained using the linear probability model are given in Table A5.

**Table A5: Language proficiency and time spent in Germany**

|                    | All       | Afghanistan | Albania   |
|--------------------|-----------|-------------|-----------|
| Years since arrival| 0.003     | −0.007      | −0.025    |
|                    | (0.004)   | (0.011)     | (0.035)   |
| Months since arrival| 0.000    | −0.001      | −0.006    |
|                    | (0.000)   | (0.001)     | (0.004)   |
| Observations       | 3,326     | 3,229       | 521       |
|                    | 499       | 52          | 50        |

Notes: All models are estimated using OLS. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively. All represents the five selected origin countries.

Source: Author’s elaboration based on SAP (2011-16), LSMS (2012) and IAB-BAMF-SOEP Refugee Sample (2017).

All coefficients are not significant, regardless of the time variable taken into account. This outcome supports the idea that the time spent in the host country is likely not to influence the estimates of the language variable included in the specifications associated to Afghanistan and Albania.
### Table A6.1: Self-selection of asylum seekers from conflict-affected countries

Dependent variable: 1 if an individual has migrated, 0 otherwise  
Benchmark group: Tertiary education

|                | Afghanistan | Iraq | Syria |
|----------------|-------------|------|-------|
| (1)            | (2)         | (3)  | (4)   |
| Level of Education |             |      |       |
| Primary or less  | -0.626***   | -0.719*** | -0.434* |
|                  | (0.216)     | (0.215) | (0.255) |
| Secondary       | -0.984***   | -1.037*** | -0.794*** |
|                  | (0.226)     | (0.228) | (0.267) |
| Age             | 0.213***    | 0.194*** | 0.199*** |
|                  | (0.040)     | (0.039) | (0.039) |
| Age\(^2\)       | -0.003***   | -0.003*** | -0.003*** |
|                  | (0.001)     | (0.001) | (0.001) |
| Male            | 0.477***    | 0.535*** | 0.531*** |
|                  | (0.107)     | (0.107) | (0.108) |
| Married         | -1.109***   | -1.091*** | -1.086*** |
|                  | (0.133)     | (0.129) | (0.130) |
| Insecurity      | 2.162***    | 2.161*** | 3.811*** |
|                  | (0.191)     | (0.191) | (0.337) |
| Speaks German   | 4.506***    |       |       |
|                  |             |       |       |
| PTS             |             | 2.700*** |       |
| FH CL           |             |       |       |
| Observations    | 50,848      | 50,848 | 50,848 |
| McFadden's R\(^2\) | 0.028     | 0.074 | 0.097 |

Notes: All models are estimated using logistic regressions and the reported coefficients are in log-odds units. McFadden’s $R^2 = 1 - \frac{\ln(L_M)}{\ln(L_0)}$, with $L_M$, the likelihood of the estimated model and $L_0$, the likelihood of the model without predictors. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively. PTS corresponds to Political Terror Scale, while FH CL is the Civil Liberties index from Freedom House. Source: Author’s elaboration based on SAP (2011-16), HSES (2012-13), MICS (2006), Gibney et al. (2017), Freedom House (2017) and IAB-BAMP-SOEP Refugee Sample (2017).
Table A6.2: Self-selection of asylum seekers from Balkan countries

Dependent variable: 1 if an individual has migrated, 0 otherwise
Benchmark group: Tertiary education (Albania), Secondary or more (Serbia)

|                        | Albania                  | Serbia                  |
|------------------------|--------------------------|-------------------------|
|                        | (1) (2) (3) (4) (5) (6)  | (4) (5) (6)             |
| **Level of education** |                          |                         |
| Primary or less        | 2.180**                  | 2.553**                 |
|                        | (1.004)                  | (1.071)                 |
| Secondary              | 2.057**                  | 2.355**                 |
|                        | (1.016)                  | (1.056)                 |
| Age                    | 0.160                    | 0.158                   |
|                        | (0.122)                  | (0.121)                 |
| Age²                   | -0.003*                  | -0.003*                 |
|                        | (0.002)                  | (0.002)                 |
| Male                   | -0.359                   | -0.400                  |
|                        | (0.306)                  | (0.305)                 |
| Married                | 0.727                    | 0.778                   |
|                        | (0.533)                  | (0.531)                 |
| Speaks German          | 3.122***                 |                         |
|                        | (0.664)                  |                         |
| **Religion**           |                          |                         |
| Atheist                | 2.441***                 |                         |
|                        | (0.554)                  |                         |
| Orthodox / Other       | 0.366                    |                         |
|                        | (0.619)                  |                         |
| Catholic               | 0.399                    |                         |
|                        | (0.422)                  |                         |
| **Occupation**         |                          |                         |
| No work                | 2.740***                 |                         |
|                        | (0.998)                  |                         |
| Worker                 | 4.802***                 |                         |
|                        | (1.016)                  |                         |
| Self-employed          | 2.044                    |                         |
|                        | (1.254)                  |                         |
| Insecurity             |                         | -0.335                  |
|                        |                         | (0.374)                 |
| **Observations**       | 14,875                   | 14,875                  |
|                        | 14,875                   | 33,438                  |
|                        | 33,438                   | 8,400                   |

