Spatial Disparities in Rural Socio-Economic Performance in Portugal, 1991-2011

Patrícia C. Melo[1], Conceição Rego[2], José Muñoz-Rojas[3]

[1] ISEG/Universidade de Lisboa & REM-UECE
[2] Department of Economics and CEFAGE-U.É., Universidade de Évora
[3] DYNAMO, Instituto de Ciências Agrárias e Ambientais Mediterrânicas, Universidade de Évora

XVI Colóquio Ibérico de Geografia "Península Ibérica: problemas e desafios para uma intervenção ativa da Geografia", 5-7 Nov 2018, Lisboa

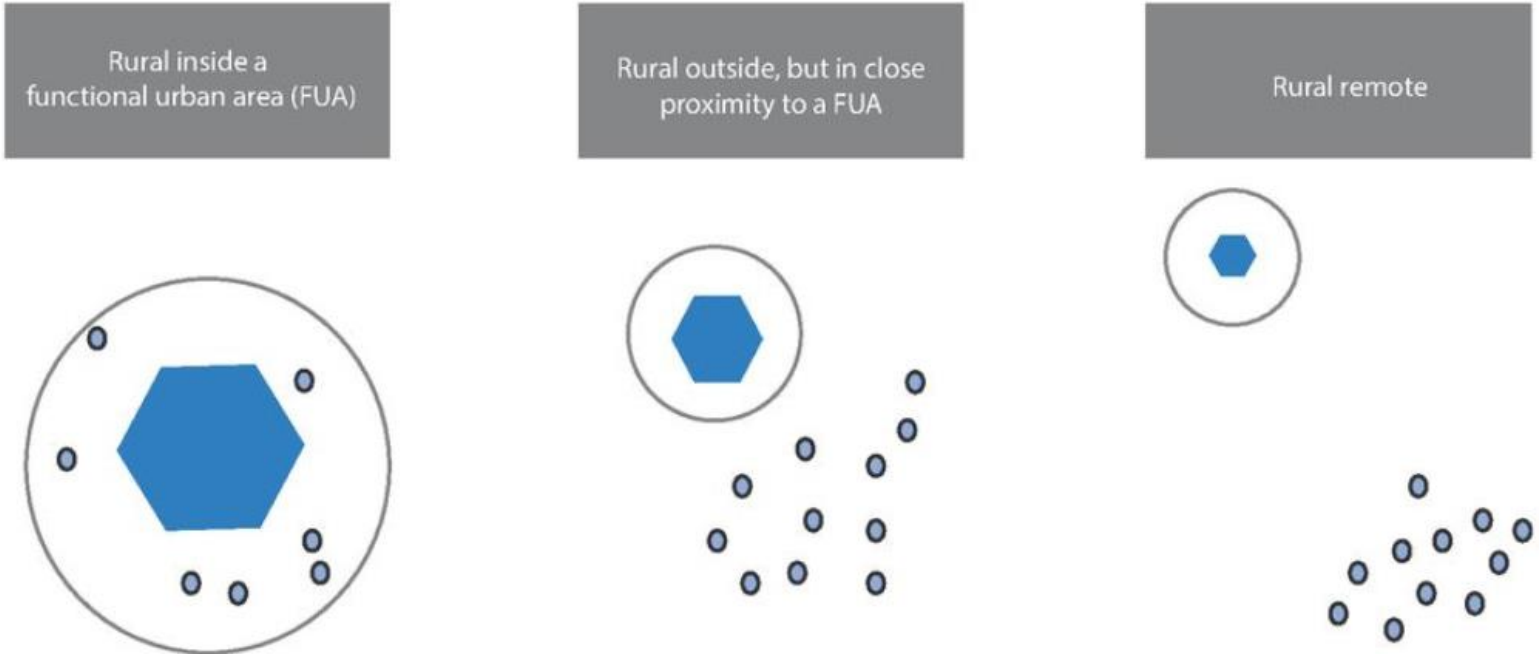
Motivation

- The problem of **territorial asymmetries** is key for Territorial Cohesion and in Portugal has been studied extensively, BUT focus usually on **aggregate regions** (e.g. NUTS3, municipality) – **we focus on wards (*freguesias*)**

- Moreover, the issue of **accessibility/remoteness is not generally combined with the rural dimension**: e.g. TIPAU classification does not consider accessibility

- Existing studies show that economic performance can differ considerably between different types of rural areas and one of the **factors driving disparities is proximity/accessibility to urban areas**

- Alas, we also argue that t**erritorial complexity across spatial-temporal scales and institutional levels** remains largely unexplored, and should also be considered as a key factor to disentangle territorial development and to help drive it towards enhanced sustainability standards



