

**2018 SMARTER Conference on Smart  
Specialisation and Territorial Development**  
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# The innovation profiles of European Regions and their resilience to the Great Recession

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# Background #1: regions innovate differently

- Smart specialization increasingly stress the case for place-based policies nurturing endogenous innovation capabilities
- This implies that regions can be innovative in different ways
- Despite that, most empirical studies are based on R&D and patents

# Background #2: regional resilience and innovation profiles

- Since the burst of the crisis and a structural dynamics towards economic disparities, understanding how regions cope with recessions and change has become imperative
- Fresh empirical research on resilience has focused on the structure of the economy, namely industrial specialization
- Lack of attention to the role of innovation, despite Schumpeter defined innovation as “*the creative response to change*”

# Our contributions

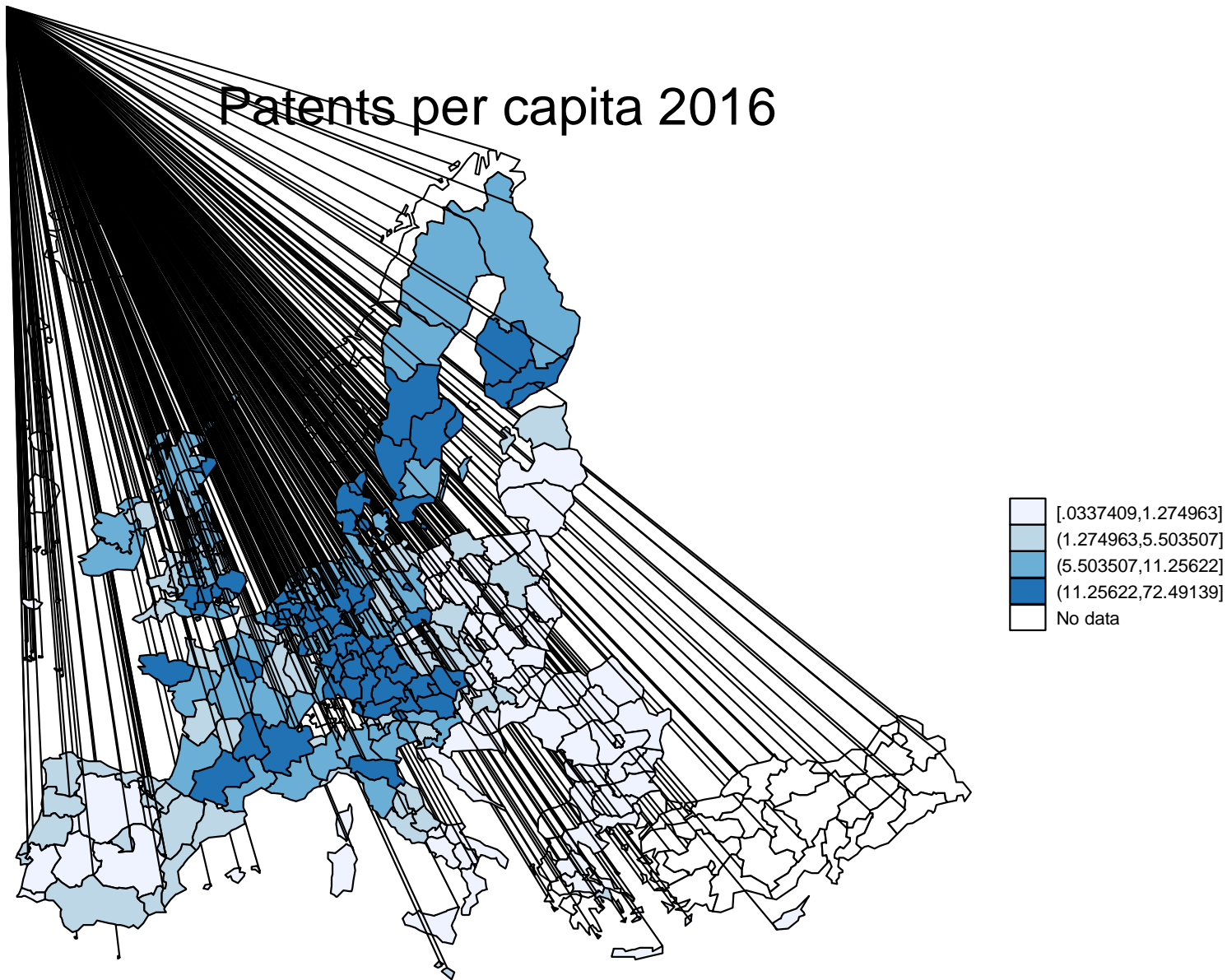
1. We provide a novel dataset that includes, in addition to patents (PAT), the number of trademarks (TM) and design registrations (DR) for European regions for the period 2003-2016
2. We investigate the role of innovation for regional resilience of the period 2003-2016

# What do we capture with our new data?

- Patent: technological innovation, hi-tech specialization
- Trademarks: innovation in knowledge-intensive sectors
- Design: innovation in aesthetic manufacturing, high, medium and low tech industries