Notes: All models are estimated using logistic regressions. McFadden’s $R^2 = 1 - \frac{ln(L_M)}{ln(L_0)}$, with $L_M$, the likelihood of the estimated model and $L_0$, the likelihood of the model without predictors. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively. Muslim is the benchmark category to analyse the religious affiliation of Albanians. Employee (both with and without supervision tasks) is the reference group to interpret the occupational status in Serbia. Information about insecurity in Serbia is only available in the 2013 wave, which explains the number of observations reported in column (6).

Source: Author’s elaboration based on LSMS (2012), EU-SILC (2013-15) and IAB-BAMF-SOEP Refugee Sample (2017).
### A7 Robustness checks

**Table A7.1: Selection of asylum seekers through the analysis of rare events**

Dependent variable: 1 if an individual has migrated, 0 otherwise  
Benchmark group: Tertiary education, Secondary or more (Serbia)

|          | Afghanistan (1) | (2) | (3) | Iraq (4) | (5) | Syria (6) | (7) | (8)     |
|----------|-----------------|-----|-----|----------|-----|-----------|-----|---------|
| Primary or less | -0.008** (0.003) | -0.010*** (0.004) | -0.005* (0.003) | -0.006*** (0.002) | -0.008*** (0.002) | -0.049*** (0.005) | -0.046*** (0.005) | -0.045*** (0.005) |
| Secondary | -0.011*** (0.003) | -0.012*** (0.004) | -0.008** (0.004) | -0.006*** (0.002) | -0.008*** (0.002) | -0.064*** (0.005) | -0.061*** (0.005) | -0.061*** (0.005) |
| McFadden’s $R^2$ | 0.028 | 0.075 | 0.098 | 0.018 | 0.103 | 0.038 | 0.146 | 0.164 |
| Observations | 50,848 | 50,848 | 50,848 | 81,207 | 81,207 | 54,014 | 54,014 | 54,014 |

|          | Albania (10) | (11) | (12) | Serbia (13) | (14) | (15) |
|----------|-------------|-----|-----|------------|-----|-----|
| Primary or less | 0.003*** (0.001) | 0.004*** (0.001) | 0.004*** (0.001) | 0.047*** (0.008) | 0.022*** (0.004) | 0.129*** (0.019) |
| Secondary | 0.003*** (0.001) | 0.003*** (0.001) | 0.003*** (0.001) | (0.001) | (0.001) | (0.001) |
| McFadden’s $R^2$ | 0.053 | 0.077 | 0.078 | 0.455 | 0.540 | 0.549 |
| Observations | 14,875 | 14,875 | 14,875 | 33,438 | 33,438 | 8,400 |

Notes: All models are estimated using penalized logistic regressions and the reported coefficients are the average marginal effects. McFadden’s $R^2 = 1 - \ln(L_M)/\ln(L_0)$ with $L_M$, the likelihood of the estimated model and $L_0$, the likelihood of the model without predictors. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

Source: Author’s elaboration based on SAP (2011-16), HSES (2012-13), MICS (2006), LSMS (2012), EU-SILC (2013-15) and IAB-BAMF-SOEP Refugee Sample (2017).
### Table A7.2: Selection with respect to urban/rural origin population

