CENTRE FOR MEDIA PLURALISM AND MEDIA FREEDOM

Understanding and Addressing Digital Inequalities Conference

Double deserts in Europe: Exploring regional gaps in local news and broadband access

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20 November 2025

Co-funded by the European Union

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What are double deserts?

News desert

Area where it is difficult or impossible to access sufficient, reliable, diverse information from independent local, regional and community media. (LM4D, 2024)

Broadband desert

Area where the broadband coverage is inadequate - also called zones affected by digital divide.

Double desert

Area where the local population experiences difficulties in both having adequate access to ICT and in getting information to meet their critical information needs. (Ali, 2023)

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Aim of this paper

Identifying "double deserts" in several countries in Europe (Croatia, Greece, France and Sweden):

Do geographical zones affected by inadequate access to ICT (low broadband download speeds) overlap with low outlet density in the European Union?

Is there a spatial correlation between low broadband download speeds and news deserts?

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Hypotheses

- **HP1:** News deserts may be more likely to occur in regions that are characterised by inadequate broadband download speeds.
- **HP2:** “Double deserts” may be a larger socio-political consequences of the digital divide.

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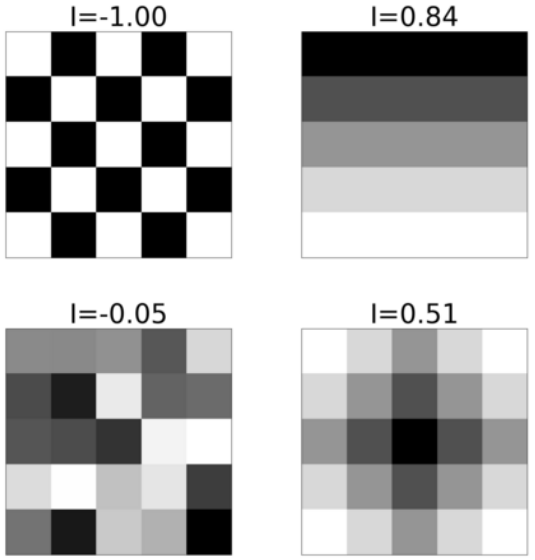
Method: Moran's I spatial (auto-)correlation

Moran's I: A statistic that detects whether spatial patterns in your data—single variable or cross-variable—are clustered, dispersed or random.

- **Moran's I (Univariate):** Measures overall spatial autocorrelation of one variable across all regions.
- **Moran's I (Bivariate):** Assesses whether one variable in a region is spatially correlated to a different variable in neighbouring regions.



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Research design

Proxy for "Broadband Desert" (IV):

- Avg. fixed broadband download speed
- Data source: Ookla

Proxy for "News Desert" (DV):

- Local media outlets per 10,000 people
- Data source: LM4D

Unit of Analysis: NUTS3 regions

Countries Covered: Croatia (HR), Greece (GR), Sweden (SE), France (FR)

Temporal Scope: Asynchronous cross-section using the most recent available year for each country: (FR – 2019; GR – 2023; HR – 2023; SE – 2023)

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Results: Univariate Moran's I (Global)

- **France – Outlets per 1,000** → Shows moderate clustering (I = 0.32). Regions with similar media outlet density tend to group together.
- **Sweden – Outlets per 1,000** → Moderate clustering (I = 0.36). Similar outlet densities appear in neighbouring regions.
- **France – Avg. Broadband Speed (fixed)** → Strong clustering (I = 0.50). Fast-speed areas cluster with fast-speed areas; slow with slow.
- **Sweden – Avg. Broadband Speed (fixed)** → Moderate clustering (I = 0.34). Broadband speeds show a clear spatial pattern.

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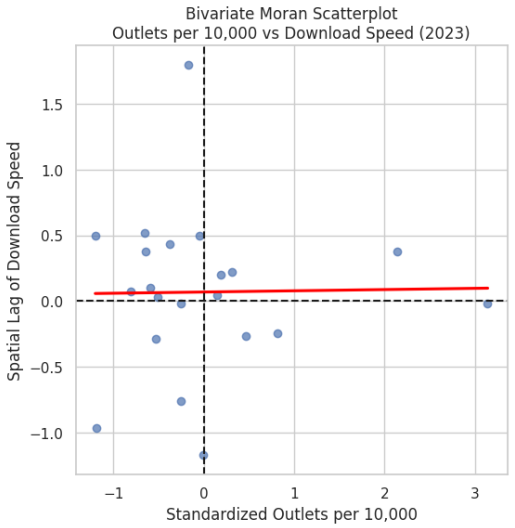
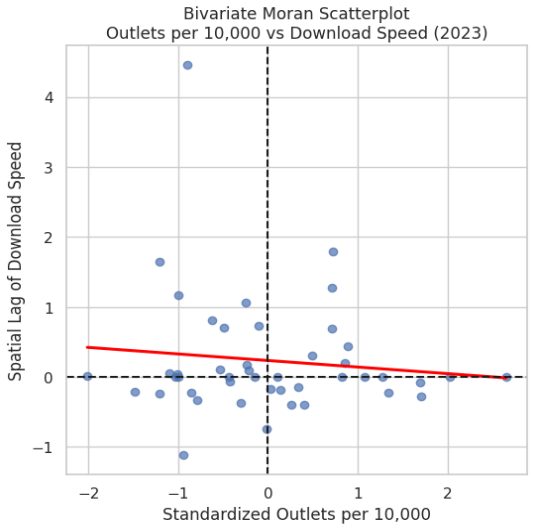
Results: Bivariate Moran's I (Global)

