

Future Migration Scenarios for Europe

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Traditional and New Data:

Questioning and improving the concept of evidence

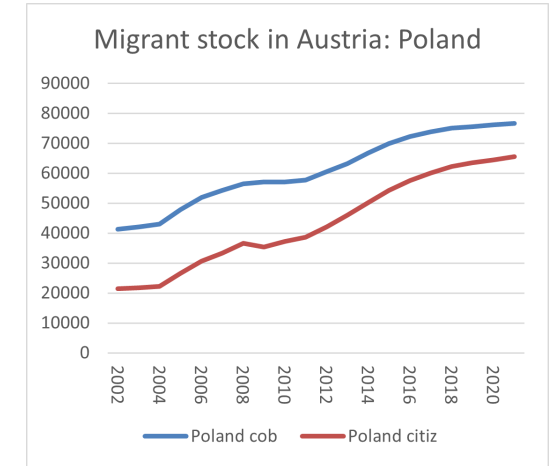
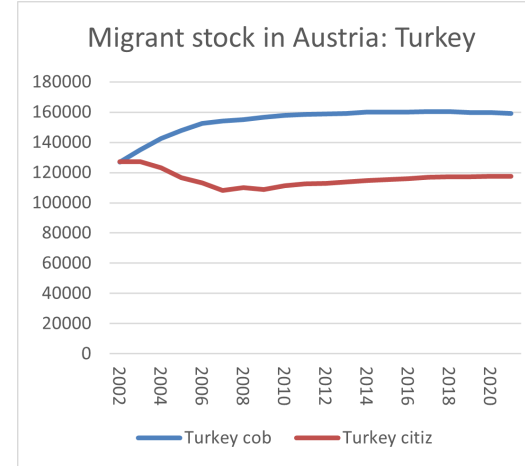
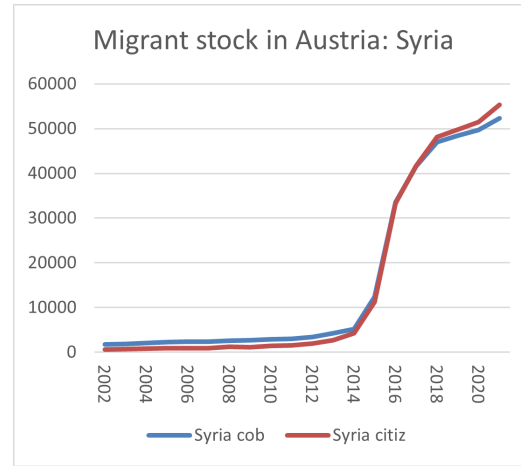
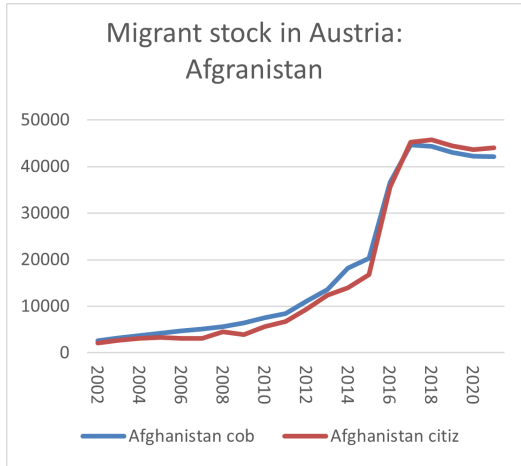


Status quo

- Unlike births and deaths, migration can happen multiple times in a lifetime.
- Good migration data are rarely available, especially outside of rich, Western countries.
- Where data do exist, inconsistent definitions and collection methods lead to inconsistent numbers of the migrants, prohibiting cross-national comparisons.