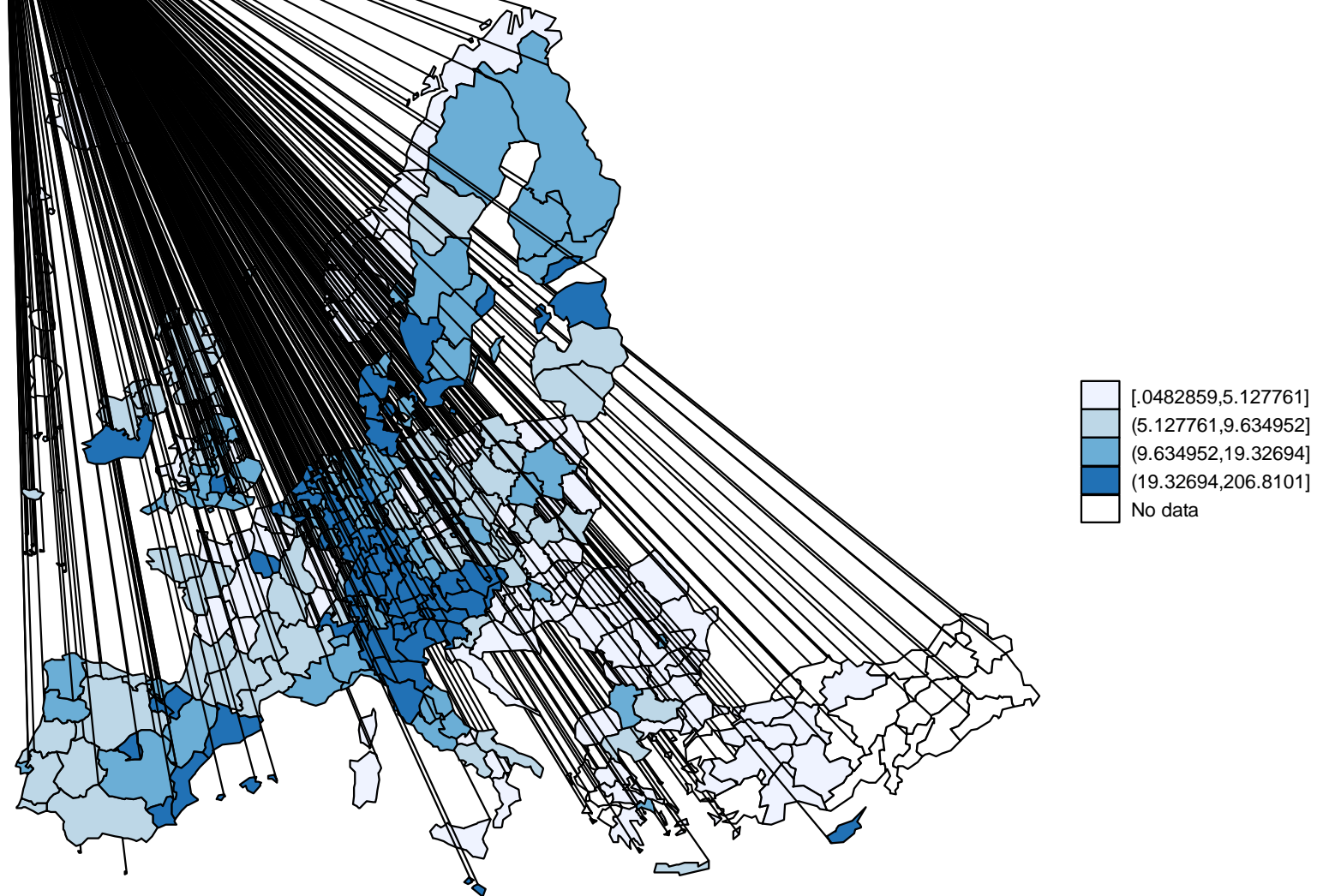
**SOME CORRELATION OF INNOVATION  
PROFILES AND ECONOMIC  
AGGREGATED**

# Patents per capita 2016



Source: Authors' elaboration on IPTS data

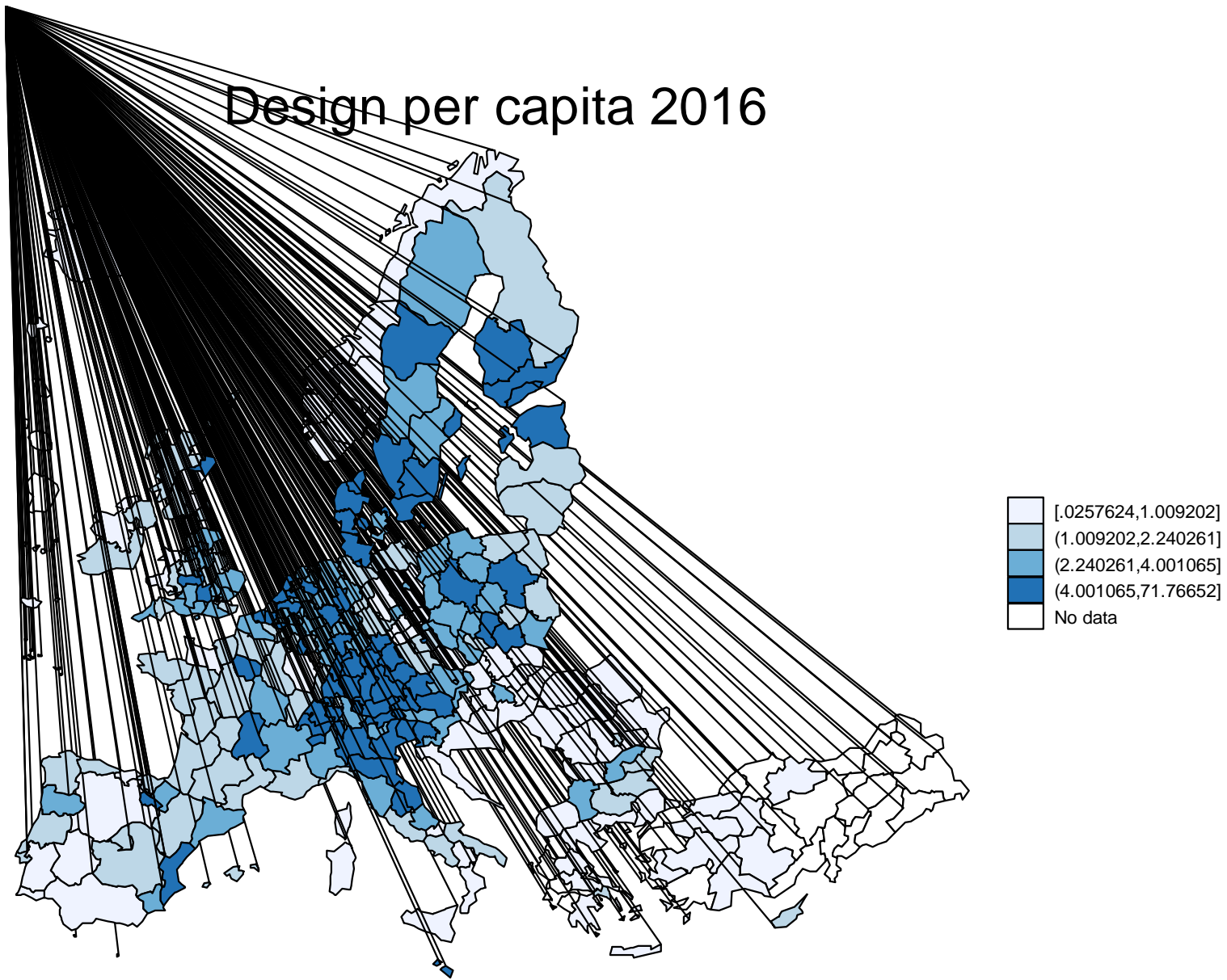
# Trademarks per capita 2016



Source: Authors' elaboration on IPTS data

