Explaining spatial patterns of foreign employment in Germany∗
– Online Appendix –

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Abstract

This paper investigates the main determinants of the representation of foreign employees across German regions. Since migration determinants are not necessarily the same for workers of different nationalities, spatial patterns are explained not only for total foreign employment but also for the 35 most important migration countries to Germany. Based on a total census for all 402 German districts, the paper starts by showing the spatial distributions of workers with different nationalities and explains the emerging patterns by spatial error models. Although large heterogeneity in determinants across nationalities are found, similarities between country groups prevail. Economic conditions matter for most nationalities, whereas the importance of amenities and openness differ.

Keywords: regional foreign employment; migration determinants; spatial models
JEL-Classification: F22, J21, J61, R12

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A. Data Set Description

| Variable                          | Description                                                                 | Source                                                                                          |
|----------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| **Dependent variable**           |                                                                             |                                                                                                |
| Representation quotient          | Share of foreign workers to the size of the labor market (no unit)          | German Federal Employment Agency (2013)                                                          |
| **Labor market and economic conditions** |                                                                             |                                                                                                |
| Unemployment rate                | Number of unemployed persons divided by the labor force (in %)              | German Federal Institute for Research on Building, Urban Affairs and Spatial Development (2015) |
| Gross earnings                   | Median of monthly gross earnings of full-time employees (in €)               | German Federal Employment Agency (2013)                                                          |
| Share high qualified employees   | Number of high qualified employees divided by total employment (in %)        | German Federal Institute for Research on Building, Urban Affairs and Spatial Development (2015) |
| Share manufacturing              | Gross value added in manufacturing divided by total gross value added (in %) | Working Group Regional Accounts (2014)                                                            |
| Share construction               | Gross value added in construction divided by total gross value added (in %)  | Working Group Regional Accounts (2014)                                                            |
| Share advanced services<sup>1</sup> | Gross value added in advanced services divided by total gross value added (in %) | Working Group Regional Accounts (2014)                                                            |
| Share basic services<sup>*</sup>  | Gross value added in basic services divided by total gross value added (in %) | Working Group Regional Accounts (2014)                                                            |
| **Amenities**                    |                                                                             |                                                                                                |
| European accessibility           | Average travel time per car and plane to 41 European agglomerations (in min.) | German Federal Institute for Research on Building, Urban Affairs and Spatial Development (2015) |
| Physician density                | Number of inhabitants per physician (no unit)                               | German Federal Institute for Research on Building, Urban Affairs and Spatial Development (2015) |
| Green area                       | Share of green area (recreation area, woodland area and water expanse) in total area (in %) | German Federal Statistical Office (2015)                                                          |
| Land price                       | Average market value (in € per m<sup>2</sup>)                               | German Federal Statistical Office and the Statistical Offices of the Länder (2016)                 |
| Flat size                        | Living space divided by the number of inhabitants (in m<sup>2</sup> per person) | German Federal Institute for Research on Building, Urban Affairs and Spatial Development (2015) |
| Crime rate                       | Number of cases divided by the number of inhabitants (per 100,000 persons)  | German Federal Criminal Police Office (2014)                                                      |
| Overnight stays                  | Number of overnight stays in tourist enterprises divided by the number of inhabitants (in persons) | German Federal Institute for Research on Building, Urban Affairs and Spatial Development (2015) |

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| Variable                  | Description                                                                 | Source                                      |
|---------------------------|------------------------------------------------------------------------------|----------------------------------------------|
| **Openness**              |                                                                              |                                              |
| Ethnic diversity          | Inverse Herfindahl-Hirschman-Index based on foreigner shares from 207 nationalities | German Federal Statistical Office (2015a)   |
| Share of foreigners       | Total number of foreigners divided by the number of inhabitants (in %)         | German Federal Statistical Office (2015a)   |
| **Miscellaneous**         |                                                                              |                                              |
| Net flow of workers       | Annual difference of foreign workers (persons per 10,000 employees)          | German Federal Employment Agency (2013)      |
| Distance                  | Geographical distance from the center of the district to the centroid of the country (in km) | own calculations based on longitude and latitude data from Wikipedia |

