Demographic and labor force impacts of future immigration flows into Europe: Does immigrants’ region of origin matter?

Supplementary Information

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**Figure S1. Heatmap of the country of destination for immigrants arrived in Europe between 2011 and 2019**

(1 = as likely as all migrants to settle in the country)



\*Regions of origin are set according to those provided by the European Labor Force Survey, which used for the modeling of the labor force participation.

\*\*Other Europe refers to countries not included in the model, such as Russia, Ukraine, Moldova, Belarus, Turkey

Source: Marois et al. (2023)

**Figure S2. Odds of having a child\* by region of origin, age at arrival and duration of stay (1=Born in Europe)**

|  |
| --- |
|  |
| \* Control for age, education and country of residenceSource: Marois et al. (2023) |

**Figure S3. Educational attainment of the immigrants (age 15+) arrived in Europe between 2011 and 2019 by region of birth**

|  |
| --- |
|  |
| Source: Marois et al. (2023) |

**Figure S4. Odds of participating in the labor force by place of birth and duration of stay of immigrants arrived at age 15 and over (1=Born in Europe)1**

x Not significant

1. Statistical control for age, country of residence and education

Source: Marois et al. (2023)

**Table S1. Population (in millions) in 2020 and 2060 by scenario**

|  |  |  |
| --- | --- | --- |
| **Country** | **2020** | **2060** |
| **Reference** | **Europe+** | **SSA+** | **MENA+** | **Asia+** |
| **AT** | 9.0 | 10.0 | 11.0 | 9.8 | 10.3 | 9.9 |
| **BE** | 11.5 | 12.6 | 12.3 | 13.2 | 12.8 | 12.4 |
| **BG** | 6.5 | 4.4 | 4.8 | 4.2 | 4.3 | 4.3 |
| **CH** | 8.4 | 10.1 | 10.3 | 10.0 | 10.0 | 10.0 |
| **CY** | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| **CZ** | 10.3 | 9.4 | 9.9 | 9.3 | 9.4 | 9.4 |
| **DE** | 81.4 | 83.2 | 87.6 | 81.5 | 87.5 | 82.3 |
| **DK** | 5.7 | 6.2 | 6.2 | 6.1 | 6.3 | 6.4 |
| **EE** | 1.3 | 1.2 | 1.3 | 1.1 | 1.2 | 1.2 |
| **ES** | 47.1 | 42.1 | 40.4 | 41.3 | 41.8 | 40.6 |
| **FI** | 5.5 | 5.5 | 5.7 | 5.5 | 5.5 | 5.6 |
| **FR** | 67.4 | 71.5 | 69.2 | 73.8 | 72.2 | 70.7 |
| **GR** | 10.4 | 8.8 | 9.1 | 8.8 | 8.9 | 8.7 |
| **HR** | 3.8 | 2.6 | 3.1 | 2.5 | 2.6 | 2.6 |
| **HU** | 9.3 | 7.1 | 7.2 | 7.0 | 7.1 | 7.1 |
| **IE** | 4.8 | 5.3 | 5.2 | 5.4 | 5.3 | 5.4 |
| **IS** | 0.4 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| **IT** | 59.8 | 54.8 | 55.0 | 56.6 | 54.7 | 54.9 |
| **LT** | 2.6 | 1.9 | 2.2 | 1.9 | 1.9 | 1.9 |
| **LU** | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **LV** | 1.9 | 1.3 | 1.6 | 1.3 | 1.4 | 1.4 |
| **MT** | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| **NL** | 17.3 | 17.7 | 17.5 | 17.8 | 18.0 | 17.8 |
| **NO** | 5.5 | 7.3 | 7.0 | 7.5 | 7.2 | 7.6 |
| **PL** | 36.7 | 28.8 | 30.1 | 28.8 | 28.9 | 28.7 |
| **PT** | 10.3 | 8.8 | 8.5 | 9.2 | 8.5 | 8.7 |
| **RO** | 17.6 | 12.6 | 12.8 | 12.5 | 12.7 | 12.5 |
| **SE** | 10.4 | 14.5 | 13.8 | 14.8 | 15.8 | 14.4 |
| **SI** | 2.1 | 1.9 | 2.5 | 1.8 | 1.8 | 1.8 |
| **SK** | 5.4 | 4.9 | 5.1 | 4.9 | 4.9 | 5.0 |
| **UK** | 66.8 | 74.2 | 69.8 | 75.6 | 71.7 | 78.1 |
| **Total** | 520.9 | 511.8 | 511.8 | 515.4 | 515.2 | 512.1 |

