



# The effects of Covid-19 on regional employment in Europe

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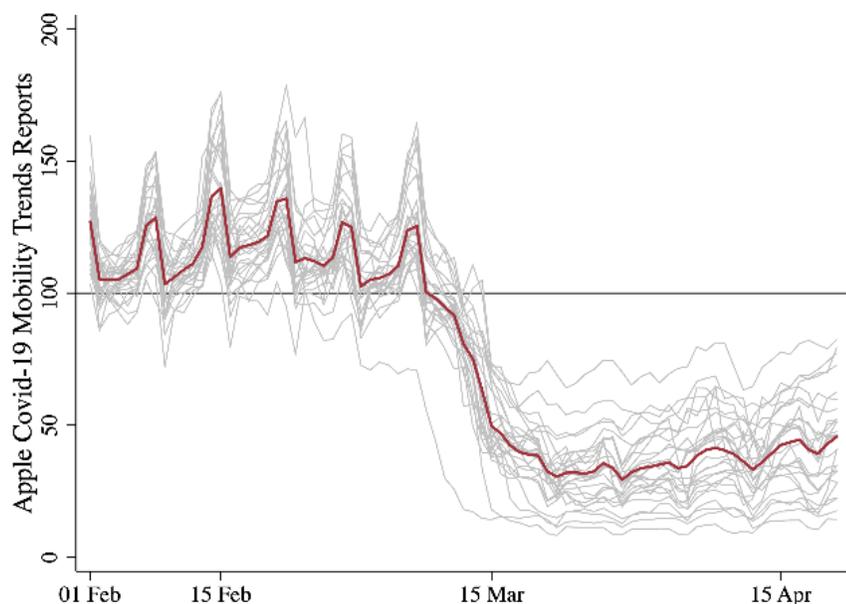
## Outline of the presentation

- ❑ Mobility and Google searches for the topic “unemployment”
- ❑ Identifying regional exposure to Covid-19
  - ❑ Sectoral Covid-19 employment exposure
  - ❑ Share of small-firm employment
  - ❑ Employment risk index
- ❑ Employment risk index components and Google searches
- ❑ Conclusions

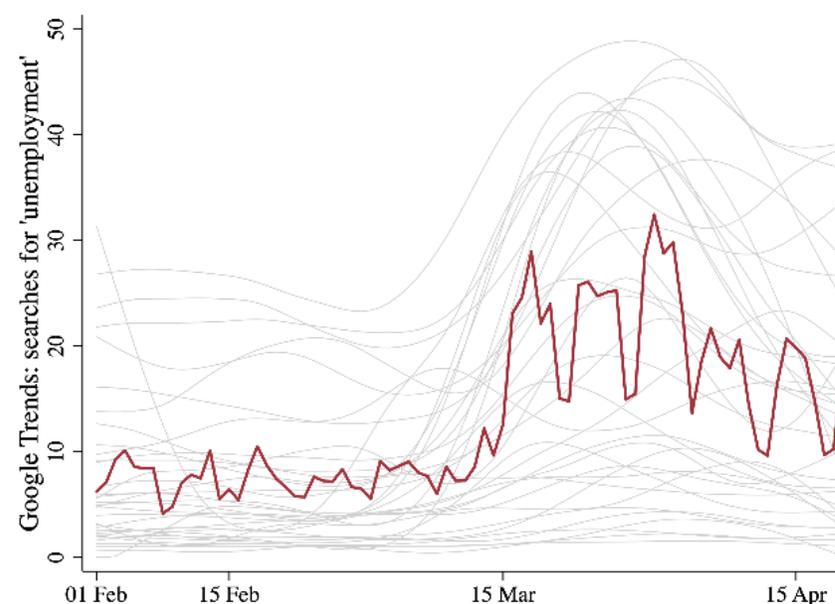
# Mobility and Google searches for the topic “unemployment”