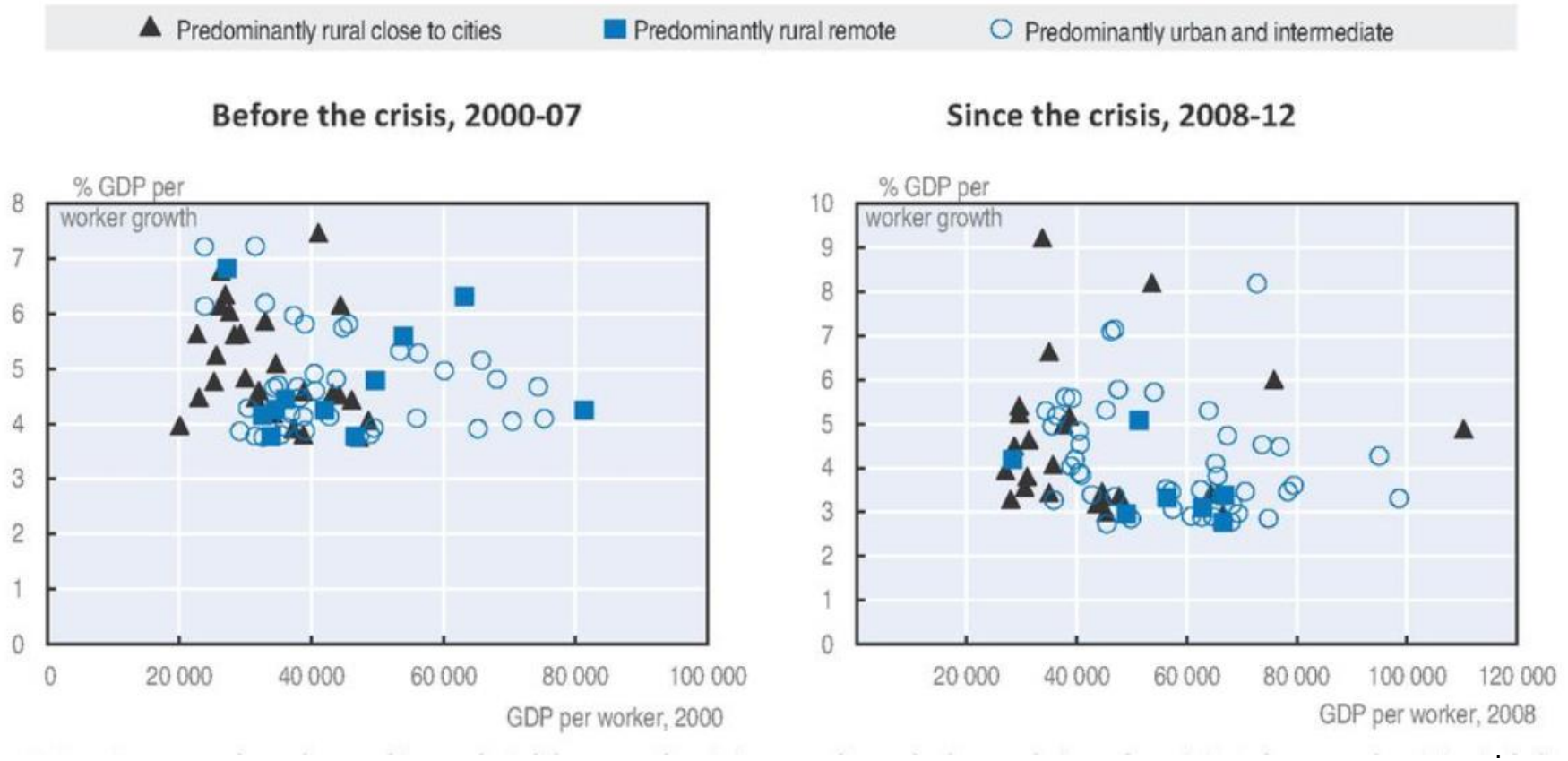
Type	Challenges	Opportunities
Rural inside a functional urban area (FUA)	• loss of control over the future • activities concentrate in the urban core • loss of rural identity	• more stable future • potential to capture benefits of urban areas while avoiding the negatives
Rural outside, but in close proximity to a FUA	• conflicts between new residents and locals • may be too far away for some firms, but too close for others	• potential to attract high-income households seeking a high quality of life • relatively easy access to advanced services and urban culture • good access to transport
Rural remote	• highly specialised economies subject to booms and busts • limited connectivity and large distances between settlements • high per capita costs of services	• absolute advantage in production of natural resource-based outputs • attractive for firms that need access to an urban area, but not on a daily basis • can offer unique environments that can be attractive to firms and individuals

Source: OECD Regional Outlook 2016 “Productive Regions for Inclusive Societies”