Traditional migration data

- They provide detailed information in small areas with various socio-demographic characteristics
- Traditional data sources are often not up to date
 - Censuses are often in every 10 years
 - Most recent Eurostat data refers to 1 January 2021
- There are inconsistencies in reported numbers of migrants due to:
 - Different definitions:
 - Country of birth vs country of citizenship



Country of birth vs citizenship

Potancokova, M., 2022 calculations from Eurostat

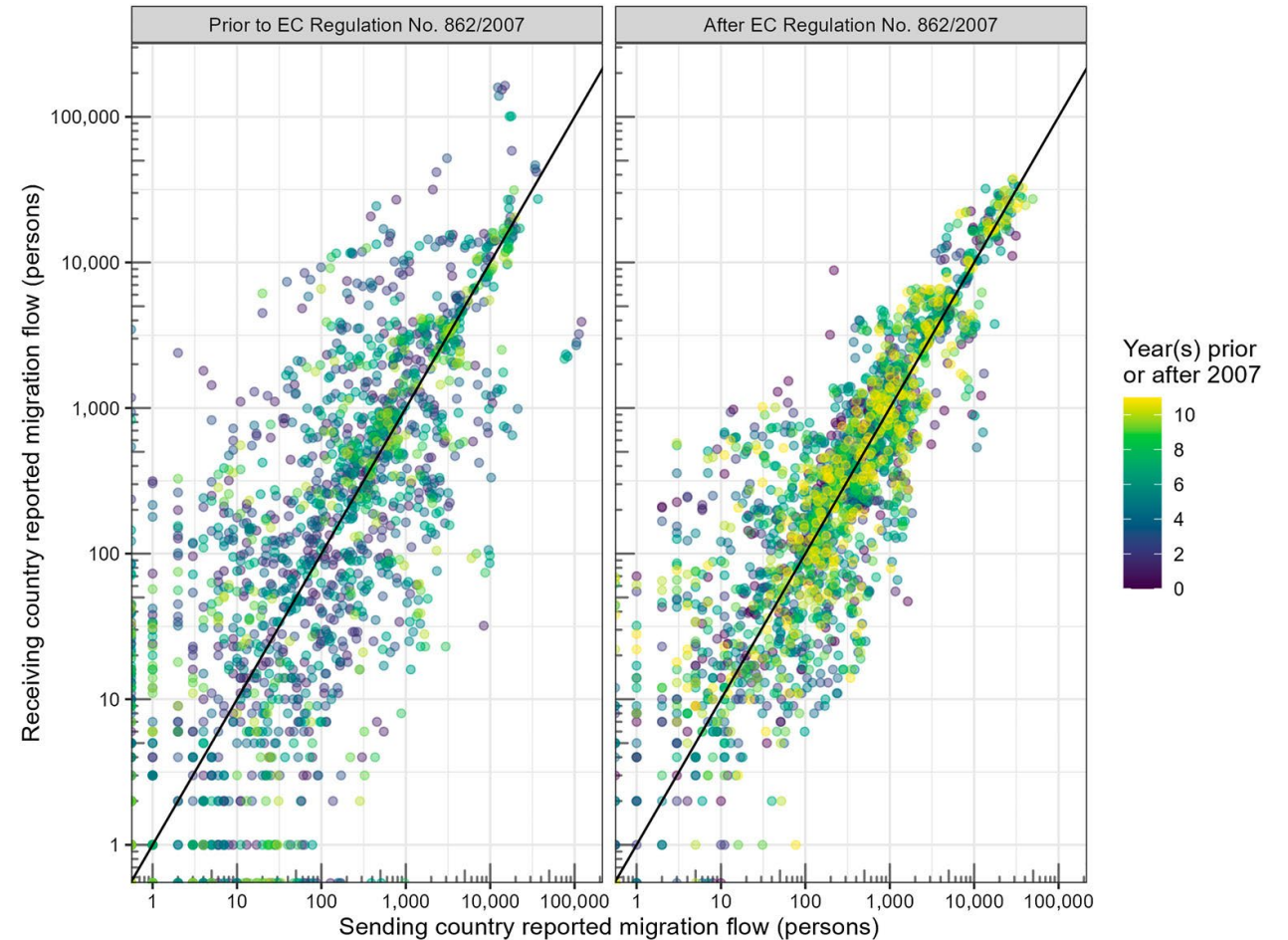
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 - Difficulties in measuring emigration

EU migration flows

In 2007 European Parliament implemented a regulation to harmonize international migration data. Over 20 countries reported bilateral flows to Eurostat.