From 1 February to 21 April 2020

Apple Covid-19 Mobility Trends Reports



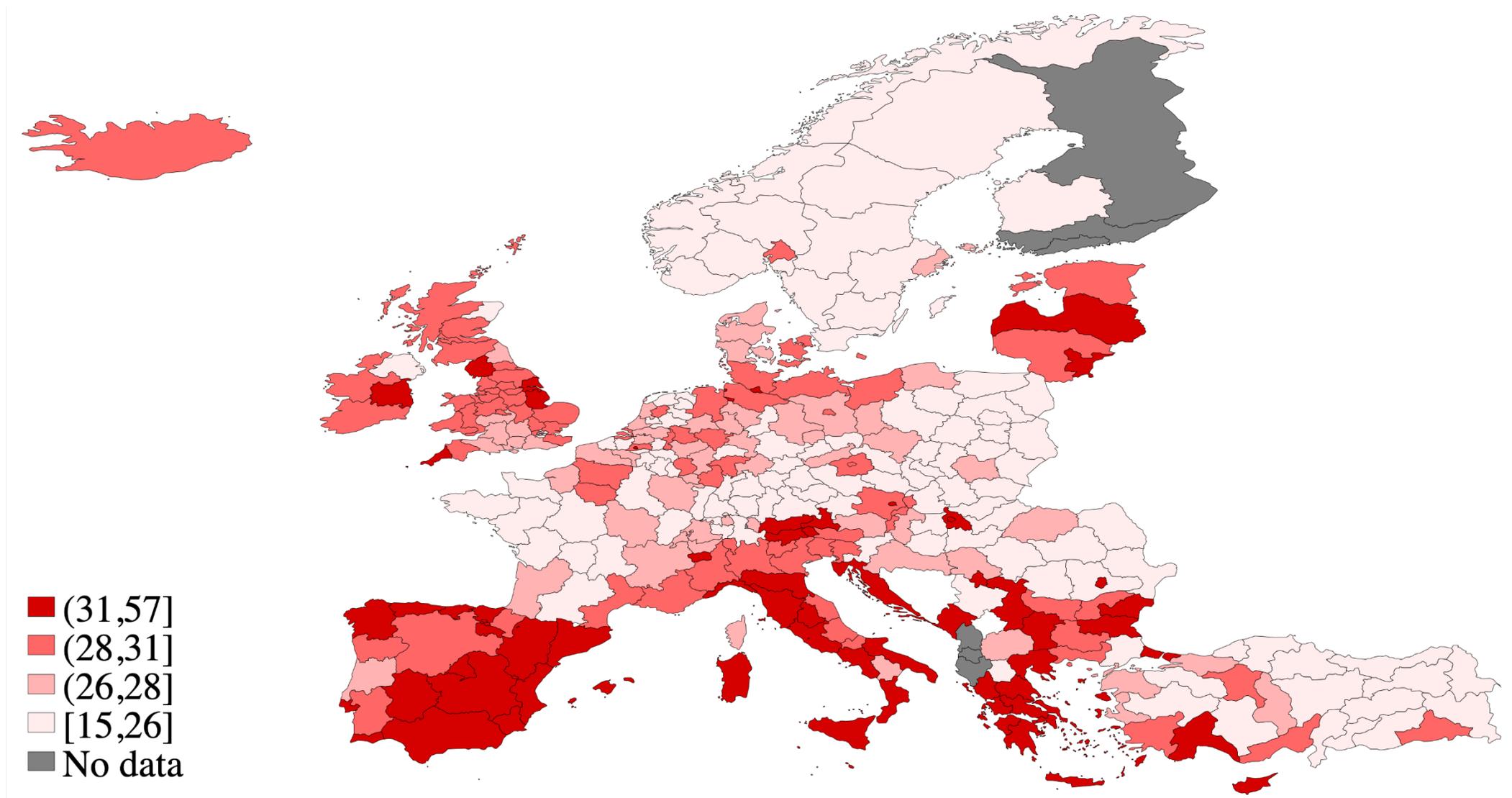
Google searches for the topic “unemployment”