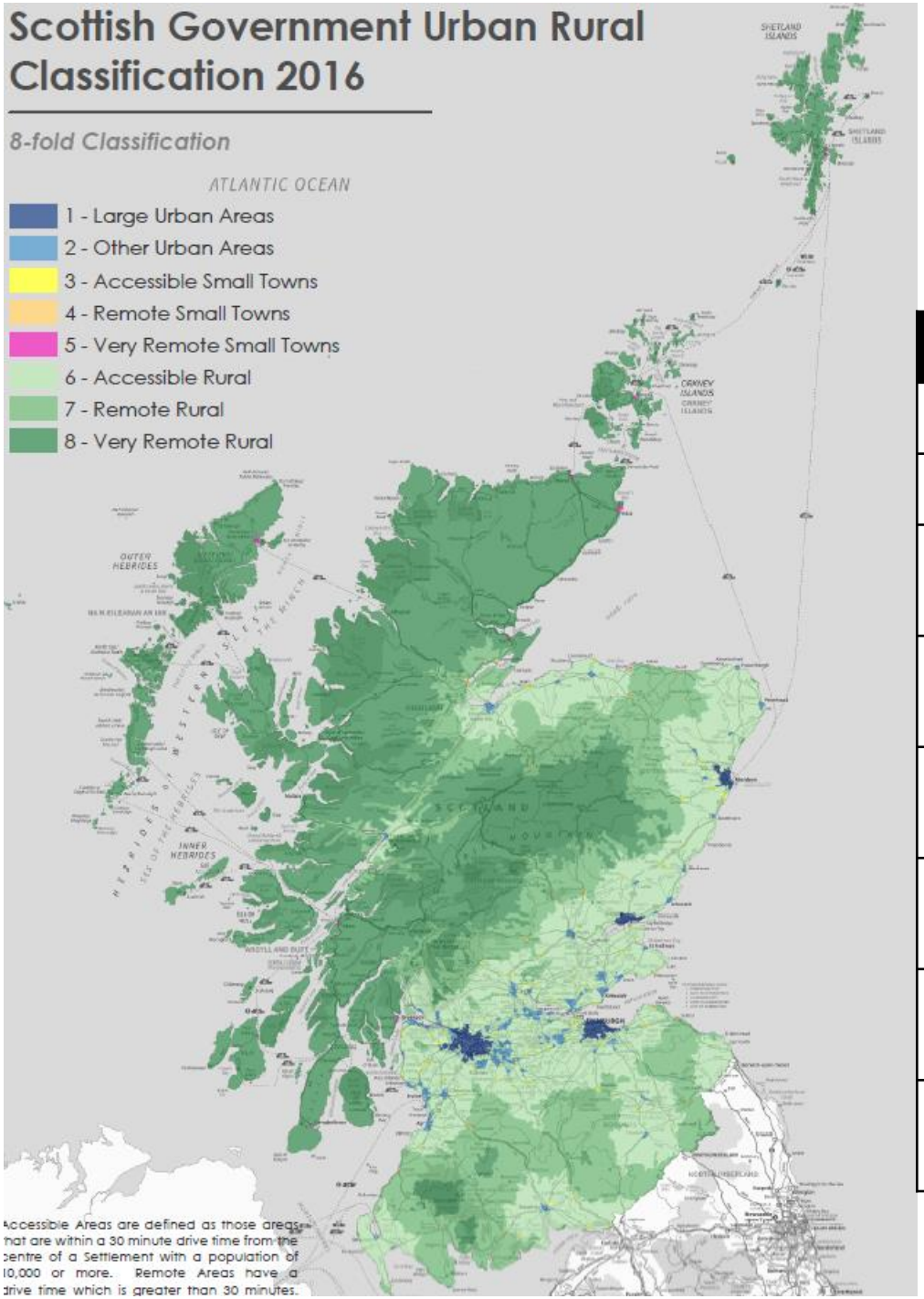
Trends in regional productivity

- **Economic performance across rural areas is mixed and rural regions accessible from/to cities often perform well**

Figure 3.10. **Many rural regions are among the 10% top performing OECD TL3 regions**