Number of immigrants from country A residing in country B should match number of emigrants leaving country A to reside in country B.

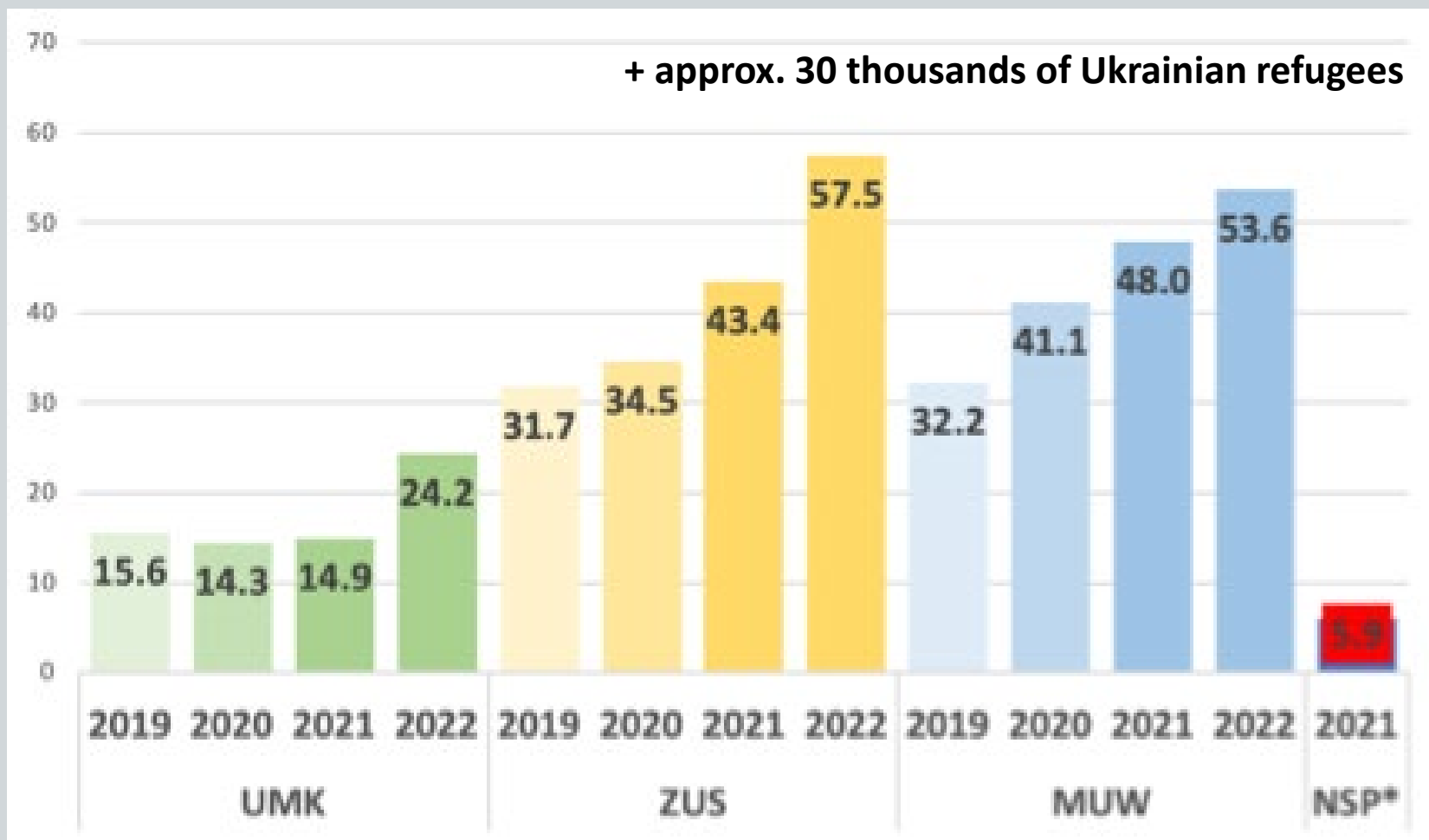


Guy J. Abel & Dilek Yildiz (2022) Closing disparities between European sending and receiving international migration flow data, *Regional Studies, Regional Science*, 9:1, 523-525, DOI: 10.1080/21681376.2022.2096478