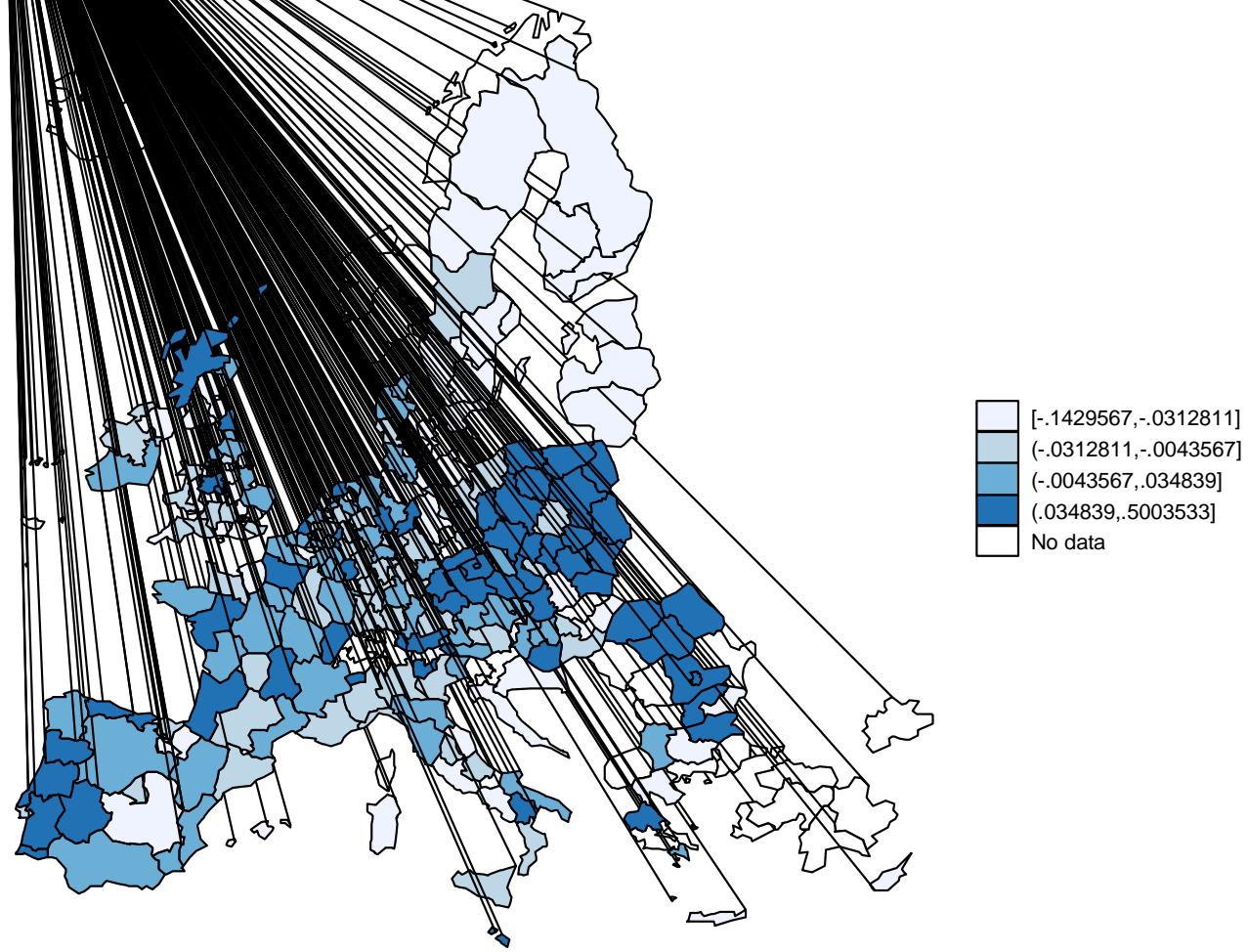


# Design per capita 2016



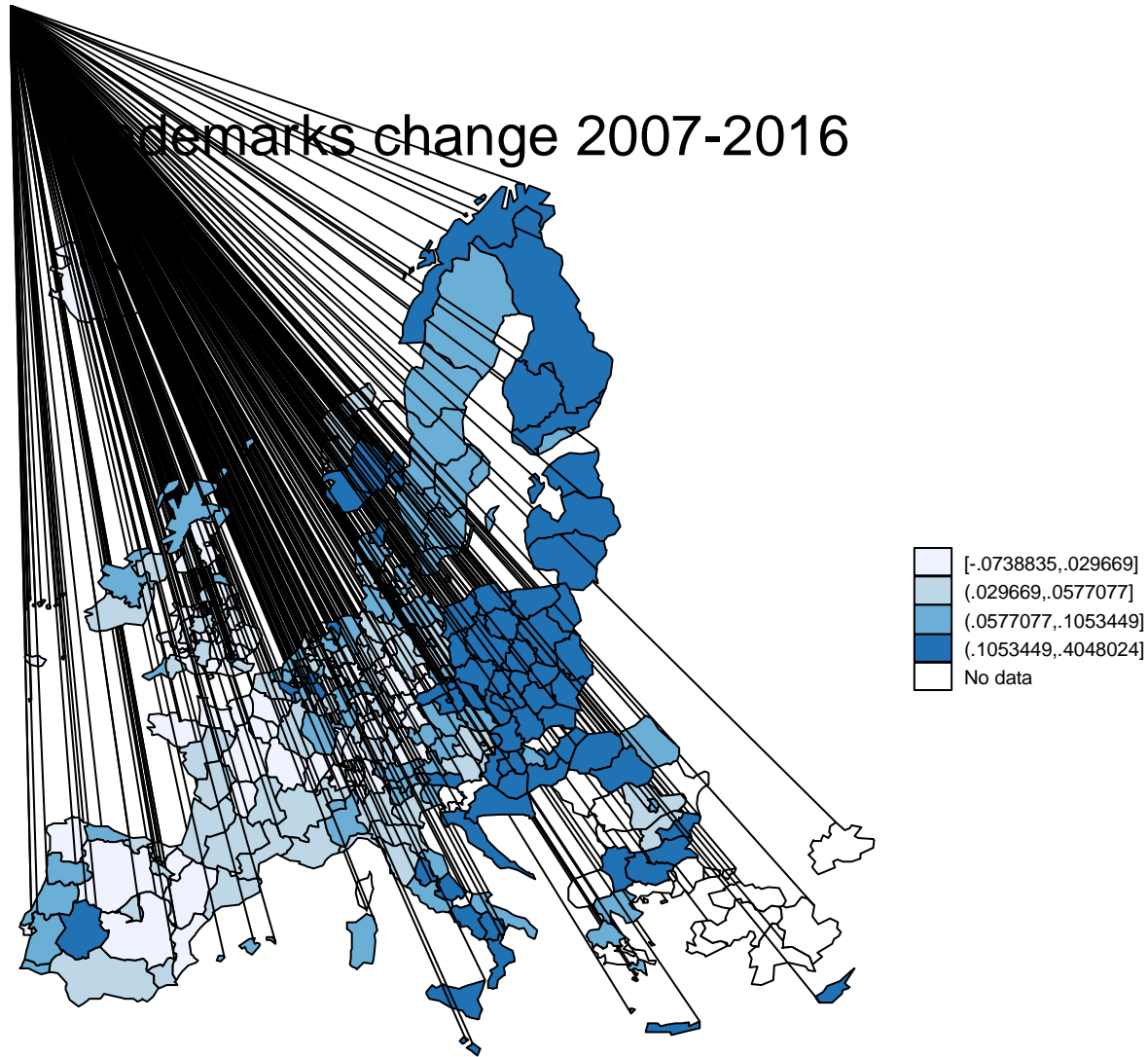
Source: Authors' elaboration on IPTS data