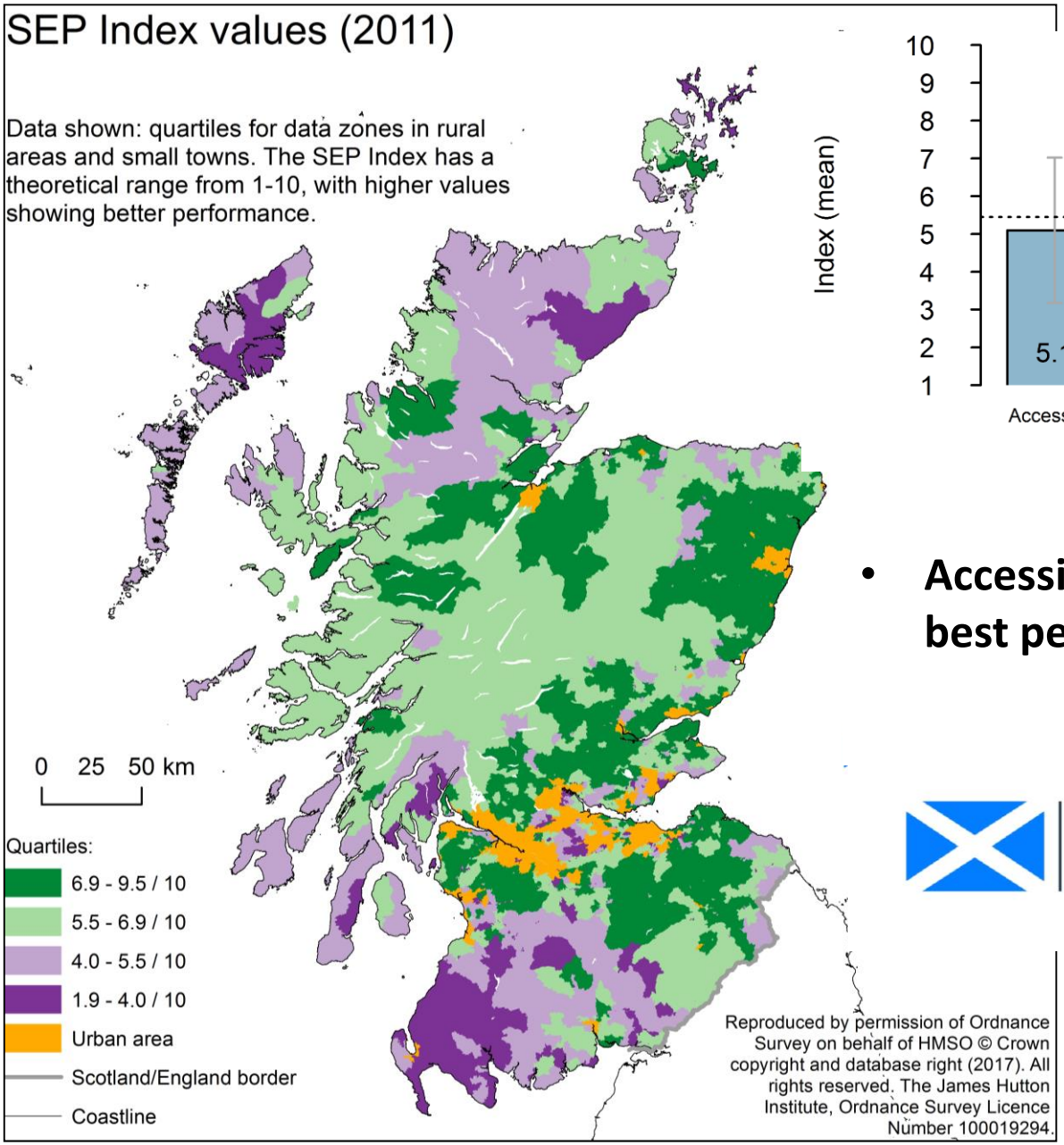


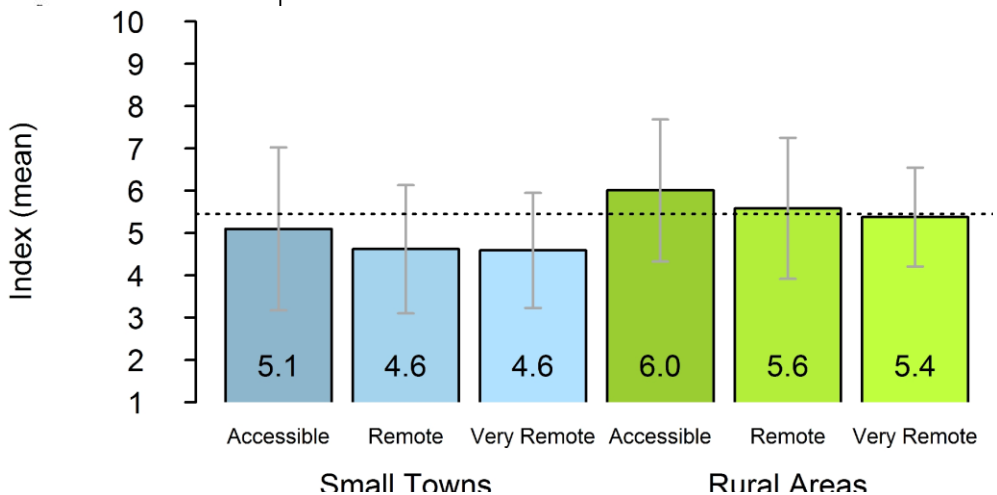
Source: OECD Regional Outlook 2016 “Productive Regions for Inclusive Societies”



Size + Accessibility to UA

Description	
LUA	pop >= 125,000
OUA	10,000 <= pop < 125,000
AST	3,000 <= pop < 10,000 <= 30 min drive time to urban area
RST	3,000 <= pop < 10,000 > 30 min drive time to urban area
VRST	3,000 <= pop < 10,000 > 60 min drive time to urban area
ARA	pop < 3,000 <= 30 min drive time to urban area
RRA	pop < 3,000 > 30 min drive time to urban area
VRRA	pop < 3,000 > 60 min drive time to urban area





- **Accessible rural areas tend to be the best performers**

Scottish Government gov.scot

The James Hutton Institute