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 - Different sampling frames in sample surveys (e.g. LFS)
 - Different population of interest in registers

Number of foreigners in Krakow by data source (in thousands)



UMK – Krakow Municipality - register based on the Polish Population Register (PESEL)

ZUS – Social Insurance Institution Register of payers of social insurances

MUW – Voivodship Office in Malopolska - Register of persons legalising stay in Poland

NSP – the 2021 Census in Poland

Source: (Pędziwiatr, Stonawski & Brzozowski, 2023)

ICT statistics

ICT	Billion people	% World population
3G mobile network coverage	7.5	95
Active mobile broadband subscriptions	6.9	87
Internet Usage	5.3	66
Social media users	4.76	60

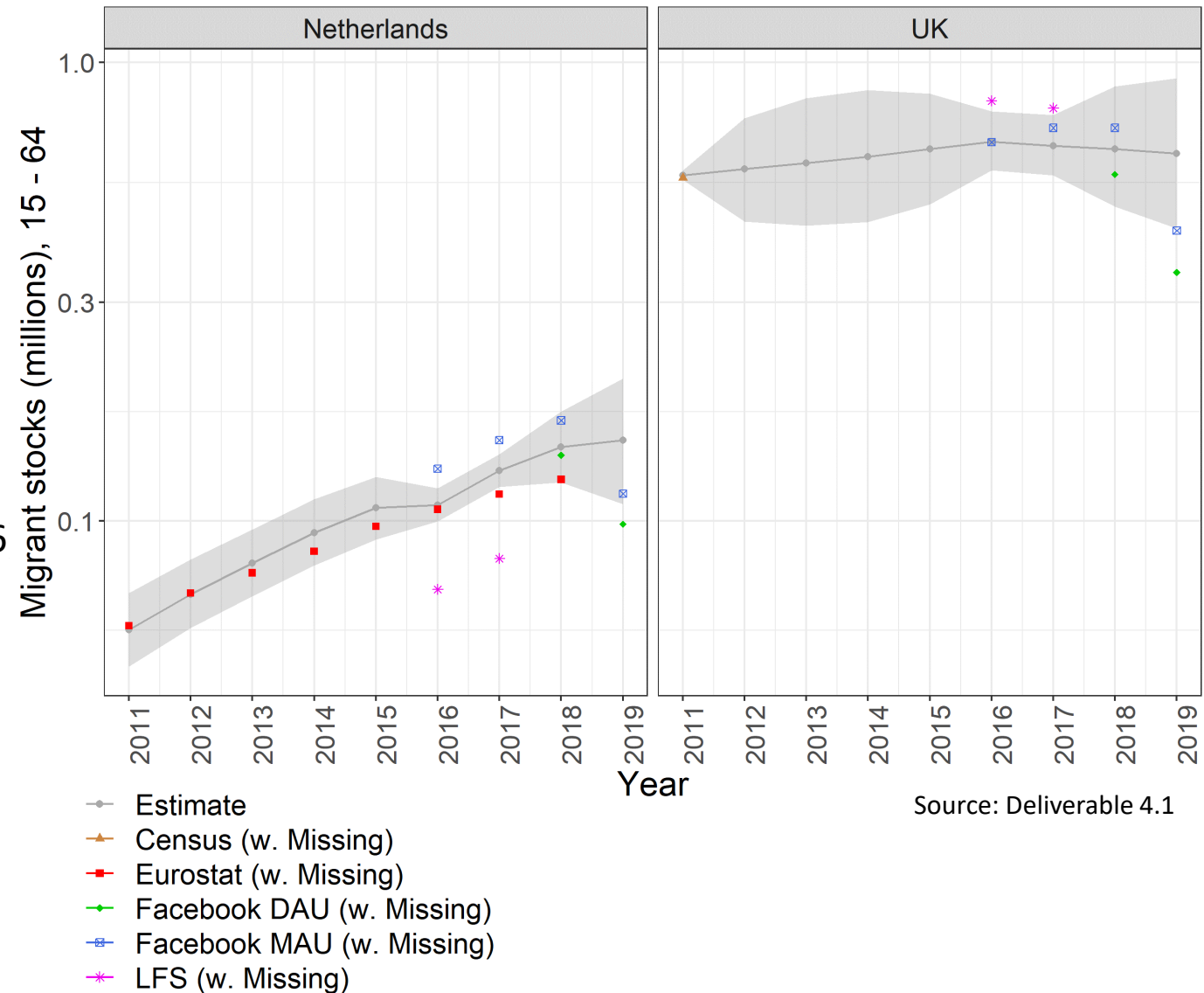
Source: International Telecommunications Union 2022; DataReportal January 2023

New forms of data

- Digital trace
- Potential in estimating migration and mobility (Hughes et al. 2016; Cesare et al. 2018; Righi 2019; Wiśniowski 2021)
- Advantages
 - Publicly available, timely, geo-tagging
- Limitations
 - Representativeness

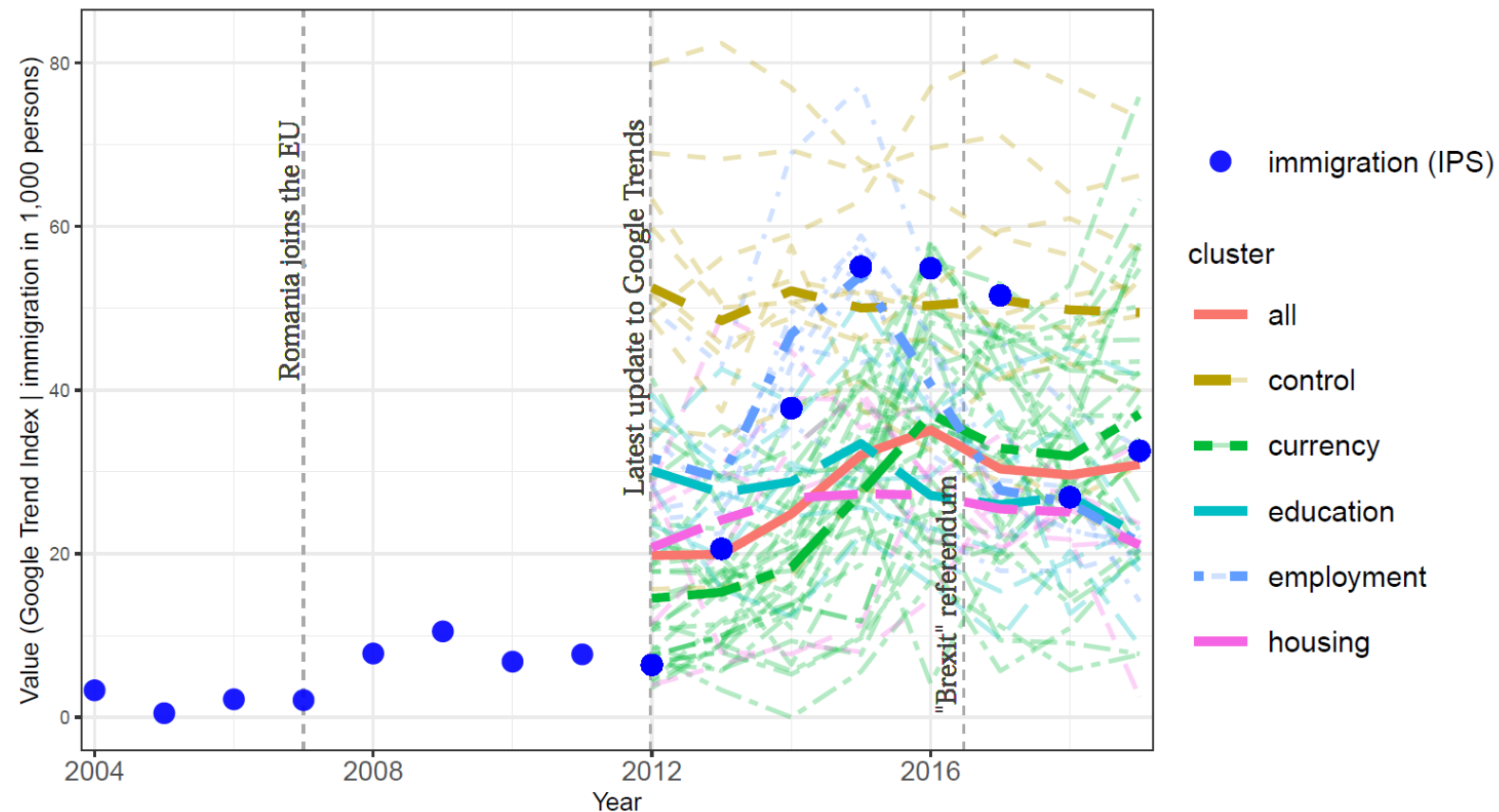
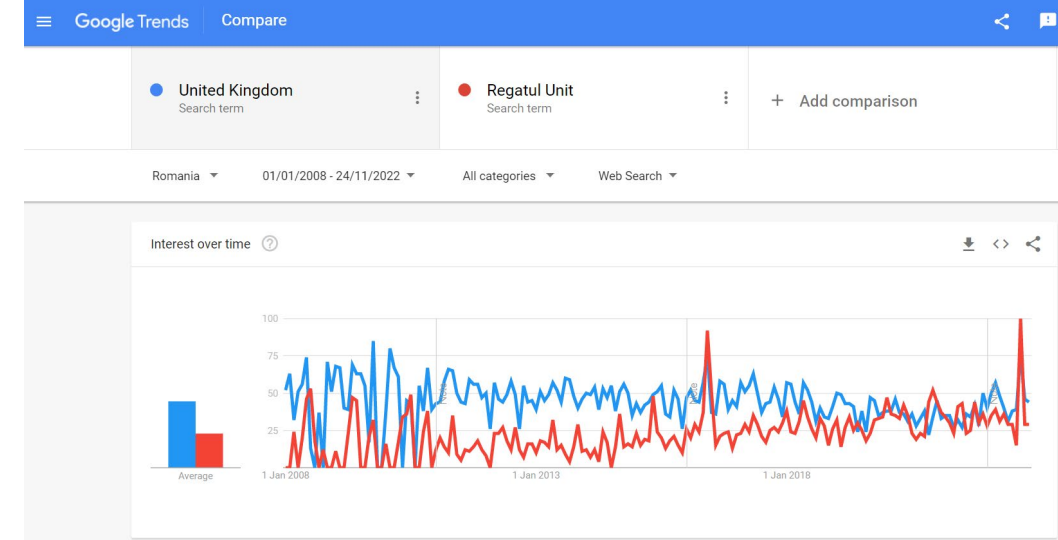
Migrant stocks in Facebook

- Publicly available through API (and free)
- ~400M active users in the EU (Q4 2022)
- “Lived in [country]”
- “Current city” or “hometown” stated city on user's Facebook profile, validated based on (i) device, (ii) connection and (iii) social network structure information (Herdagdelen et al. 2016)
- No retrospective collection
- Censoring



Google Trends data

- Publicly available
- Widely used search engine (93% globally)
- Interest in search word scaled to 0-100 values
- Lexical approach
 - **Hypernyms** (employment, education, housing, currency)
 - and their **synsets**
- Behaviours – intentions



There is not a perfect data source

- Traditional data sources are not up to date
- There are sizable differences in reported numbers
- Novel data advantages: Availability, Timeliness, Granularity, Behaviours
- Limitations: representativeness, black box, missingness

→ Understanding data & contexts

→ Data integration