Note: †) Advanced services include financial intermediation, insurance services, research and development, and real estate.
* ) Basic services include retail sale, wholesale trade, transport, hotels and restaurants, and communications.
B. Descriptive Statistics

| Country                | Obs. | Mean  | SD   | Min  | Max   |
|------------------------|------|-------|------|------|-------|
| **Total**              | 402  | 0.79  | 0.53 | 0.07 | 2.37  |
| **Neighboring countries to Germany** |       |       |      |      |       |
| Austria                | 402  | 0.93  | 2.51 | 0.03 | 32.40 |
| Belgium                | 402  | 0.68  | 1.86 | 0.00 | 31.18 |
| Czech Republic         | 402  | 1.38  | 4.60 | 0.04 | 55.02 |
| Denmark                | 402  | 0.87  | 3.69 | 0.00 | 60.49 |
| France                 | 402  | 0.87  | 2.89 | 0.00 | 23.57 |
| Luxembourg             | 402  | 0.91  | 2.27 | 0.00 | 29.72 |
| Netherlands            | 402  | 0.78  | 1.70 | 0.03 | 21.07 |
| Poland                 | 402  | 0.88  | 0.52 | 0.10 | 5.23  |
| Switzerland            | 402  | 0.78  | 0.84 | 0.00 | 8.41  |
| **Member states of the European Union** |       |       |      |      |       |
| Bulgaria               | 402  | 0.74  | 0.67 | 0.08 | 4.78  |
| Croatia                | 402  | 0.70  | 0.90 | 0.01 | 4.84  |
| Cyprus                 | 402  | 0.76  | 1.36 | 0.00 | 17.40 |
| Estonia                | 402  | 0.85  | 0.72 | 0.00 | 3.64  |
| Finland                | 402  | 0.63  | 0.67 | 0.00 | 4.70  |
| Greece                 | 402  | 0.69  | 0.90 | 0.01 | 6.33  |
| Hungary                | 402  | 0.95  | 0.90 | 0.02 | 6.79  |
| Ireland                | 402  | 0.67  | 0.76 | 0.00 | 6.35  |
| Italy                  | 402  | 0.79  | 0.99 | 0.01 | 5.96  |
| Latvia                 | 402  | 0.83  | 0.68 | 0.00 | 8.14  |
| Lithuania              | 402  | 0.86  | 0.73 | 0.00 | 9.51  |
| Malta                  | 402  | 0.88  | 2.05 | 0.00 | 22.05 |
| Portugal               | 402  | 0.79  | 1.13 | 0.00 | 8.04  |
| Romania                | 402  | 0.98  | 0.92 | 0.03 | 5.80  |
| Slovakia               | 402  | 1.04  | 1.61 | 0.01 | 18.10 |
| Slovenia               | 402  | 0.75  | 1.09 | 0.00 | 11.76 |
| Spain                  | 402  | 0.68  | 0.75 | 0.00 | 6.31  |
| Sweden                 | 402  | 0.65  | 0.71 | 0.00 | 5.21  |
| United Kingdom         | 402  | 0.70  | 0.81 | 0.01 | 5.07  |
| **Remaining countries** |       |       |      |      |       |
| Belarus                | 402  | 0.85  | 0.45 | 0.00 | 2.69  |
| Bosnia-Herzegovina     | 402  | 0.73  | 0.76 | 0.01 | 4.90  |
| Norway                 | 402  | 0.74  | 0.79 | 0.00 | 4.18  |
| Russian Federation     | 402  | 0.88  | 0.39 | 0.13 | 2.24  |
| Turkey                 | 402  | 0.79  | 0.68 | 0.01 | 3.28  |
| Ukraine                | 402  | 0.76  | 0.45 | 0.12 | 3.07  |
| United States of America | 402  | 0.81  | 1.00 | 0.01 | 9.94  |

*Note:* Representation quotients are calculated over all regional entities and the complete time period. The row “total” is based on foreign workers from all possible nationalities and not only on the selected in this study. The countries are ordered alphabetically within each category.
| Variable                                      | Obs. | Mean  | SD    | Min  | Max  |
|-----------------------------------------------|------|-------|-------|------|------|
| **Labor market and economic conditions**      |      |       |       |      |      |
| Unemployment rate (in %)                      | 402  | 8.44  | 3.83  | 2.50 | 20.30|
| Gross earnings (in €)                         | 402  | 2,539 | 396.33| 1,673| 3,760|
| Share high qualified employees (in %)         | 402  | 8.96  | 4.14  | 3.60 | 29.40|
| Share manufacturing (in %)                    | 402  | 23.55 | 10.60 | 1.10 | 66.70|
| Share construction (in %)                     | 402  | 5.22  | 2.07  | 1.00 | 16.00|
| Share advanced services† (in %)               | 402  | 24.77 | 5.38  | 10.60| 55.20|
| Share basic services* (in %)                  | 402  | 17.74 | 4.62  | 7.10 | 39.60|
| **Amenities**                                 |      |       |       |      |      |
| European accessibility (in mins)              | 402  | 254.36| 29.33 | 191.00| 390.00|
| Physician density (inhabitants per doctor)    | 402  | 679.80| 183.42| 254.50| 1,205|
| Green area (in %)                             | 402  | 33.03 | 13.51 | 7.72 | 66.16|
| Land price (in € per m²)                      | 402  | 102.09| 97.13 | 9.90 | 908.50|
| Flat size (per inhabitant in m²)              | 402  | 44.24 | 3.90  | 35.80| 59.40|
| Crime rate (cases per 100,000 inhabitants)    | 402  | 6,694 | 2,730 | 2,679| 16,596|
| Overnight stays (per inhabitant)              | 402  | 4.77  | 5.68  | 0.40 | 41.10|
| **Openness**                                  |      |       |       |      |      |
| Ethnic diversity (in %)                       | 402  | 9.07  | 5.77  | 2.44 | 35.70|
| Share of foreigners (in %)                    | 402  | 7.12  | 4.49  | 0.70 | 26.50|