Source: Copus A and Hopkins J (2015) Mapping Rural Socio-Economic Performance (SEP), Report for Rural Communities Team, Food, Drink and Rural Communities Division, The Scottish Government

Objectives

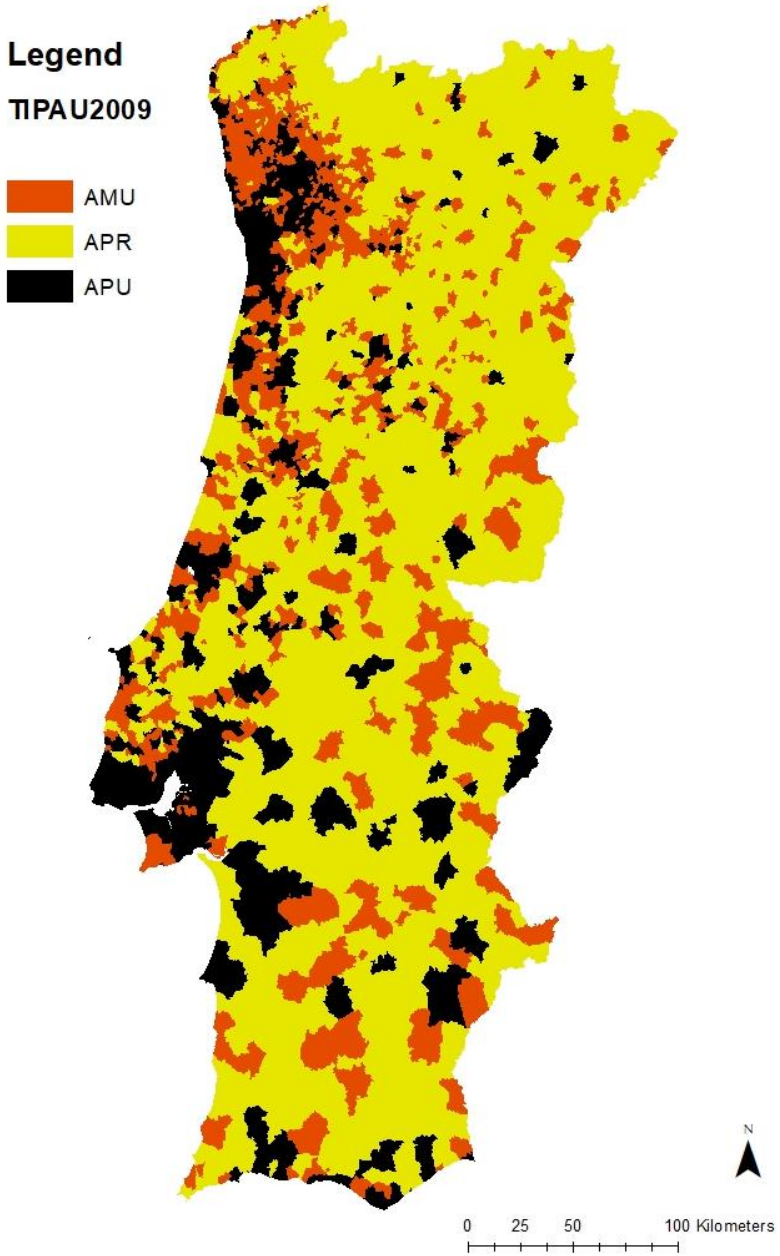
1. To compare how **different types of rural areas** – i.e. accessible vs. remote - have **performed in terms of population dynamics between 1991-2001-2011**

2. To propose a **new classification or rural areas** that considers degree of accessibility/remoteness to the urban hierarchy (vs. TIPAU)

3. To examine how **changes in transport accessibility** to/from urban areas and/or functional nodes and networks have impacted on rural population growth (among other factors affecting territorial development)