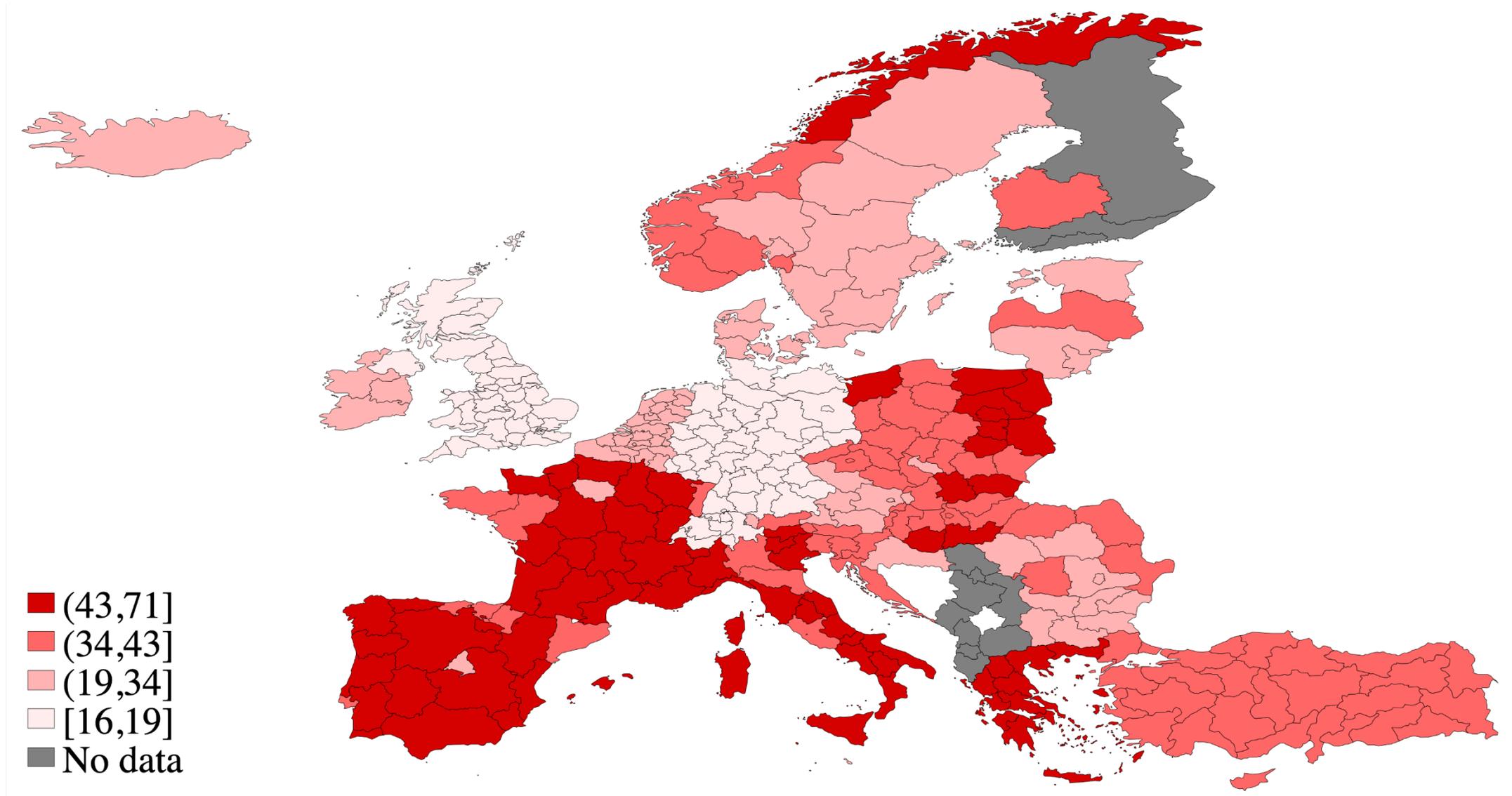
The left-hand panel shows the evolution of Apple Covid-19 Mobility Trends Reports from 1 February to 21 April 2020 for individual European countries (grey lines) and the European average (red line). The index is averaged across all subcategories. The Mobility Trends index reflects requests for directions in Apple Maps and is standardised to 100 on 13 January 2020. The right-hand panel shows the relative frequency of Google searches for the topic “unemployment” from 1 February to 21 April 2020 for individual European countries (grey lines) and the European average (red line). For illustration, country-specific lines are Hodrick Prescott-filtered trend components with a smoothing parameter of 500.

Sources: Apple Covid-19 Mobility Trends Reports; Google Trends; authors’ calculations.