**Dependent variable:** 1 if an individual has migrated, 0 otherwise  
**Benchmark group:** Tertiary education, Secondary or more (Serbia)

|                | Afghanistan          | Iraq          | Syria          |
|----------------|----------------------|---------------|----------------|
|                | (1) (2) (3)          | (4) (5) (6)   | (7) (8)        |
| Primary or less| 0.030\( ^{**} \) 0.024 & 0.037\( ^{***} \) & -0.004\( ^{**} \) -0.008\( ^{***} \) & -0.041\( ^{***} \) -0.037\( ^{***} \) -0.037\( ^{***} \) |
|                | (0.015) (0.015) (0.014) & (0.002) (0.003) & (0.007) (0.006) (0.006) |
| Secondary      | -0.037\( ^{***} \) -0.038\( ^{***} \) -0.026\( ^{**} \) & -0.007\( ^{***} \) -0.010\( ^{**} \) & -0.079\( ^{***} \) -0.074\( ^{***} \) -0.074\( ^{***} \) |
|                | (0.013) (0.014) (0.013) & (0.002) (0.003) & (0.007) (0.006) (0.006) |

|                |                |                |                |
|----------------|----------------|----------------|----------------|
|                | Afghanistan          | Iraq          | Syria          |
|                | (10) (11) (12)     | (13) (14)     |
| Primary or less| 0.004\( ^{**} \) 0.005\( ^{***} \) 0.005\( ^{***} \) & 0.124\( ^{***} \) 0.062\( ^{***} \) & |
|                | (0.002) (0.002) (0.002) & (0.018) (0.010) |
| Secondary      | 0.006\( ^{**} \) 0.007\( ^{***} \) 0.006\( ^{***} \) & |
|                | (0.003) (0.002) (0.002) & |

|                |                |                |                |
|----------------|----------------|----------------|----------------|
|                | Albania         | Serbia         |
|                | (10) (11) (12) | (13) (14)     |
| Primary or less| 0.048           | 0.500          | 0.566          |
|                | (0.075)         | (0.093)        |                |
| Secondary      | 0.093           | 9.240          |                |
|                | (0.002)         | (0.002)        |                |

Notes: All models are estimated using logistic regressions and the reported coefficients are the average marginal effects. McFadden’s $R^2 = 1 - \ln(L_M)/\ln(L_0)$ with $L_M$, the likelihood of the estimated model and $L_0$, the likelihood of the model without predictors. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively. Due to data limitations, column (6) of Table 8 cannot be replicated.  
Source: Author’s elaboration based on SAP (2011-16), HSES (2012-13), MICS (2006), LSMS (2012), EU-SILC (2013-15) and IAB-BAMF-SOEP Refugee Sample (2017).
## Table A7.3: Selection on education of male asylum seekers

| Dependent variable: 1 if an individual has migrated, 0 otherwise | Benchmark group: Tertiary education |
|---------------------------------------------------------------|------------------------------------|
| Afghanistan                                                  | Iraq                               | Syria                             |
| (1)                                                          | (2)                                | (3)                               |
| Primary or less                                              | −0.003                             | −0.005                            |
|                                                               | (0.004)                            | (0.004)                           |
| Secondary                                                    | −0.009**                           | −0.011***                         |
|                                                               | (0.004)                            | (0.004)                           |
|                                                               | McFadden’s $R^2$                     |
|                                                              | 0.038                              | 0.095                             |
|                                                              | Observations 26,781                 | 26,781                            |
|                                                               | (4)                                | (5)                               |
| Primary or less                                              | −0.006***                          | −0.008***                         |
|                                                               | (0.002)                            | (0.003)                           |
| Secondary                                                    | −0.005**                           | −0.007***                         |
|                                                               | (0.002)                            | (0.003)                           |
|                                                               | McFadden’s $R^2$                     |
|                                                              | 0.066                              | 0.118                             |
|                                                              | Observations 26,781                 | 40,337                            |
|                                                               | (6)                                | (7)                               |
| Primary or less                                              | −0.043***                          | −0.039***                         |
|                                                               | (0.007)                            | (0.006)                           |
| Secondary                                                    | −0.005                             | −0.068***                         |
|                                                               | (0.003)                            | (0.007)                           |
|                                                               | McFadden’s $R^2$                     |
|                                                              | 0.118                              | 0.031                             |
|                                                              | Observations 40,337                 | 27,746                            |
|                                                               | (8)                                | (9)                               |
| Primary or less                                              | −0.039***                          | −0.063***                         |
|                                                               | (0.006)                            | (0.006)                           |
| Secondary                                                    | −0.005                             | −0.063***                         |
|                                                               | (0.005)                            | (0.007)                           |
|                                                               | McFadden’s $R^2$                     |
|                                                              | 0.163                              | 0.163                             |
|                                                              | Observations 27,746                 | 27,746                            |