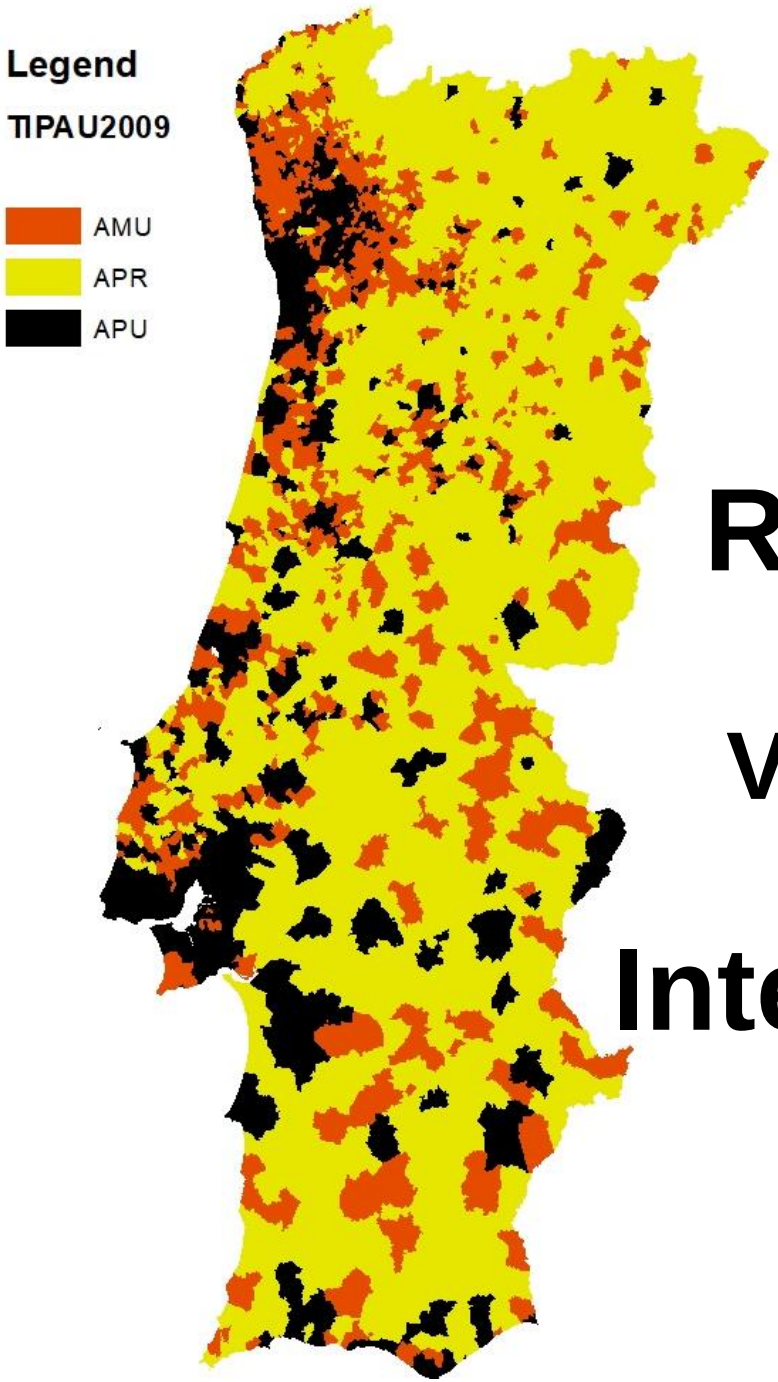
4. To trigger discussion on the possibilities for an **index of territorial complexity** aimed to improve our understanding of regional and territorial heterogeneity and its contribution to sustainable territorial development

Rural classification in Portugal



TIPAU	Description
APU	Predominantly urban areas
AMU	Moderately urban areas
APR	Predominantly rural areas

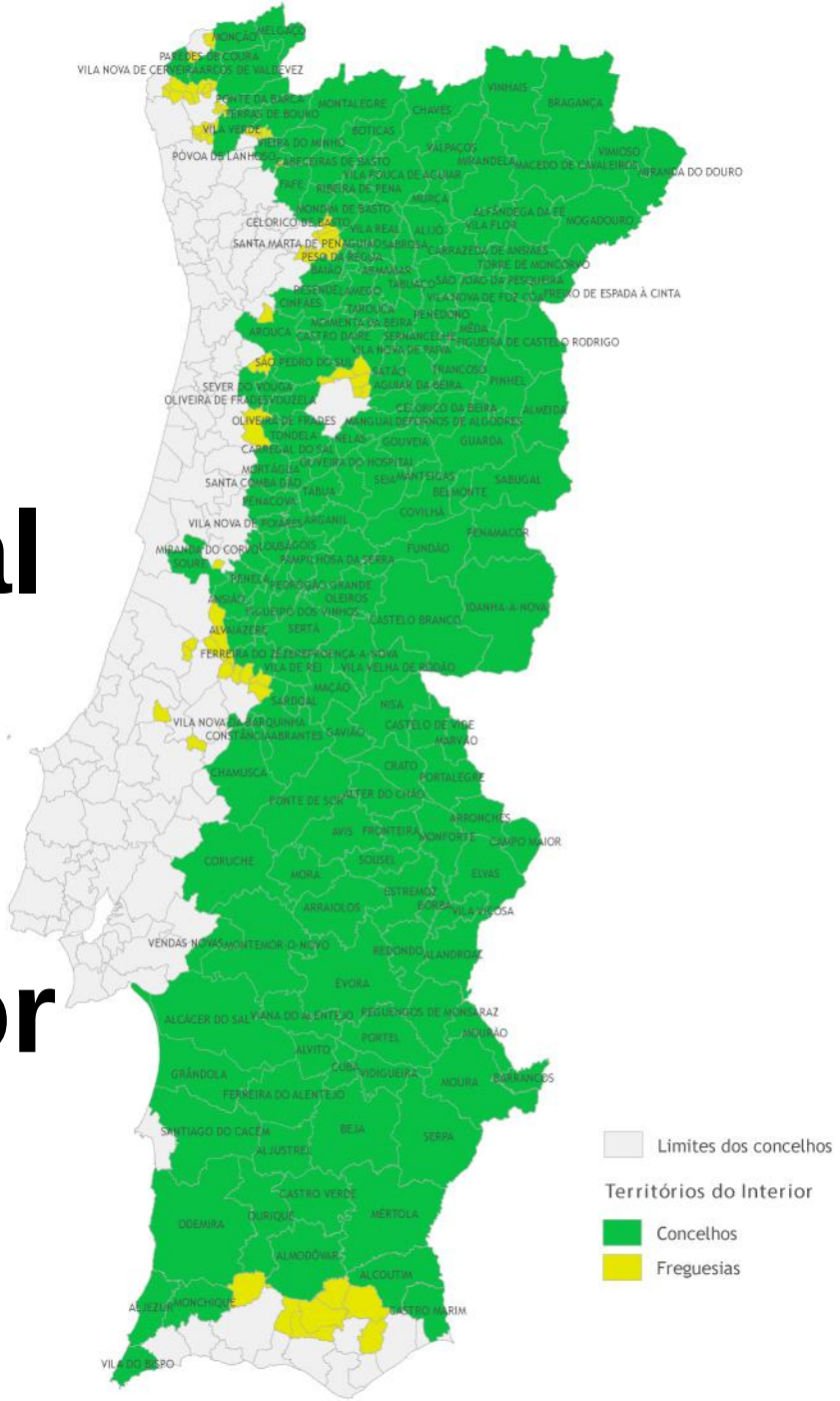
- Tipologia de Areas Urbanas (TIPAU) defines rural areas (APR) as being all equal
- Some countries include 'accessibility to urban areas' in their territorial classification and it seems to matter – e.g. UK, Scotland