# Patent change 2003-2016



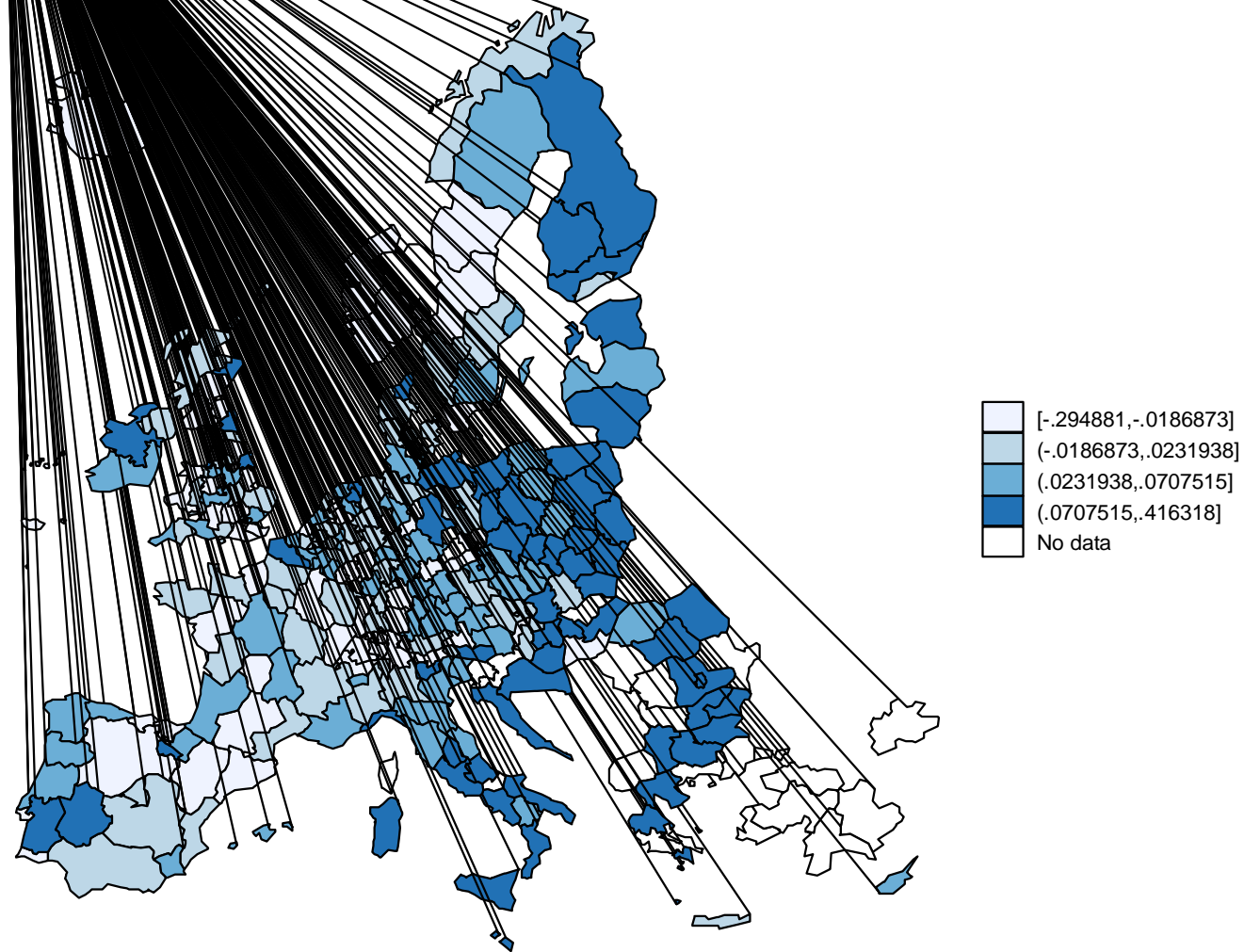
Source: Authors' elaboration on IPTS data

# demarks change 2007-2016



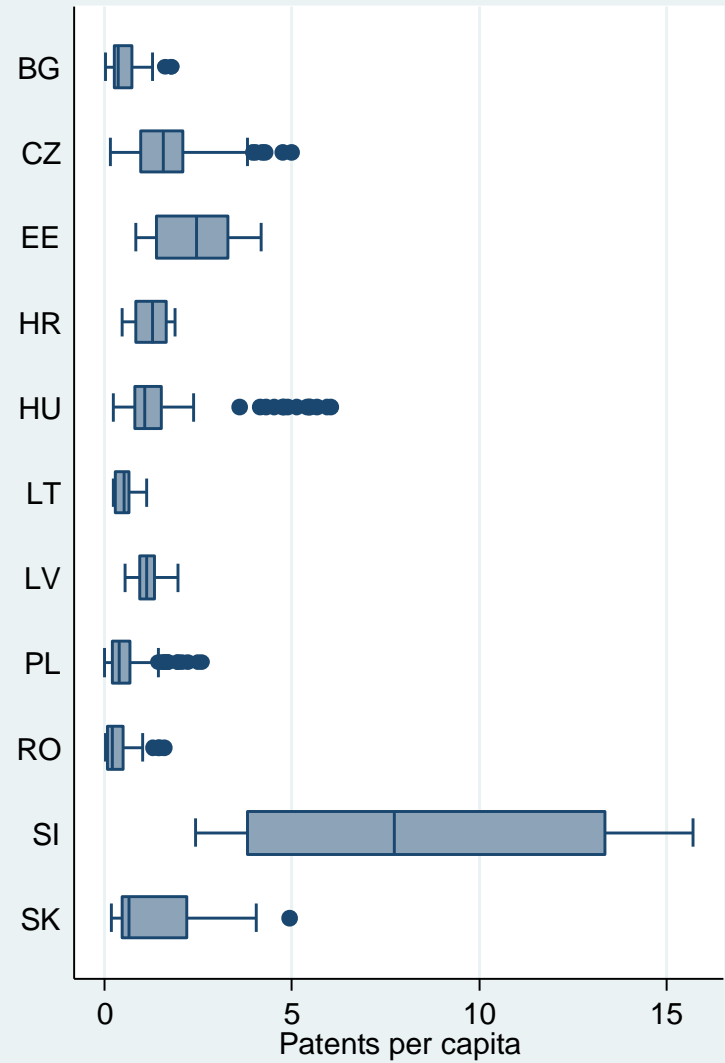
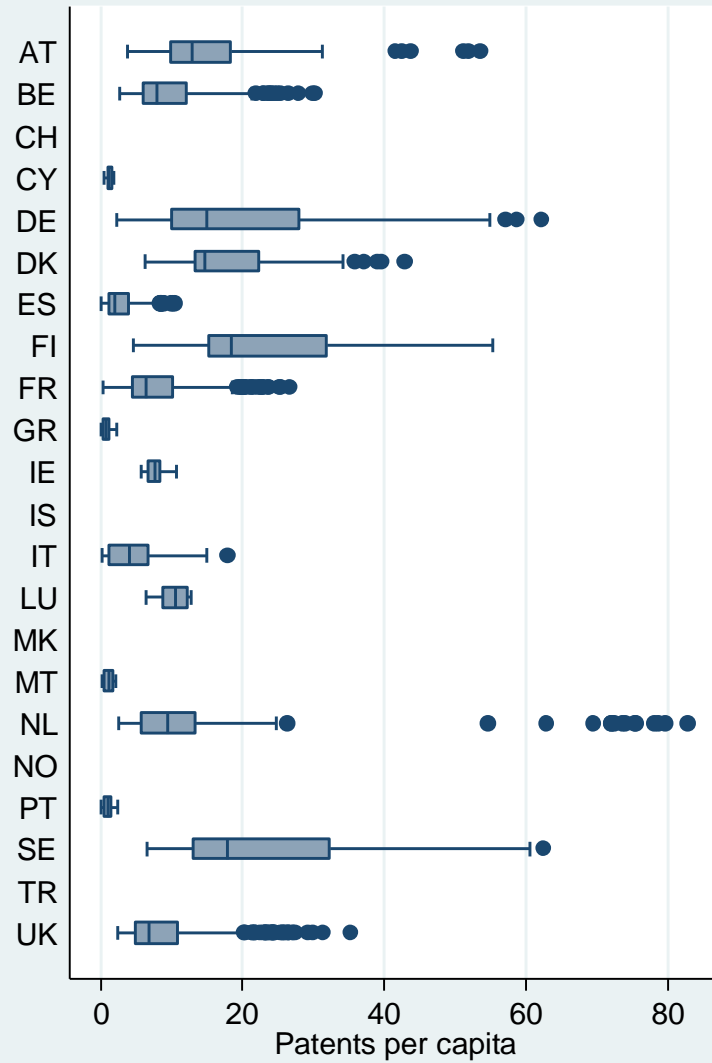
Source: Authors' elaboration on IPTS data