| Benchmark group: Secondary education or more                  | Albania                            | Serbia                            |
|--------------------------------------------------------------|------------------------------------|-----------------------------------|
| (10)                                                         | (11)                               | (12)                              |
| Primary or less                                              | 0.002*                             | 0.002*                            |
|                                                               | (0.001)                            | (0.001)                           |
| Secondary                                                    | 0.054***                           | 0.024***                          |
|                                                               | (0.012)                            | (0.005)                           |
|                                                               | McFadden’s $R^2$                     |
|                                                              | 0.027                              | 0.487                             |
|                                                              | Observations 7,524                  | 16,815                            |
|                                                               | (13)                               | (14)                              |
| Primary or less                                              | 0.156***                           | 0.626                             |
|                                                               | (0.034)                            | (0.034)                           |
| Secondary                                                    | 0.034                              | 0.626                             |
|                                                               | (0.005)                            | (0.005)                           |
|                                                               | McFadden’s $R^2$                     |
|                                                              | 0.595                              | 3,953                             |
|                                                              | Observations 7,524                  | 16,815                            |

Notes: All models are estimated using logistic regressions and the reported coefficients are the average marginal effects. McFadden’s $R^2 = 1 - \ln(L_M)/\ln(L_0)$ with $L_M$, the likelihood of the estimated model and $L_0$, the likelihood of the model without predictors. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

Source: Author’s elaboration based on SAP (2011-16), HSES (2012-13), MICS (2006), LSMS (2012), EU-SILC (2013-15) and IAB-BAMF-SOEP Refugee Sample (2017).
Table A7.4: Selection on education of family-tied asylum seekers

Dependent variable: 1 if an individual has migrated, 0 otherwise
Benchmark group: Tertiary education

|                | Afghanistan (1) | Afghanistan (2) | Afghanistan (3) | Iraq (4) | Iraq (5) | Syria (6) | Syria (7) | Syria (8) |
|----------------|----------------|-----------------|-----------------|---------|---------|----------|----------|----------|
| **Primary or less** |                |                 |                 |         |         |          |          |          |
| Coefficient     | -0.002         | -0.002          | -0.001          | -0.002* | -0.003**| -0.022***| -0.022***| -0.022***|
| (SE)           | (0.002)        | (0.002)         | (0.002)         | (0.001) | (0.001) | (0.003)  | (0.003)  | (0.003)  |
| **Secondary**  |                |                 |                 |         |         |          |          |          |
| Coefficient     | -0.002         | -0.002          | -0.001          | -0.002**| -0.003**| -0.028***| -0.028***| -0.028***|
| (SE)           | (0.002)        | (0.002)         | (0.002)         | (0.001) | (0.001) | (0.003)  | (0.003)  | (0.003)  |
| **McFadden’s R²** | 0.017          | 0.049           | 0.068           | 0.008   | 0.078   | 0.025    | 0.122    | 0.130    |
| **Observations** | 50,499         | 50,499          | 50,499          | 80,882  | 80,882  | 52,680   | 52,680   | 52,680   |

Benchmark group: Secondary education or more

|                | Albania (10)  | Albania (11) | Albania (12) | Serbia (13) | Serbia (14) | Serbia (15) |
|----------------|---------------|--------------|--------------|-------------|-------------|-------------|
| **Primary or less** |               |              |              |             |             |             |
| Coefficient     | 0.000         | 0.000        | 0.000        | 0.012***    | 0.012*      | 0.047***    |
| (SE)           | (0.000)       | (0.000)      | (0.000)      | (0.004)     | (0.007)     | (0.017)     |
| **McFadden’s R²** | 0.026         | 0.069        | 0.066        | 0.368       | 0.369       | 0.445       |
| **Observations** | 14,836        | 14,836       | 14,836       | 33,406      | 33,406      | 8,369       |

Notes: All models are estimated using logistic regressions and the reported coefficients are the average marginal effects. McFadden’s $R^2 = 1 - \ln(L_M)/\ln(L_0)$ with $L_M$, the likelihood of the estimated model and $L_0$, the likelihood of the model without predictors. Robust standard errors in parentheses. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.
Source: Author’s elaboration based on SAP (2011-16), HSES (2012-13), MICS (2006), LSMS (2012), EU-SILC (2013-15) and IAB-BAMF-SOEP Refugee Sample (2017).