Note: Descriptive statistics are calculated over all regional entities and the complete time period.

†) Advanced services include financial intermediation, insurance services, research and development, and real estate.

*) Basic services include retail sale, wholesale trade, transport, hotels and restaurants, and communications.
| Country                          | Obs. | Mean  | SD   | Min  | Max  |
|---------------------------------|------|-------|------|------|------|
| **Total**                       | 402  | 16.87 | 12.59| -11.97| 85.06|
| **Neighboring countries to Germany** |      |       |      |      |      |
| Austria                         | 402  | 0.00  | 1.23 | -13.81| 3.86 |
| Belgium                         | 402  | 0.03  | 0.11 | -0.35 | 1.63 |
| Czech Republic                  | 402  | 0.57  | 2.17 | -18.76| 24.36|
| Denmark                         | 402  | 0.01  | 0.12 | -1.71 | 0.52 |
| France                          | 402  | -0.11 | 1.51 | -12.39| 2.41 |
| Luxembourg                      | 402  | 0.02  | 0.09 | -0.17 | 1.36 |
| Netherlands                     | 402  | 0.12  | 0.59 | -4.92 | 6.30 |
| Poland                          | 402  | 4.79  | 3.87 | 0.16  | 33.25|
| Switzerland                     | 402  | 0.06  | 0.12 | -0.36 | 0.75 |
| **Member states of the European Union** |      |       |      |      |      |
| Bulgaria                        | 402  | 0.64  | 0.91 | -0.16 | 13.62|
| Croatia                         | 402  | 0.58  | 0.69 | -0.98 | 4.51 |
| Cyprus                          | 402  | 0.01  | 0.03 | -0.10 | 0.16 |
| Estonia                         | 402  | 0.03  | 0.05 | -0.17 | 0.31 |
| Finland                         | 402  | 0.00  | 0.07 | -0.28 | 0.41 |
| Greece                          | 402  | 0.30  | 0.67 | -3.12 | 4.10 |
| Hungary                         | 402  | 1.29  | 1.83 | -0.47 | 12.23|
| Ireland                         | 402  | 0.02  | 0.06 | -0.19 | 0.29 |
| Italy                           | 402  | 0.74  | 1.05 | -4.69 | 5.08 |
| Latvia                          | 402  | 0.22  | 0.52 | -0.10 | 9.45 |
| Lithuania                       | 402  | 0.33  | 0.38 | -0.11 | 4.79 |
| Malta                           | 402  | 0.00  | 0.02 | -0.08 | 0.14 |
| Portugal                        | 402  | 0.16  | 0.40 | -1.35 | 1.79 |
| Romania                         | 402  | 1.86  | 2.01 | -0.17 | 16.31|
| Slovakia                        | 402  | 0.51  | 0.90 | -0.14 | 8.85 |
| Slovenia                        | 402  | 0.07  | 0.14 | -0.57 | 1.18 |
| Spain                           | 402  | 0.20  | 0.46 | -1.97 | 2.59 |
| Sweden                          | 402  | 0.02  | 0.10 | -0.58 | 0.97 |
| United Kingdom                  | 402  | 0.09  | 0.39 | -2.87 | 3.86 |
| **Remaining countries**         |      |       |      |      |      |
| Belarus                         | 402  | 0.06  | 0.09 | -0.43 | 0.36 |
| Bosnia-Herzegovina              | 402  | 0.58  | 0.61 | -0.53 | 3.62 |
| Norway                          | 402  | 0.00  | 0.06 | -0.30 | 0.78 |
| Russian Federation              | 402  | 0.77  | 0.51 | -1.14 | 2.75 |
| Turkey                          | 402  | 0.79  | 2.92 | -9.45 | 16.03|
| Ukraine                         | 402  | 0.41  | 0.29 | -0.34 | 2.22 |
| United States of America        | 402  | 0.16  | 0.59 | -2.57 | 9.06 |