# Design change 2007-2016

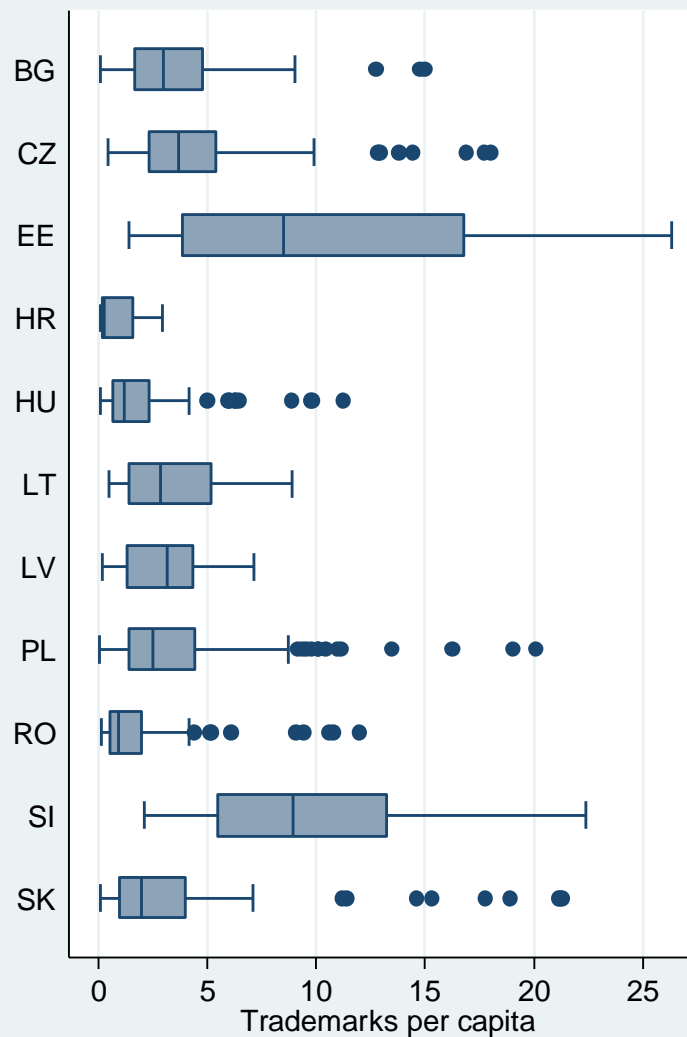
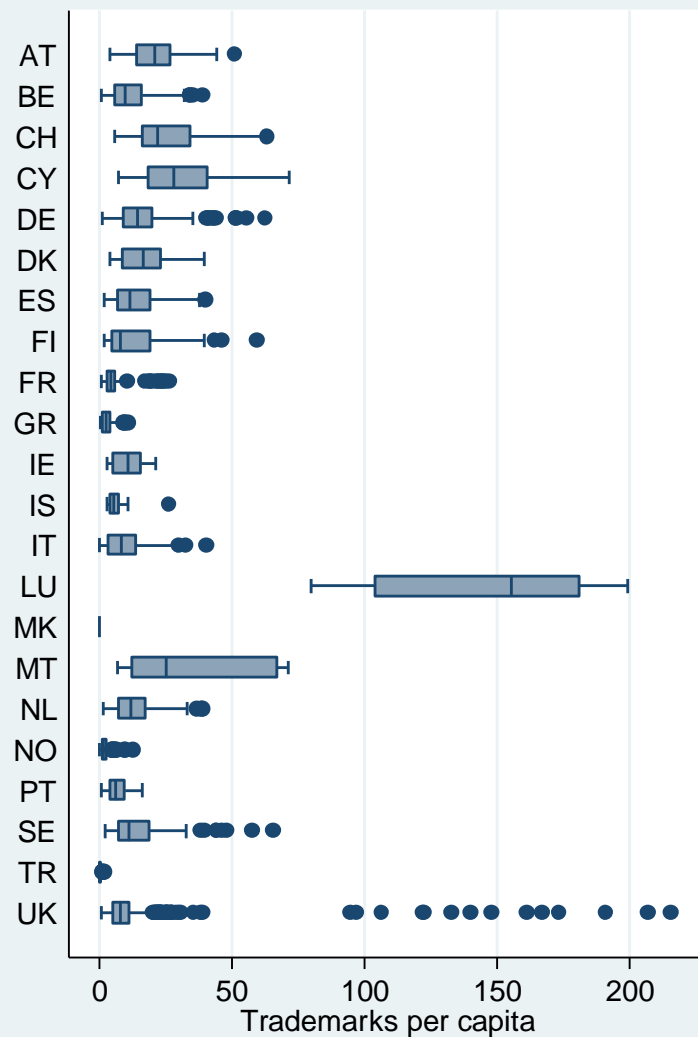