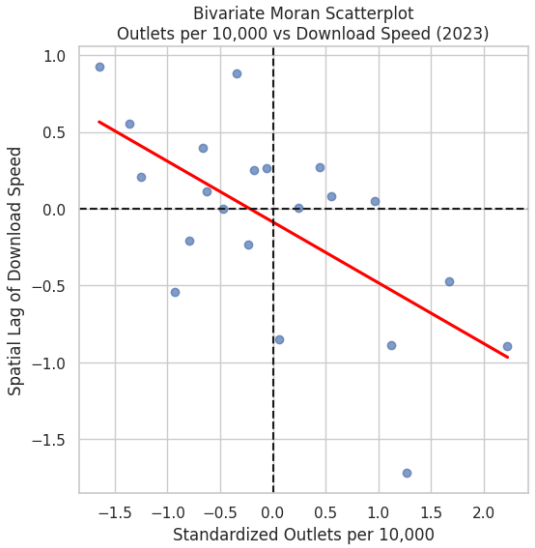
Croatia



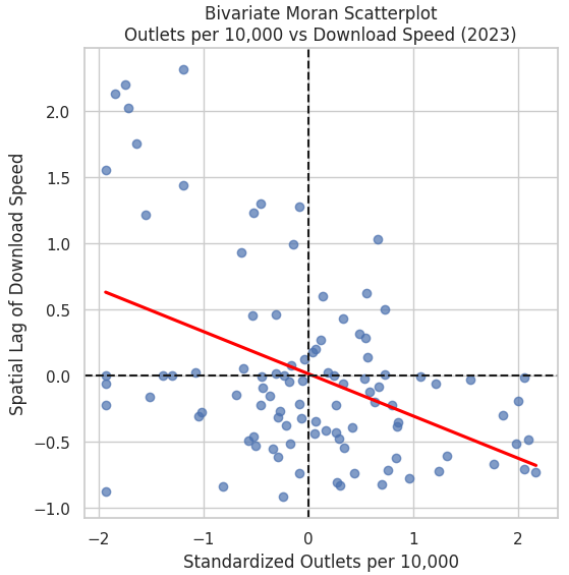
Greece



Sweden



France



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Findings

Possible “double deserts” in France

“News deserts” less likely to appear in regions with low fixed broadband speed

“News deserts” are not a larger socio-political consequence of digital divides.

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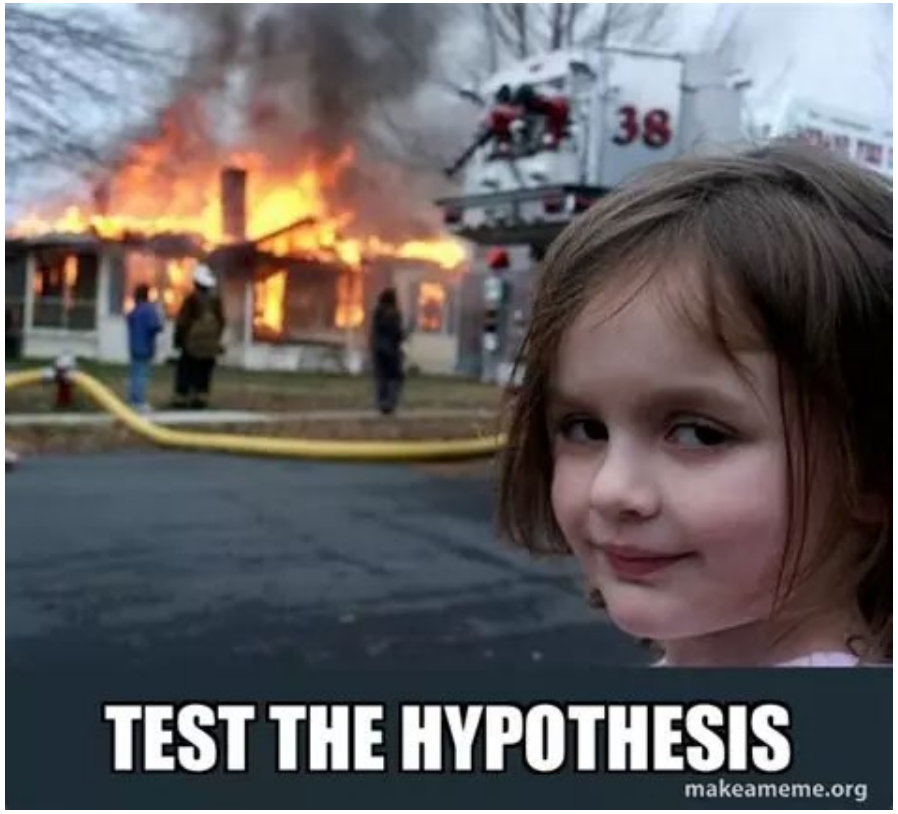
Limitations



- Just a snapshot of the situation
- Limited number of countries
- Lack of comprehensive database of existing local media
- NUT3 may not be the best scale

The findings may not be applicable to other regional contexts

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Further research

- Conduct further qualitative studies in the four countries studied
  - Why local media outlets tend to resist better in regions marked by inadequate broadband speeds?
  - What type of local news outlets in regions marked by low broadband download speed?
- Extend current study to other countries
- How the reduction of the existing digital divide impacts news deserts.

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Thank you!

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