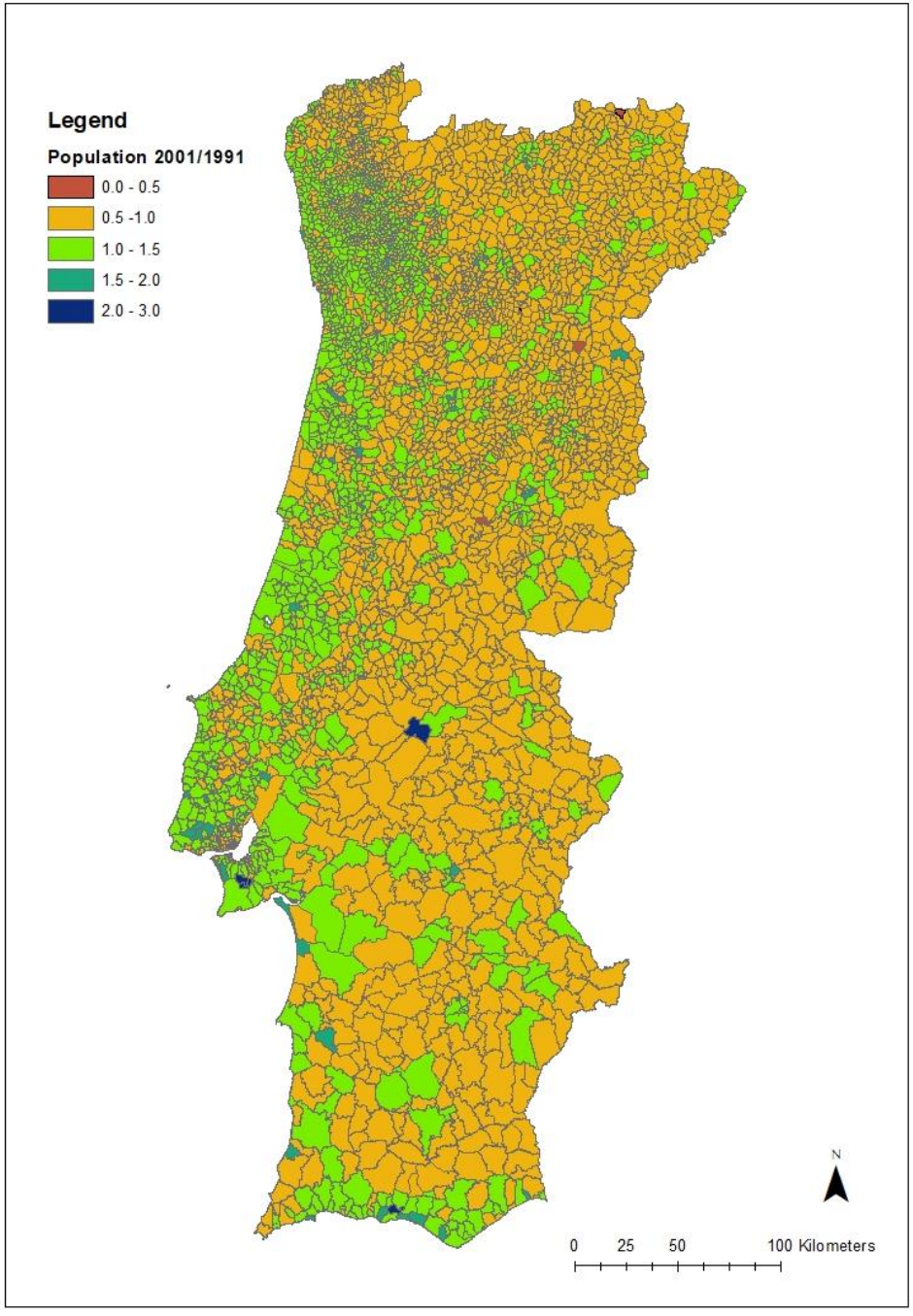


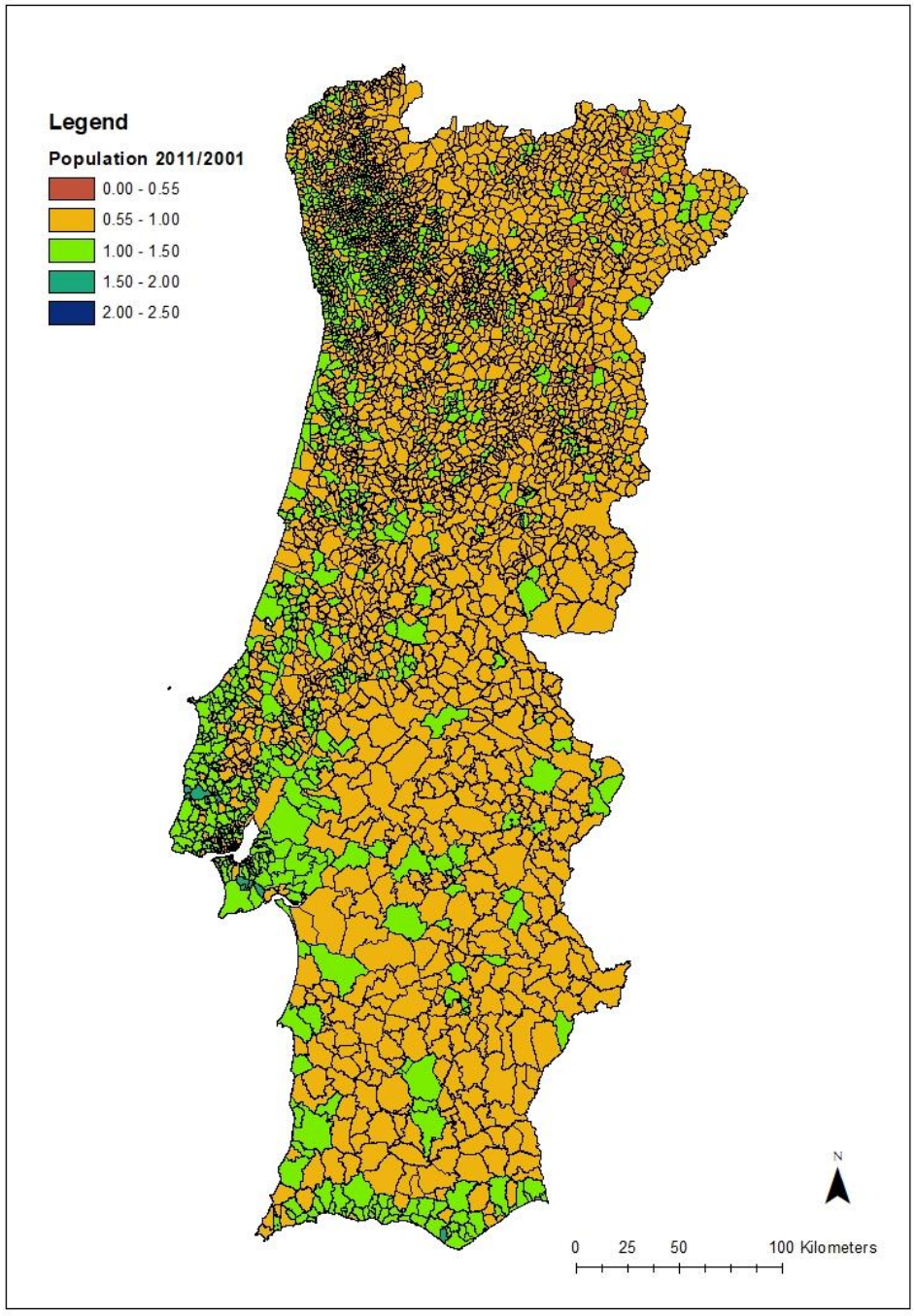
Rural

Vs.