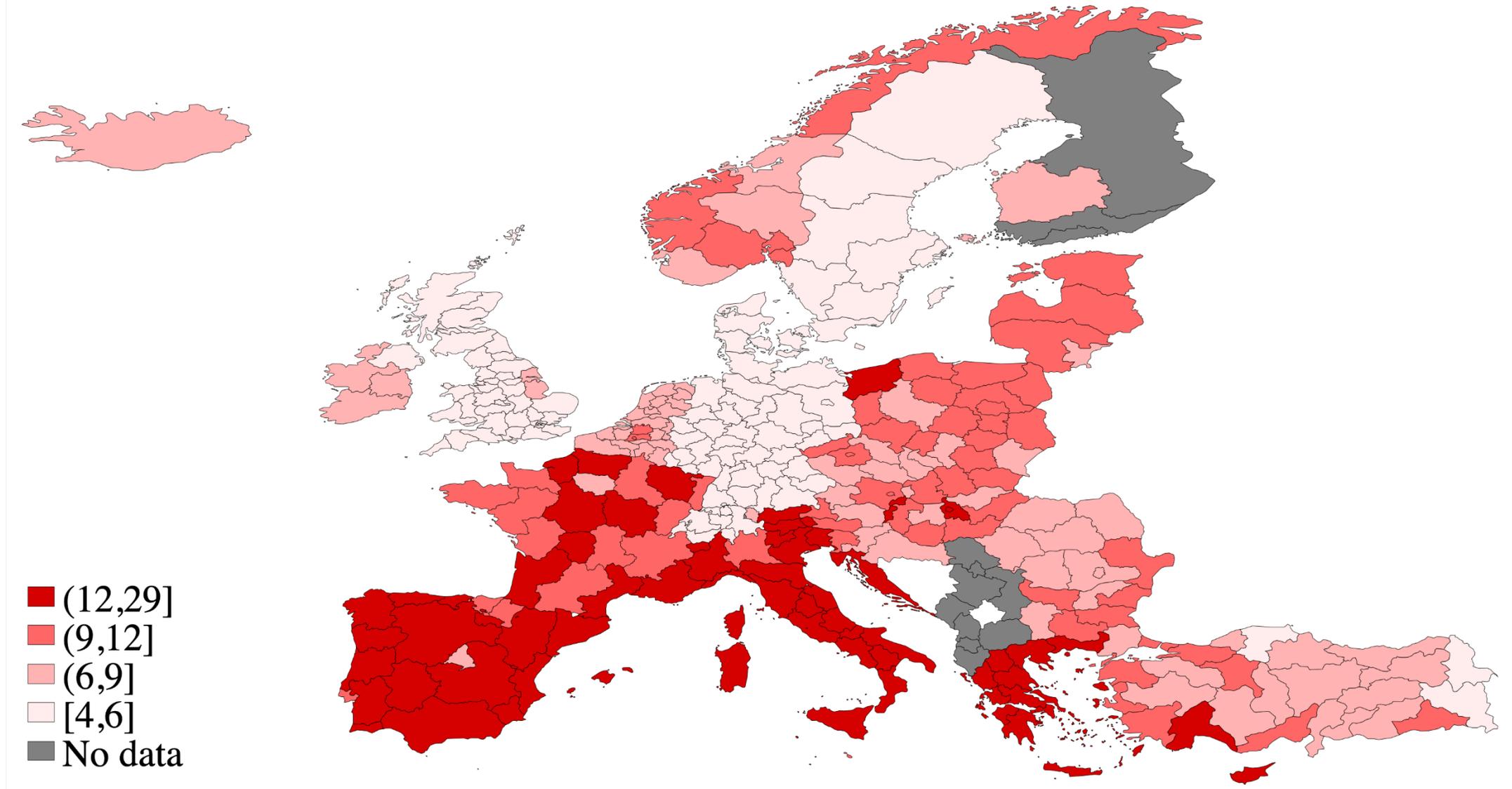
# Sectoral Covid-19 employment exposure



# Share of small-firm employment

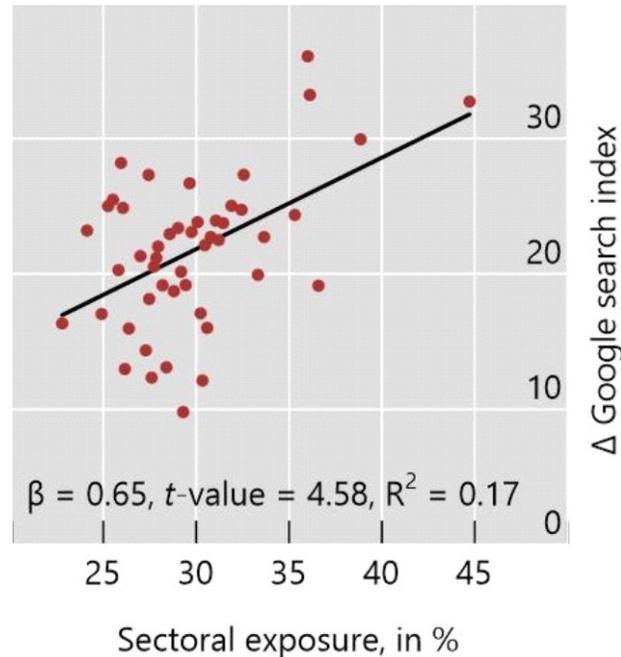


# Employment risk index

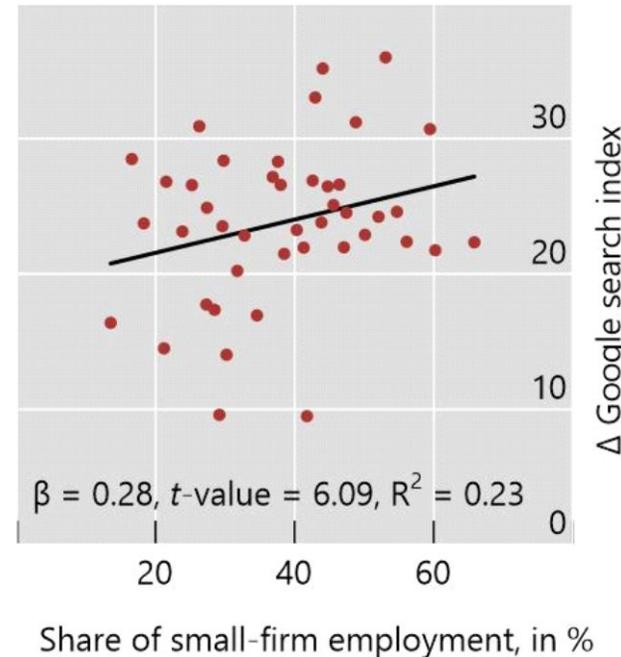


# Employment risk index components and Google searches at the regional level

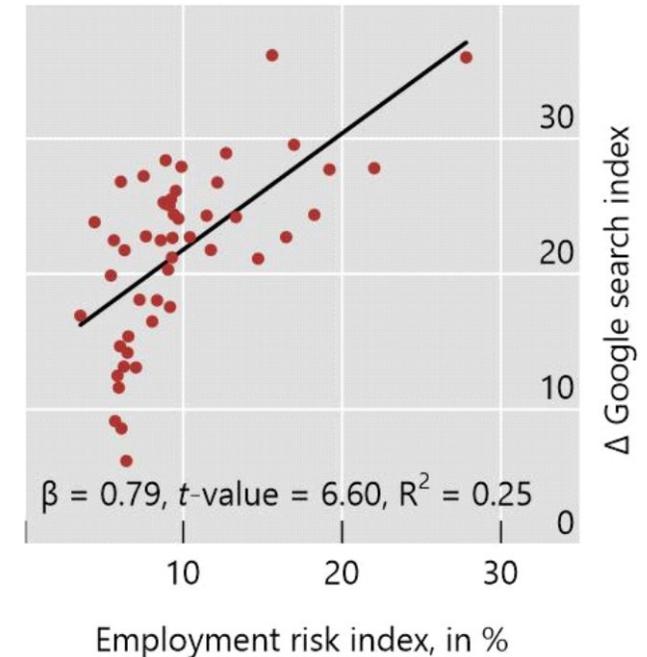
Sectoral exposure and Google searches



Small-firm employment and Google searches



Employment risk index and Google searches



The three panels provide binscatter plots with a linear fit of the change in the Google search index for the topic “unemployment” on the vertical axis against sectoral exposure and the employment risk index, respectively, on the horizontal axis. Binscatter plots group the explanatory variable into equally spaced bins and then provide a scatter plot of the relationship between the average value of the dependent and independent variable in each bin. Changes in search intensity are the difference in means for the periods 1 February to 10 March 2020 and 11 March to 21 April 2020 for Google Trends index on searches for the topic “unemployment”. The change in Covid-19 cases per country is in log differences. Data are provided by the European Centre for Disease Prevention and Control (ECDC). Regressions are weighted by NUTS 2 total employment.

Sources: Eurostat; OECD; ECDC; Google Trends; authors' calculations.

## Conclusions

- ❑ *First envisaged as a symmetric shock, the recession caused by Covid-19 will affect some European regions more than others.*
- ❑ *Southern Europe and France have high employment risk indices, while regions in northern Europe have lower risk indices. Eastern and central European regions have intermediate risk indices.*
- ❑ *Important to evaluate not only sectors particularly exposed to the economic consequences of the pandemic, but also the share of small businesses across regions. Small firms are financially more constrained and have less diversified sources of revenues.*
- ❑ *To protect employment, special emphasis should be placed on measures that reflect spatial differences in Europe's local economic fabric to mitigate the asymmetric impact of the shock.*

## References

[Covid-19 and regional employment in Europe](#)

by [Sebastian Doerr](#) and [Leonardo Gambacorta](#)

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[Identifying regions at risk with Google Trends: the impact of Covid-19 on US labour markets](#)

by [Sebastian Doerr](#) and [Leonardo Gambacorta](#)

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