**Note:** The net flows of foreign workers (per 10,000 employees) are calculated over all regional entities and the complete time period. The row “total” is based on foreign workers from all possible nationalities and not only on the selected in this study. The countries are ordered alphabetically within each category.
| Country                      | Obs. | Mean  | SD    | Min   | Max    |
|-----------------------------|------|-------|-------|-------|--------|
| Neighboring countries to Germany |     |       |       |       |        |
| Austria                     | 402  | 475.30| 176.60| 55.85 | 872.20 |
| Belgium                     | 402  | 455.60| 145.90| 149.50| 771.50 |
| Czech Republic              | 402  | 428.50| 133.60| 148.90| 676.10 |
| Denmark                     | 402  | 614.40| 187.30| 140.20| 948.70 |
| France                      | 402  | 797.60| 163.10| 467.80| 1,214.00 |
| Luxembourg                  | 402  | 338.80| 148.20| 34.41 | 693.50 |
| Netherlands                 | 402  | 397.90| 151.10| 83.55 | 735.20 |
| Poland                      | 402  | 747.20| 140.40| 360.00| 1,011.00 |
| Switzerland                 | 402  | 455.60| 180.60| 71.14 | 888.10 |
| Member states of the European Union |     |       |       |       |        |
| Bulgaria                    | 402  | 1,440.00| 157.70| 1,084.00| 1,746.00 |
| Croatia                     | 402  | 757.10| 177.90| 348.90| 1,153.00 |
| Cyprus                      | 402  | 2,555.00| 161.00| 2,187.00| 2,871.00 |
| Estonia                     | 402  | 1,397.00| 169.50| 946.60| 1,749.00 |
| Finland                     | 402  | 1,772.00| 182.10| 1,303.00| 2,139.00 |
| Greece                      | 402  | 1,615.00| 174.40| 1,218.00| 1,992.00 |
| Hungary                     | 402  | 866.30| 151.30| 520.40| 1,154.00 |
| Ireland                     | 402  | 1,269.00| 149.20| 970.00| 1,590.00 |
| Italy                       | 402  | 908.90| 190.20| 536.50| 1,352.00 |
| Latvia                      | 402  | 1,230.00| 162.80| 800.20| 1,570.00 |
| Lithuania                   | 402  | 1,126.00| 159.30| 710.30| 1,457.00 |
| Malta                       | 402  | 1,683.00| 190.80| 1,316.00| 2,132.00 |
| Portugal                    | 402  | 1,874.00| 160.10| 1,549.00| 2,284.00 |
| Romania                     | 402  | 1,247.00| 147.70| 917.80| 1,520.00 |
| Slovakia                    | 402  | 753.90| 142.10| 425.90| 1,013.00 |
| Slovenia                    | 402  | 647.30| 174.10| 239.30| 1,032.00 |
| Spain                       | 402  | 1,610.00| 166.30| 1,261.00| 2,040.00 |
| Sweden                      | 402  | 1,311.00| 189.20| 864.00| 1,667.00 |
| United Kingdom              | 402  | 1,031.00| 153.70| 724.40| 1,373.00 |
| Remaining countries         |     |       |       |       |        |
| Belarus                     | 402  | 1,288.00| 144.70| 911.40| 1,561.00 |
| Bosnia-Herzegovina          | 402  | 944.40| 172.50| 544.70| 1,318.00 |
| Norway                      | 402  | 1,273.00| 191.10| 804.60| 1,616.00 |
| Russian Federation          | 402  | 5,359.00| 170.40| 4,913.00| 5,717.00 |
| Turkey                      | 402  | 2,351.00| 152.00| 2,014.00| 2,637.00 |
| Ukraine                     | 402  | 1,609.00| 140.10| 1,238.00| 1,860.00 |
| United States of America    | 402  | 7,811.00| 165.10| 7,480.00| 8,188.00 |