**Table S2. Age dependency ratio in 2020 and 2060 by scenario**

|  |  |  |
| --- | --- | --- |
| **Country** | **2020** | **2060** |
| **Reference** | **Europe+** | **SSA+** | **MENA+** | **Asia+** |
| **AT** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **BE** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **BG** | 0.6 | 0.9 | 0.8 | 0.9 | 0.9 | 0.9 |
| **CH** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **CY** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **CZ** | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **DE** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **DK** | 0.6 | 0.8 | 0.8 | 0.8 | 0.7 | 0.8 |
| **EE** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **ES** | 0.5 | 1.0 | 1.1 | 1.0 | 1.0 | 1.1 |
| **FI** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **FR** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **GR** | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **HR** | 0.6 | 0.9 | 0.8 | 0.9 | 0.9 | 0.9 |
| **HU** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **IE** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **IS** | 0.5 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| **IT** | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **LT** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **LU** | 0.5 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 |
| **LV** | 0.6 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 |
| **MT** | 0.6 | 0.8 | 0.9 | 0.9 | 0.8 | 0.8 |
| **NL** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **NO** | 0.5 | 0.7 | 0.7 | 0.7 | 0.8 | 0.7 |
| **PL** | 0.5 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **PT** | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **RO** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **SE** | 0.6 | 0.7 | 0.8 | 0.7 | 0.7 | 0.7 |
| **SI** | 0.5 | 0.9 | 0.8 | 0.9 | 0.9 | 0.9 |
| **SK** | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **UK** | 0.6 | 0.7 | 0.8 | 0.7 | 0.8 | 0.7 |
| **Total** | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |

**Table S3. Labor force dependency ratio in 2020 and 2060 by scenario**

|  |  |  |
| --- | --- | --- |
| **Country** | **2020** | **2060** |
| **Reference** | **Europe+** | **SSA+** | **MENA+** | **Asia+** |
| **AT** | 1.0 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 |
| **BE** | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| **BG** | 1.2 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| **CH** | 0.8 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **CY** | 1.0 | 1.2 | 1.3 | 1.2 | 1.3 | 1.2 |
| **CZ** | 1.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| **DE** | 1.0 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 |
| **DK** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **EE** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **ES** | 1.1 | 1.7 | 1.7 | 1.7 | 1.8 | 1.7 |
| **FI** | 1.1 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 |
| **FR** | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.3 |
| **GR** | 1.3 | 1.6 | 1.6 | 1.7 | 1.7 | 1.6 |
| **HR** | 1.4 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| **HU** | 1.2 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| **IE** | 1.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| **IS** | 0.7 | 0.9 | 0.9 | 0.8 | 0.8 | 0.9 |
| **IT** | 1.4 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 |
| **LT** | 1.1 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 |
| **LU** | 1.1 | 1.5 | 1.5 | 1.4 | 1.5 | 1.5 |
| **LV** | 1.0 | 1.3 | 1.3 | 1.2 | 1.3 | 1.2 |
| **MT** | 1.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| **NL** | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 |
| **NO** | 0.9 | 1.1 | 1.1 | 1.1 | 1.2 | 1.1 |
| **PL** | 1.2 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| **PT** | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| **RO** | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| **SE** | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.0 |
| **SI** | 1.1 | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 |
| **SK** | 1.0 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| **UK** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **Total** | 1.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |

**Table S4. Productivity-weighted labor force dependency ratio in 2020 and 2060 by scenario**

|  |  |  |
| --- | --- | --- |
| **Country** | **2020** | **2060** |
| **Reference** | **Europe+** | **SSA+** | **MENA+** | **Asia+** |
| **AT** | 0.9 | 1.0 | 0.9 | 1.0 | 1.0 | 1.0 |
| **BE** | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| **BG** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **CH** | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **CY** | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **CZ** | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| **DE** | 0.8 | 0.9 | 0.9 | 0.9 | 1.0 | 0.9 |
| **DK** | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 |
| **EE** | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 |
| **ES** | 1.0 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 |
| **FI** | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 | 1.0 |
| **FR** | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 |
| **GR** | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 |
| **HR** | 1.2 | 1.3 | 1.2 | 1.3 | 1.3 | 1.2 |
| **HU** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **IE** | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **IS** | 0.6 | 0.7 | 0.7 | 0.6 | 0.7 | 0.7 |
| **IT** | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| **LT** | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **LU** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **LV** | 0.8 | 1.0 | 1.0 | 0.9 | 1.0 | 1.0 |
| **MT** | 1.0 | 0.9 | 1.0 | 1.0 | 0.9 | 0.9 |
| **NL** | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **NO** | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **PL** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **PT** | 1.1 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **RO** | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **SE** | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| **SI** | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **SK** | 0.9 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| **UK** | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | 0.8 |
| **Total** | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |