

War and Migration

Exploring the Russian Exodus with Online Search Data

Athina Anastasiadou, Artem Volgin, Douglas R. Leasure



Background

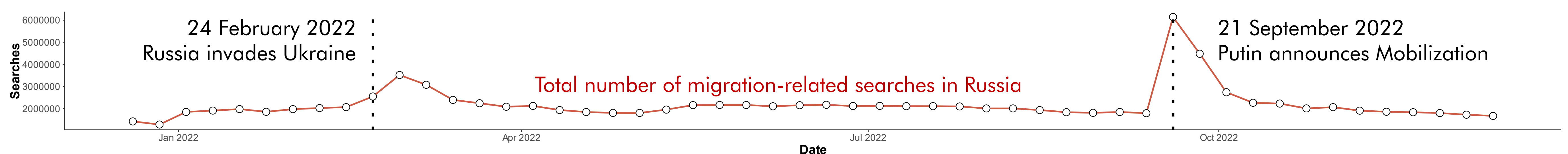
- Russia's full-scale invasion of Ukraine has caused a notable number of Russians to leave their home country due to increasing repressions, sanctions, and mobilization efforts.
- Monitoring and understanding this exodus has critical policy implications. Traditional migration statistics often lag behind in covering such sudden movements. Digital trace data can be harnessed to fill this gap.

Data Sources

- Weekly number of migration-related Yandex searches ("Russian Google") performed on the city level from 20/12/2021 to 18/12/2022.
- Socio-demographic characteristics of the population in 390 cities across Russia provided by Rosstat.
- GDP, population, and entry requirements for Russians for 48 potential countries of destination provided by the World Bank.

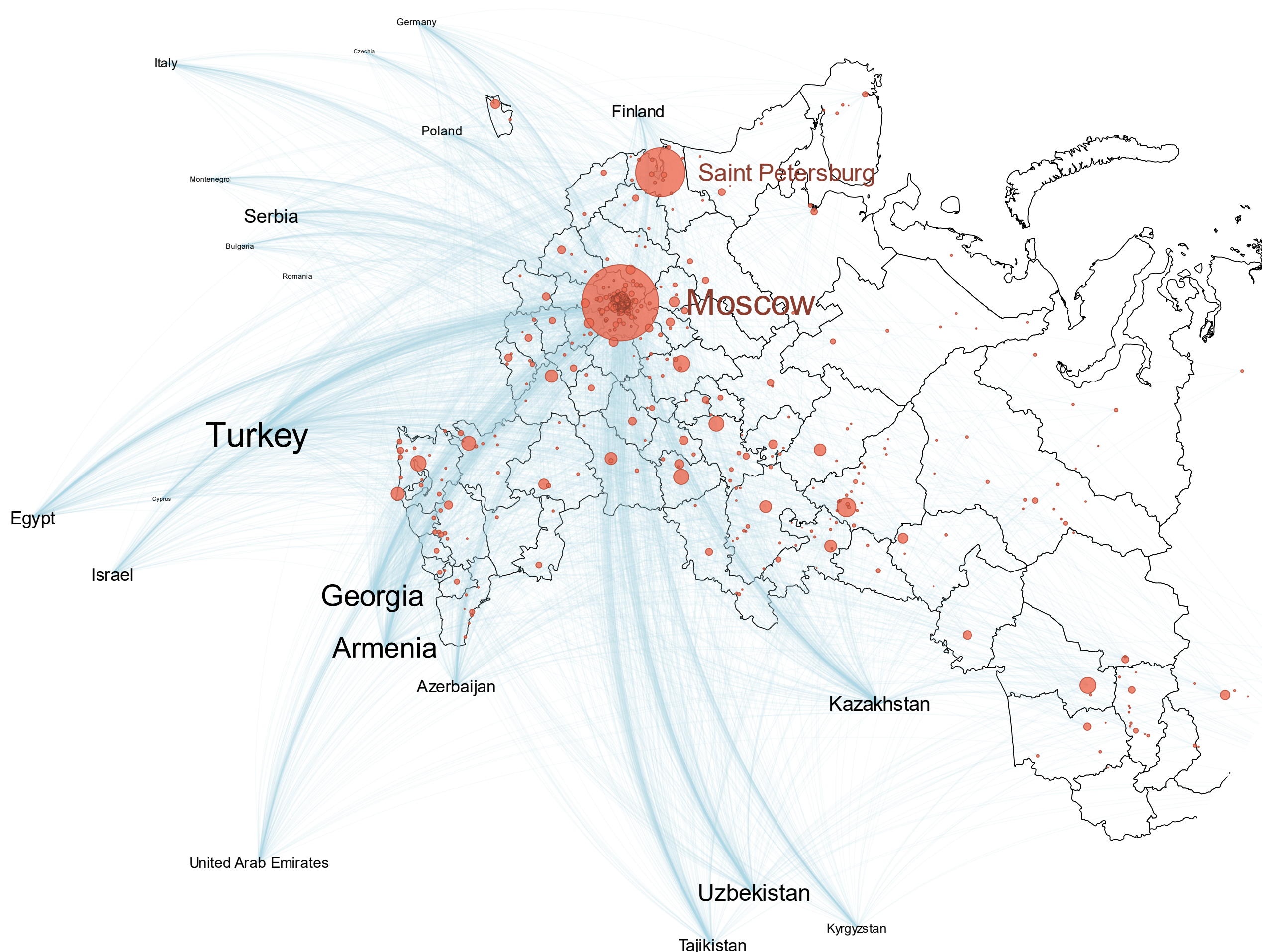
Who left Russia after the invasion of Ukraine and Where did they go?

Key idea: the flow of people from an **origin city** to a **destination country** is proportional to migration searches for the respective **country** in the **city**



Start of the War

Increase in migration searches 3 weeks after



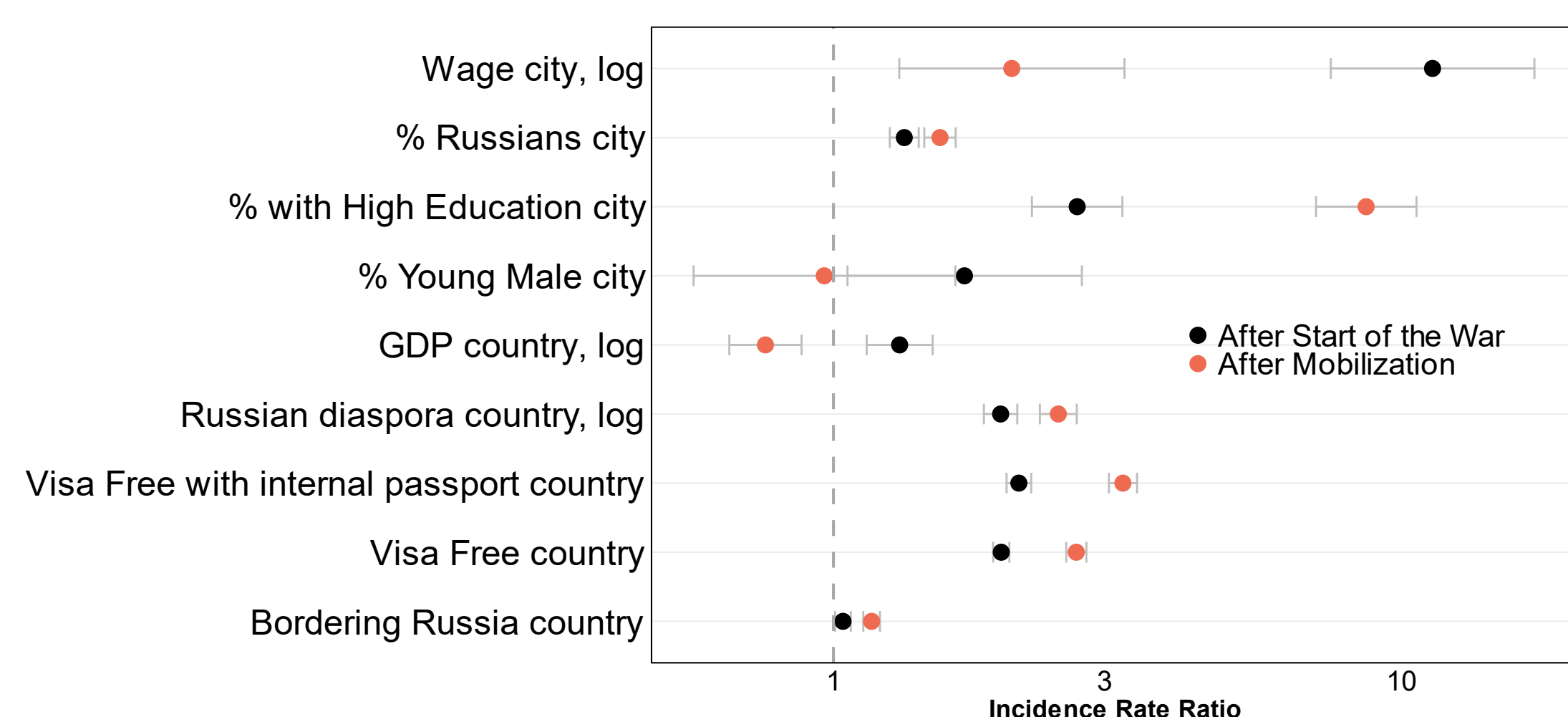
Mobilization

Increase in migration searches 3 weeks after



Findings based on a Gravity Model

- Who** planned to leave Russia? People from cities with higher wages, higher education, and a higher percentage of ethnic Russians. Low-income cities experienced higher search incidence after the mobilization compared to the start of the war.
- Where** did they plan to go? To the countries with higher GDP after the war, and lower-GDP countries after the mobilization. Immediate entry to the country and the size of the Russian diaspora were crucial factors in both waves but were more important for the potential migrants fleeing mobilization.



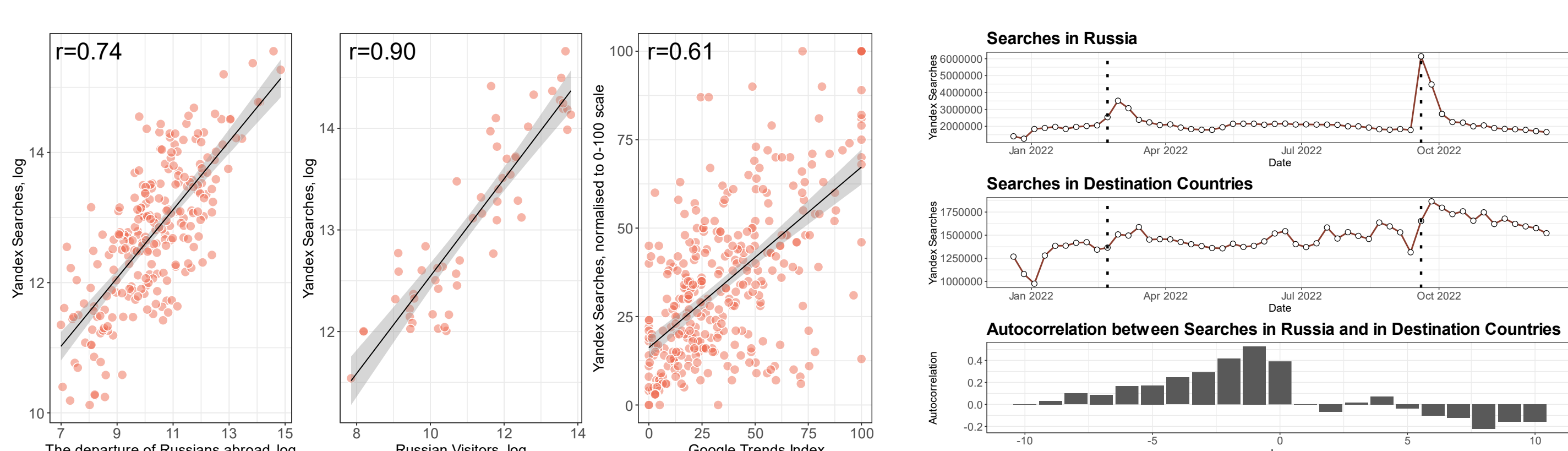
Gravity Model to infer push and pull factors of migration after War/Mobilization.

Dataset: all pairs of Russian cities and destination countries (n = 18,700)

$$\text{Number of migration queries 3 weeks after War/Mobilization from city to country} = \text{number of migration queries 3 weeks before, log} + \text{distance between the city and country, log} + \text{city population, log} + \text{country population, log} + \text{city characteristics} + \text{country characteristics}$$

Estimated using Negative Binomial Regression.

Validation of Yandex Search Data



Full list of countries

Armenia, Austria, Azerbaijan, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, India, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Mongolia, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sri Lanka, Sweden, Switzerland, Tajikistan, Thailand, Turkey, United Arab Emirates, United Kingdom, Uzbekistan, Vietnam

List of migration queries (translated from Russian)

move, work, residence permit, permanent residence, rent, flight, accommodation, (to) rent, flat, citizenship, real estate, visa, car