Note: Geographical distances (in km) are values from the center of each German district to the centroid of the respective country and averaged over all regional entities. The countries are ordered alphabetically within each category.
C. Detailed Nationality-Specific Estimation Results

| Variable                        | AT    | BA    | BE    | BG    | BY    | CH    | CY    | CZ    | DK    | EE    | ES    | FI    |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Unemployment rate               | 1.26  | 2.07** | -4.65 | -0.48 | -1.93*** | -2.05 | 4.54* | -12.41 | 3.56  | -5.45*** | 3.50*** | -1.42 |
| Gross earnings                  | -0.02 | 0.01  | -0.02 | -0.01 | -0.03*** | 0.01  | 0.06* | 0.18   | 0.02  | 0.00   | 0.04*** | 0.05***|
| Share high qual. empl.          | 8.56*** | -0.46 | 4.35  | 5.47*** | 3.99*** | 1.50  | 4.97** | -7.80  | 0.79  | 0.05   | 2.54*** | 0.78   |
| Share manufacturing             | 0.01  | -0.45 | 0.42  | -0.47* | 0.40   | -0.24 | -0.52 | -0.56  | 0.40  | -1.14** | 1.29*** | 0.80   |
| Share construction              | -3.23 | -0.38 | -8.25* | -0.07 | -0.83  | -3.68* | 4.36  | 7.34   | -0.02 | -6.11*** | -2.43   | 1.39   |
| Share advanced services         | -1.09 | -0.55 | 2.46* | -0.67 | 1.55*** | 0.62  | 0.45  | 3.95   | 5.69** | -1.44* | 3.45*** | 3.23***|
| Share basic services           | 2.89  | 0.04  | -1.94 | 0.13  | 0.56   | -0.41 | -2.12 | -1.82  | 7.39* | 1.97*** | 2.36*** | 2.71***|
| Amenities                       |       |       |       |       |       |       |       |       |       |       |       |       |
| European accessibility          | -0.76** | -0.24** | 0.34  | -0.01 | -0.05  | 0.12  | -0.58** | 2.43   | 0.11  | -0.09  | -0.49*** | -0.13 |
| Physician density               | 0.06  | 0.03** | 0.04  | 0.00  | -0.00  | 0.02  | -0.00  | 0.24*  | -0.12 | -0.02  | 0.08*** | 0.00   |
| Green area                      | 1.44** | 0.08  | -0.34 | 0.41** | 0.08  | 0.29  | 0.62*  | 4.06   | 1.24  | -0.23  | 0.40**  | 0.30*  |
| Land price                      | 0.04  | 0.16*** | -0.47 | 0.21*** | 0.09*** | 0.07  | 0.05  | 0.20   | -0.04 | 0.12** | -0.02   | 0.16***|
| Flat size                       | 2.69  | -0.55 | -4.11 | 2.11** | 3.40*** | -1.50 | 4.87  | 13.17  | 0.59  | 1.89   | -1.36   | -0.84  |
| Crime rate                      | 0.00  | -0.01*** | -0.01 | 0.00  | 0.00*** | 0.00  | 0.00  | 0.01   | -0.01 | 0.00   | -0.00   | 0.00   |
| Overnight stays                 | 1.81  | -0.40 | -0.06 | 0.70* | -0.89*** | 0.71  | -0.31 | 13.98** | -5.62 | -0.19  | 1.15*** | 0.21   |
| Openness                        |       |       |       |       |       |       |       |       |       |       |       |       |
| Ethnic diversity                | 4.15  | -0.98*** | -7.38** | -0.41 | -0.11  | 0.20  | -0.69 | 1.48   | 1.71  | -0.56  | -0.85   | -1.35***|
| Share of foreigners             | -1.70 | 4.93*** | 15.37 | 1.60  | 0.06   | 1.76  | 2.27  | 14.42** | -2.52 | -0.49  | 6.61*** | 1.00   |
| Miscellaneous                   |       |       |       |       |       |       |       |       |       |       |       |       |
| Net flow of workers†            | -1.31*** | 0.67*** | -0.27 | 0.36*** | 0.76**  | 2.21*** | 9.64*** | 0.22  | -14.08 | 2.33**  | -0.52*** | 0.98   |
| Distance                        | -2.66*** | -0.29** | -2.68*** | -0.35 | -0.15* | -0.76*** | -0.32*** | -8.48** | -4.32** | -1.07*** | 0.30*   | -1.21***|
| Distance squared                | 0.23*** | 0.01*  | 0.25*** | 0.01  | 0.01**  | 0.06*** | 0.80*** | 0.33** | 0.04*** | -0.01** | 0.03*** |
| Obs.                            | 402   | 402   | 402   | 402   | 402    | 402   | 402   | 402    | 402   | 402    | 402    | 402    |
| pvalue R²                       | 0.77  | 0.84  | 0.27  | 0.78  | 0.46   | 0.19  | 0.51  | 0.44   | 0.30  | 0.61   | 0.58   |        |