Source: Authors' elaboration on IPTS data

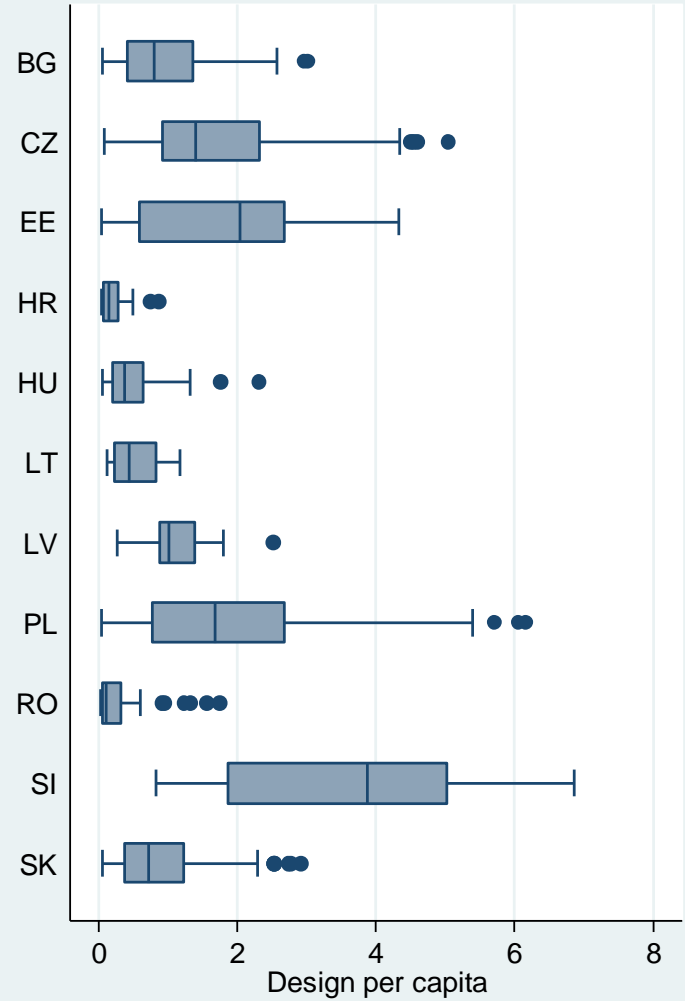
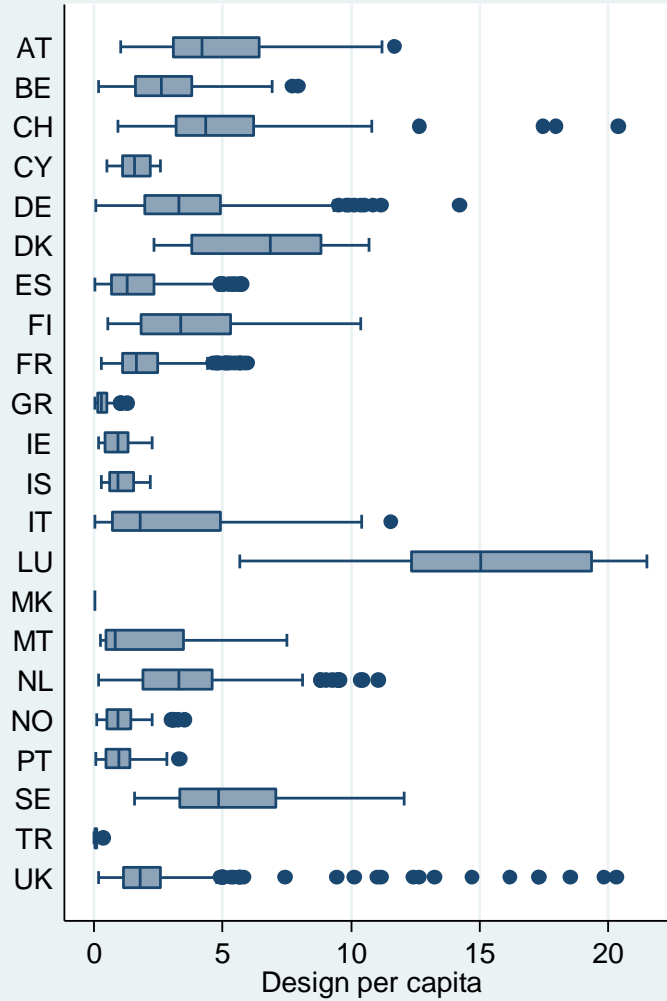
# The distribution of patents