Note: The dependent variable is the representation quotient of nationality-specific foreign employment. All models include a constant. Country abbreviations are taken from official sources and stand for the following countries: AT: Austria, BA: Bosnia-Herzegovina, BE: Belgium, BG: Bulgaria, BY: Belarus, CH: Switzerland, CY: Cyprus, CZ: Czech Republic, DK: Denmark, EE: Estonia, ES: Spain, and FI: Finland. With the exception of the net flow of workers (†), each coefficient is multiplied by 100 in order to avoid numbers with too many digits. The variables are ordered as in the data set description. Standard errors shown in parentheses are robust to autocorrelation as well as heteroscedasticity. ***, ** and * denote statistical significance to the 1%, 5% and 10% level.
## Table 7: Estimation results – nationalities II

| Variable                        | FR  | GR  | HR  | HU  | IE  | IT  | LT  | LU  | LV  | MT  | NL  | NO  |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| **Labor market and economic conditions** |     |     |     |     |     |     |     |     |     |     |     |     |
| Unemployment rate               | 0.82| 0.78| 2.29**| 1.27| 0.13| 1.27| -0.55| -12.20| -2.69**| -5.72| -11.85**| -0.92|
| Gross earnings                  | 0.07**| -0.03| 0.03**| -0.01| 0.04**| -0.04| -0.00| -0.08**| 0.01| -0.06| -0.15**| 0.02|
| Share high qual. emp.           | 5.72**| 0.68| -1.09| 3.10***| 3.36**| 1.80| 0.95| -0.69| -0.35| -0.32| 8.89**| 3.45**|
| Share manufacturing             | 2.55***| 0.87**| 0.67**| -0.07| -0.21| 1.65**| -0.78**| 0.36| -0.97**| 1.28| 0.41| 0.56|
| Share construction              | -3.19| -5.12***| 0.58| 3.01| 0.06| -2.83| -2.91**| -5.30| -2.24| -1.80| 7.77**| -0.23|
| Share advanced services         | 2.25| 1.76**| 1.52**| -0.38| 1.85*| 0.16| 0.05| -0.55| 0.12| 0.90| -2.17| 2.63***|
| Share basic services            | 1.67| -0.03| 0.23| 0.53| 2.38***| 0.13| 0.23| -0.74| 0.59| 5.20| 2.18| 1.20|
| European accessibility          | 0.14| -0.54***| -0.17*| -0.45***| -0.09| -0.52**| -0.07| 0.95**| -0.22**| -1.02**| 0.26| -0.12|
| Physician density               | 0.12**| 0.05**| 0.04**| -0.02| 0.05**| 0.06*| 0.02| -0.01| -0.02| -0.14| 0.09*| -0.01|
| Green area                      | 0.14| -0.53*| 0.32| 0.12| 0.16| 0.99***| -0.05| -1.04**| 0.00| -0.59| -0.19| 0.32|
| Land price                      | 0.05| 0.19**| 0.25***| 0.22***| 0.29***| -0.07| 0.00| 0.14| 0.06| 0.39| 0.07| 0.15*|
| Flat size                       | 0.93| -1.09*| -1.65*| 3.14| 1.86| -0.48| 0.63| -1.26| 0.56| 1.19| 3.31*| 1.82|
| Crime rate                      | 0.01| -0.01***| -0.01***| -0.00**| -0.01**| -0.00| 0.01| 0.00| 0.00| 0.00| 0.00| 0.00|
| Overnight stays                 | 1.05| 0.24| 0.34| 0.45| 0.29| -0.04| 0.36| -0.93| 0.89**| -1.89| -1.15| -1.11|
| **Amenities**                   |     |     |     |     |     |     |     |     |     |     |     |     |
| Ethnic diversity                | -0.91| -0.29| -0.76| 0.08| -0.57| -1.29| -1.14**| -3.31***| -1.17***| 2.19| 4.15| -0.32|
| Share of foreigners             | -2.05| 5.23***| 6.73***| 1.23| 1.60| 17.09***| 3.27**| 5.56| 1.06| -4.39| 12.60**| 1.35|
| **Openness**                    |     |     |     |     |     |     |     |     |     |     |     |     |
| Net flow of workers†            | -1.42***| -0.41***| 0.21**| 0.26***| 2.16**| -0.01| 1.35***| 14.71***| 0.88***| 13.13| -0.70| 2.90***|
| Distance                        | -1.05**| 0.33***| 0.02| -0.08| 0.27| -0.70**| 0.09| -1.87***| -0.11| -0.48| -1.85***| -1.79***|
| Distance squared                | 0.51| -0.10***| -0.04| -0.03| -0.09| 0.36**| -0.05| 2.05***| 0.03| 0.12| 1.68***| 0.68***|
| **Miscellaneous**               |     |     |     |     |     |     |     |     |     |     |     |     |
| Obs.                            | 402| 402| 402| 402| 402| 402| 402| 402| 402| 402| 402| 402|
| pseudo R²                       | 0.69| 0.37| 0.60| 0.75| 0.67| 0.50| 0.64| 0.68| 0.66| 0.14| 0.41| 0.47|

Note: The dependent variable is the representation quotient of nationality-specific foreign employment. All models include a constant. Country abbreviations are taken from official sources and stand for the following countries: FR: France, GR: Greece, HR: Croatia, HU: Hungary, IE: Ireland, IT: Italy, LT: Lithuania, LU: Luxembourg, LV: Latvia, MT: Malta, NL: Netherlands, and NO: Norway. With the exception of the net flow of workers (†), each coefficient is multiplied by 100 in order to avoid numbers with too many digits. The variables are ordered as in the data set description. Standard errors shown in parentheses are robust to autocorrelation as well as heteroscedasticity. ***, **, and * denote statistical significance to the 1%, 5% and 10% level.
| Variable                        | PL   | PT   | RO   | RU   | SE   | SI   | SK   | TR   | UA   | UK   | US   |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| **Labor market and economic conditions** |      |      |      |      |      |      |      |      |      |      |      |
| Unemployment rate              | -0.66| 1.92 | -2.35**| -4.79***| -1.04| -1.24| 0.65| 1.12| -2.11**| 0.95| 1.69 |
| Gross earnings                 | -0.01| -0.02| -0.03| -0.01| 0.05***| 0.02| -0.00| 0.01| -0.00| 0.05**| 0.05***|
| Share high qual. empl.         | 0.76*| -0.50| 0.89| -0.07| 3.73***| -0.90| 0.28| -1.07| 0.24| 3.10**| 2.38 |
| Share manufacturing            | -0.45| 0.64| -0.28| -0.28| 0.68| -0.06| -0.85| 0.47| -0.51**| 0.22| -0.12 |
| Share construction             | -1.94**| -1.84| -1.29***| -2.28***| -0.97| -2.38| 5.73*| -0.33| -2.84***| -5.13**| -0.96 |
| Share advanced services        | 0.31| 3.03*| -0.89| 0.11| 3.48***| -2.07| -1.23| 1.09**| 0.54| 1.84*| 2.06*|
| Share basic services           | 0.11| 0.65| 0.07| 0.24| 2.64**| -2.06**| 1.52| 1.03**| 0.63| 2.75**| 2.32**|
| European accessibility         | -0.22***| -0.98***| -0.08| -0.02| 0.03| 0.07| 0.01| 0.19| -0.68**| -0.67***| -0.20***| -0.17| -0.05 |
| Physician density              | 0.04***| 0.06| -0.02*| -0.01| 0.02| 0.02| 0.02| 0.21***| 0.01| -0.02| 0.05| 0.04 |
| Green area                     | -0.09| 0.68| -0.04| -0.14| 0.12| -0.05| 0.58| 0.01| -0.01| 0.05| 0.13 |
| Land price                     | 0.03| -0.08| 0.12| -0.07***| 0.14**| 0.40***| 0.54***| -0.02| -0.02| 0.12| 0.04 |
| Flat size                      | 1.93***| -2.30| 0.94| 0.64| -0.52| -4.48***| -1.06| -3.19***| 0.54| -0.14| 6.95***|
| Crime rate                     | 0.00| -0.00| -0.00***| 0.00| -0.00| -0.01**| -0.02***| -0.01***| 0.00**| -0.00| 0.00 |
| Overnight stays                | -0.17| 1.36| -0.51| -0.95***| -0.30| 0.62| 4.70***| 0.51| -0.56***| 0.71| -0.34 |
| **Amenities**                  |      |      |      |      |      |      |      |      |      |      |      |
| Ethnic diversity               | 0.26| -1.19| 0.20| -0.77***| -1.14**| -0.68| 2.96***| 4.19***| -0.96***| -1.15*| -1.64**|
| Share of foreigners            | 2.77***| 7.85*| 3.94***| 3.92***| 1.02| 6.56***| -5.11*| 5.40***| 3.20***| -0.64| 4.72***|
| **Openness**                   |      |      |      |      |      |      |      |      |      |      |      |
| Net flow of workers†           | 0.08***| -0.33| 0.26***| 0.29***| -0.24| 1.03| 1.00***| 0.00| 0.43***| -0.12| 0.44 |
| Distance                       | 0.05| 0.44**| 0.36***| -1.46***| -0.90***| -0.50***| 0.22| 0.93**| -0.57*| -0.71**| 8.78***|
| Distance squared               | -0.01| -0.01**| -0.02**| 0.01***| 0.03**| -0.02| -0.02**| 0.02| 0.03**| -0.06***|      |
| Obs.                           | 402| 402| 402| 402| 402| 402| 402| 402| 402| 402| 402 |
| pseudo R²                      | 0.54| 0.25| 0.60| 0.67| 0.60| 0.61| 0.69| 0.72| 0.60| 0.37| 0.43 |

Note: The dependent variable is the representation quotient of nationality-specific foreign employment. All models include a constant. Country abbreviations are taken from official sources and stand for the following countries: PL: Poland, PT: Portugal, RO: Romania, RU: Russia, SE: Sweden, SI: Slovenia, SK: Slovakia, TR: Turkey, UA: Ukraine, UK: United Kingdom, and US: United States. With the exception of the net flow of workers (†), each coefficient is multiplied by 100 in order to avoid numbers with too many digits. The variables are ordered as in the data set description. Standard errors shown in parentheses are robust to autocorrelation as well as heteroscedasticity. ***, ** and * denote statistical significance to the 1%, 5% and 10% level.
D. Relative Importance of Determinants

Table 9: Relative importance of the determinants (in %)

| Variable                         | total   | neighbors | non-neighbors | old members | new members | North  | South |
|----------------------------------|---------|-----------|---------------|-------------|-------------|--------|-------|
| **Labor market and economic conditions** |         |           |               |             |             |        |       |
| Unemployment rate (in %)         | 34.3    | 22.2      | 40.0          | 21.4        | 38.5        | 22.2   | 37.5  |
| Gross earnings (in €)            | 34.3    | 33.3      | 32.0          | 57.1        | 15.4        | 44.4   | 25.0  |
| Share high qualified employees (in %) | 37.1    | 44.4      | 36.0          | 50.0        | 30.8        | 44.4   | 12.5  |
| Share manufacturing (in %)       | 28.6    | 11.1      | 36.0          | 28.6        | 38.5        | 33.3   | 50.0  |
| Share construction (in %)        | 37.1    | 44.4      | 36.0          | 35.7        | 38.5        | 33.3   | 25.0  |
| Share advanced services† (in %)  | 45.7    | 22.2      | 52.0          | 64.3        | 23.1        | 77.8   | 50.0  |
| Share basic services* (in %)     | 28.6    | 11.1      | 32.0          | 42.9        | 15.4        | 66.7   | 25.0  |
| **Amenities**                    |         |           |               |             |             |        |       |
| European accessibility (in mins) | 48.6    | 44.4      | 52.0          | 42.9        | 61.5        | 11.1   | 87.5  |
| Physician density (inhabitants per doctor) | 34.3 | 44.4 | 32.0 | 42.9 | 38.5 | 11.1 | 62.5 |
| Green area (in %)                | 22.9    | 22.2      | 24.0          | 42.9        | 15.4        | 11.1   | 37.5  |
| Land price (in € per m²)         | 40.0    | 0.0       | 56.0          | 28.6        | 46.2        | 55.6   | 50.0  |
| Flat size (per inhabitant in m²) | 22.9    | 22.2      | 20.0          | 7.1         | 30.8        | 0.0    | 25.0  |
| Crime rate (cases per 100,000 inhabitants) | 31.4 | 0.0 | 44.0 | 14.3 | 38.5 | 0.0 | 62.5 |
| Overnight stays (per inhabitant) | 22.9    | 11.1      | 28.0          | 7.1         | 30.8        | 11.1   | 12.5  |
| **Openness**                     |         |           |               |             |             |        |       |
| Ethnic diversity (in %)          | 37.1    | 22.2      | 40.0          | 35.7        | 23.1        | 55.6   | 12.5  |
| Share foreigners (in %)          | 48.6    | 33.3      | 52.0          | 35.7        | 53.8        | 11.1   | 87.5  |
| **Miscellaneous**                |         |           |               |             |             |        |       |
| Net flow of workers (per 10,000 employees) | 62.9 | 55.6 | 68.0 | 42.9 | 76.9 | 55.6 | 50.0 |
| Distance (in km)                 | 74.3    | 88.9      | 68.0          | 92.9        | 38.5        | 66.7   | 75.0  |
| No. of countries in the group    | 35      | 9         | 25            | 13          | 14          | 9      | 8     |

Note: The figures represent shares (in %) of significant estimations in the total number of countries in the group. The variables are ordered as in the data set description. †) Advanced services include financial intermediation, insurance services, research and development, and real estate. *) Basic services include retail sale, wholesale trade, transport, hotels and restaurants, and communications.
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