# The distribution of trademarks



# The distribution of design



-> eu = 0

2007

	tech	soft
tech	1.0000	
soft	0.3647	1.0000

---

-> eu = 1

	tech	soft
tech	1.0000	
soft	0.5845	1.0000

-> eu = 0

2016

	tech	soft
tech	1.0000	
soft	0.5690	1.0000

---

-> eu = 1

	tech	soft
tech	1.0000	
soft	0.5419	1.0000



# **INNOVATION PROFILES AND RESILIENCE**



## Resilience and innovation profile

-> eu = 0

	tech	SIgdp
tech	1.0000	
SIgdp	-0.0472	1.0000

---

-> eu = 1

	tech	SIgdp
tech	1.0000	
SIgdp	-0.1175	1.0000

---

-> eu = 0

	soft	SIgdp
soft	1.0000	
SIgdp	0.0712	1.0000

---

-> eu = 1

	soft	SIgdp
soft	1.0000	
SIgdp	0.2317	1.0000

## Resilience and trademars

---

-> eu = 0

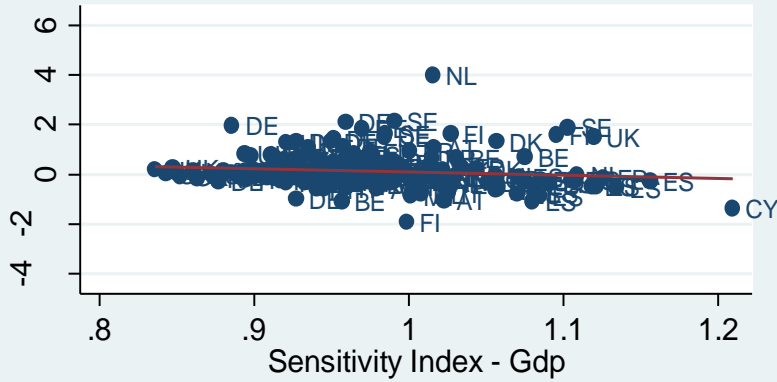
	Fractms	SIgdp
Fractms	1.0000	
SIgdp	0.2481	1.0000

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-> eu = 1

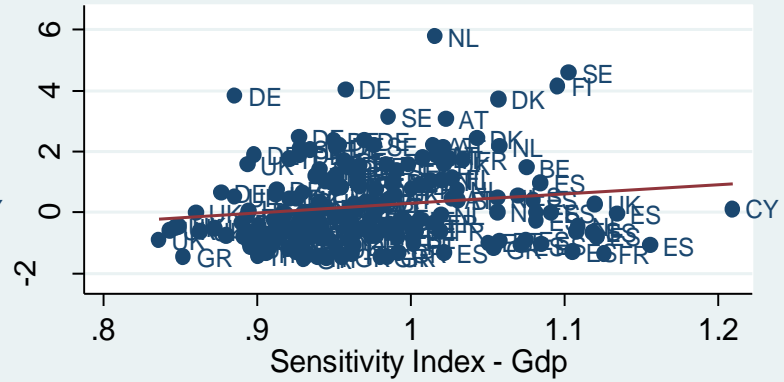
	Fractms	SIgdp
Fractms	1.0000	
SIgdp	0.3447	1.0000

### EU-15



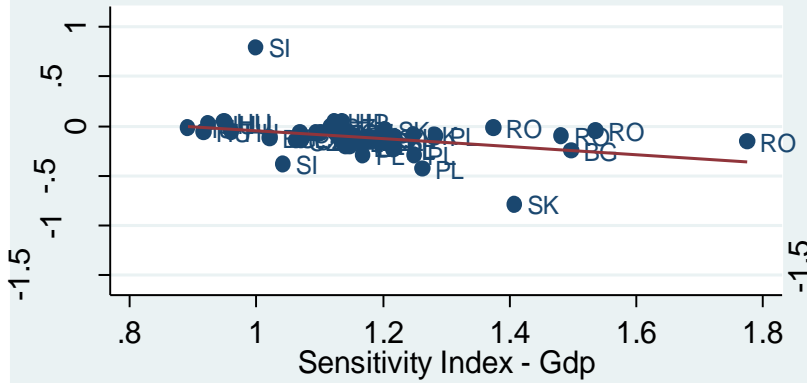
● Regions with hi-tech profile — Fitted values

### EU-15



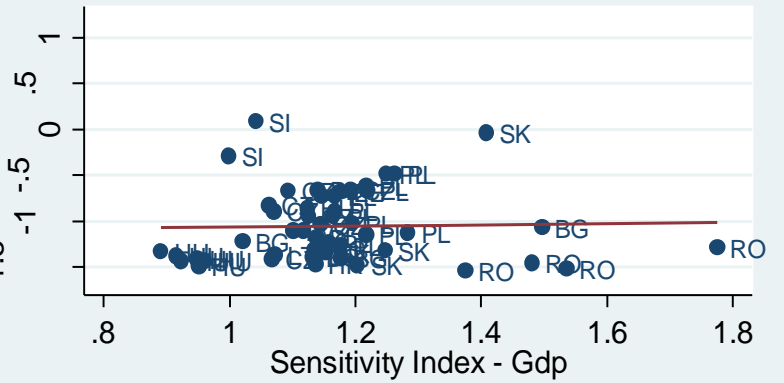
● Regions with mixed profile — Fitted values

### NMS



● Regions with hi-tech profile — Fitted values

### NMS



● Regions with mixed profile — Fitted values

# Some preliminary econometric evidence on resilience and innovation profiles

- Work in progress...