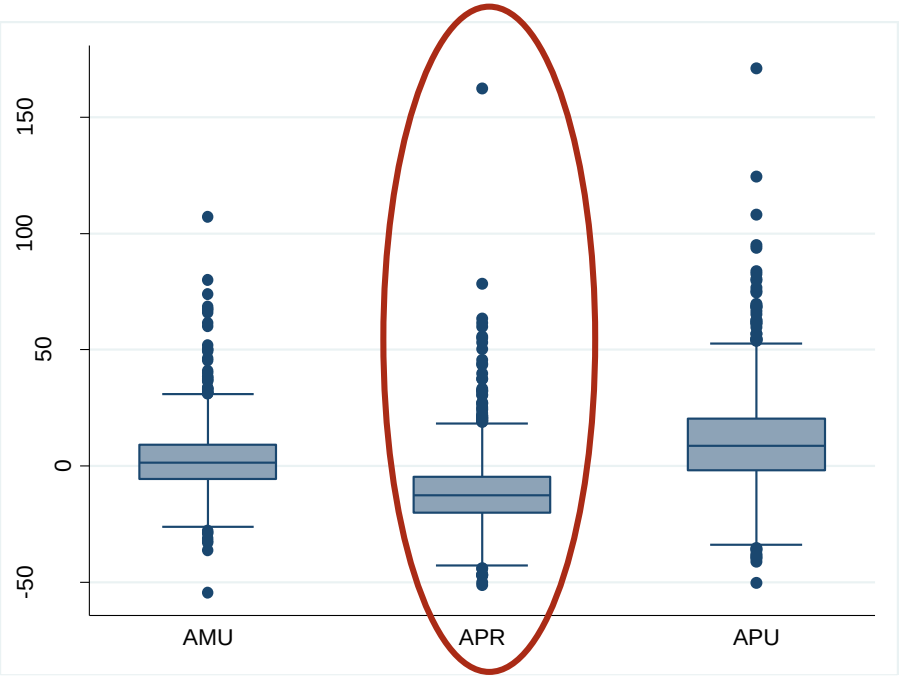
Interior

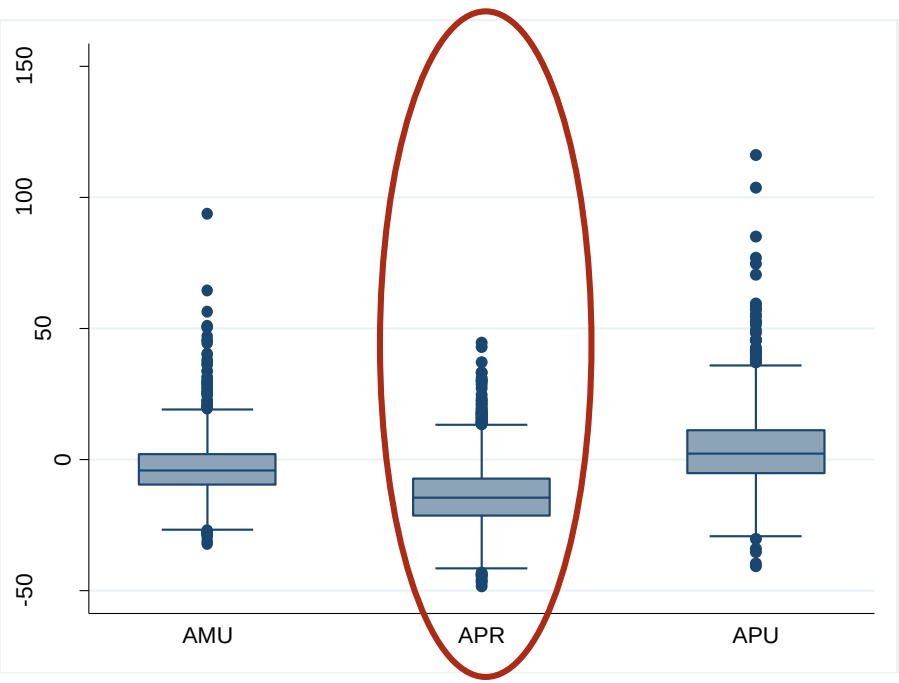



Legend
Population 2001/1991
0.0 - 0.5
0.5 -1.0
1.0 - 1.5
1.5 - 2.0
2.0 - 3.0
N
0 25 50 100 Kilometers


Legend
Population 2011/2001
0.00 - 0.55
0.55 - 1.00
1.00 - 1.50
1.50 - 2.00
2.00 - 2.50
N
0 25 50 100 Kilometers

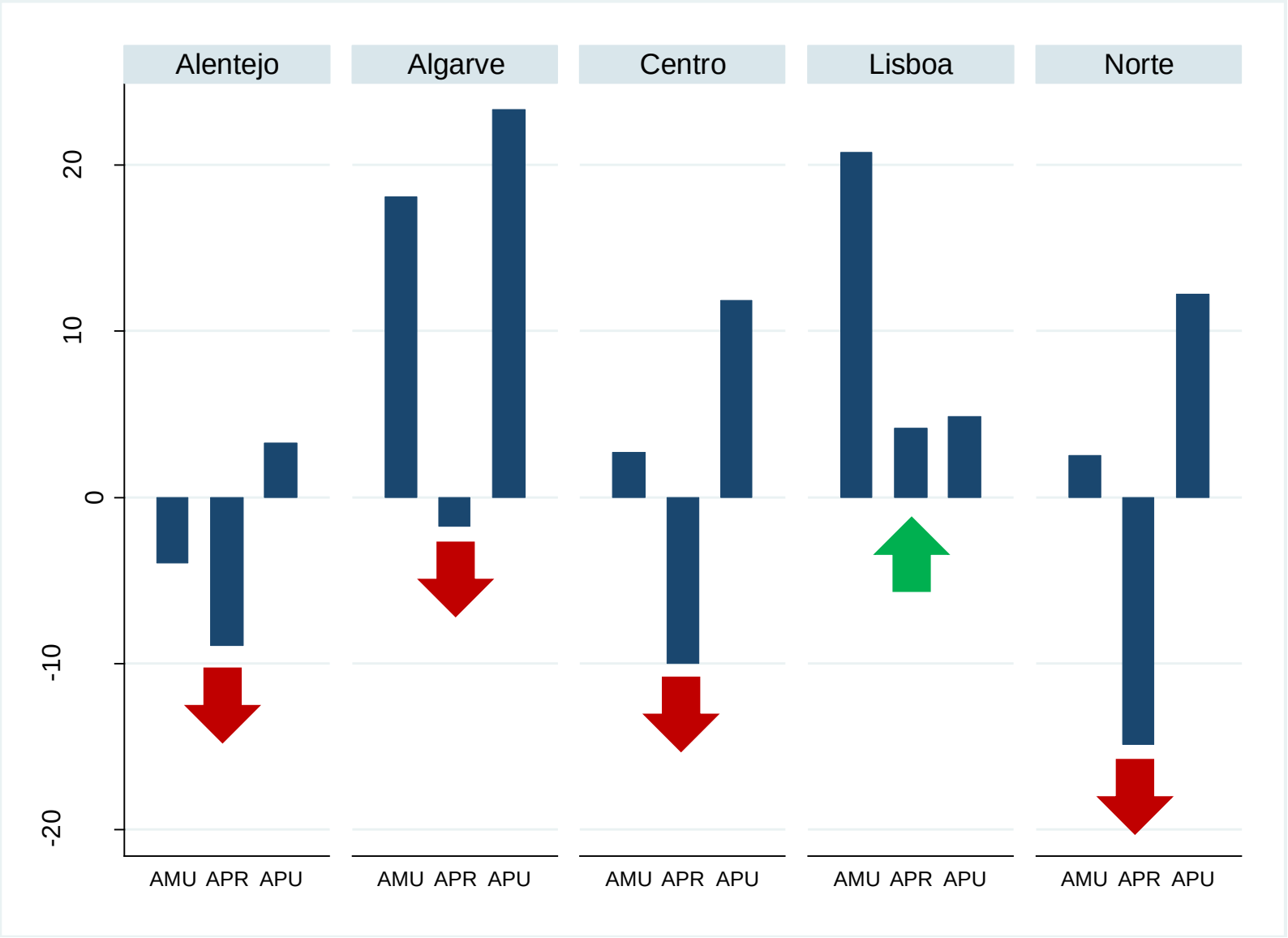
Population dynamics by TIPAU



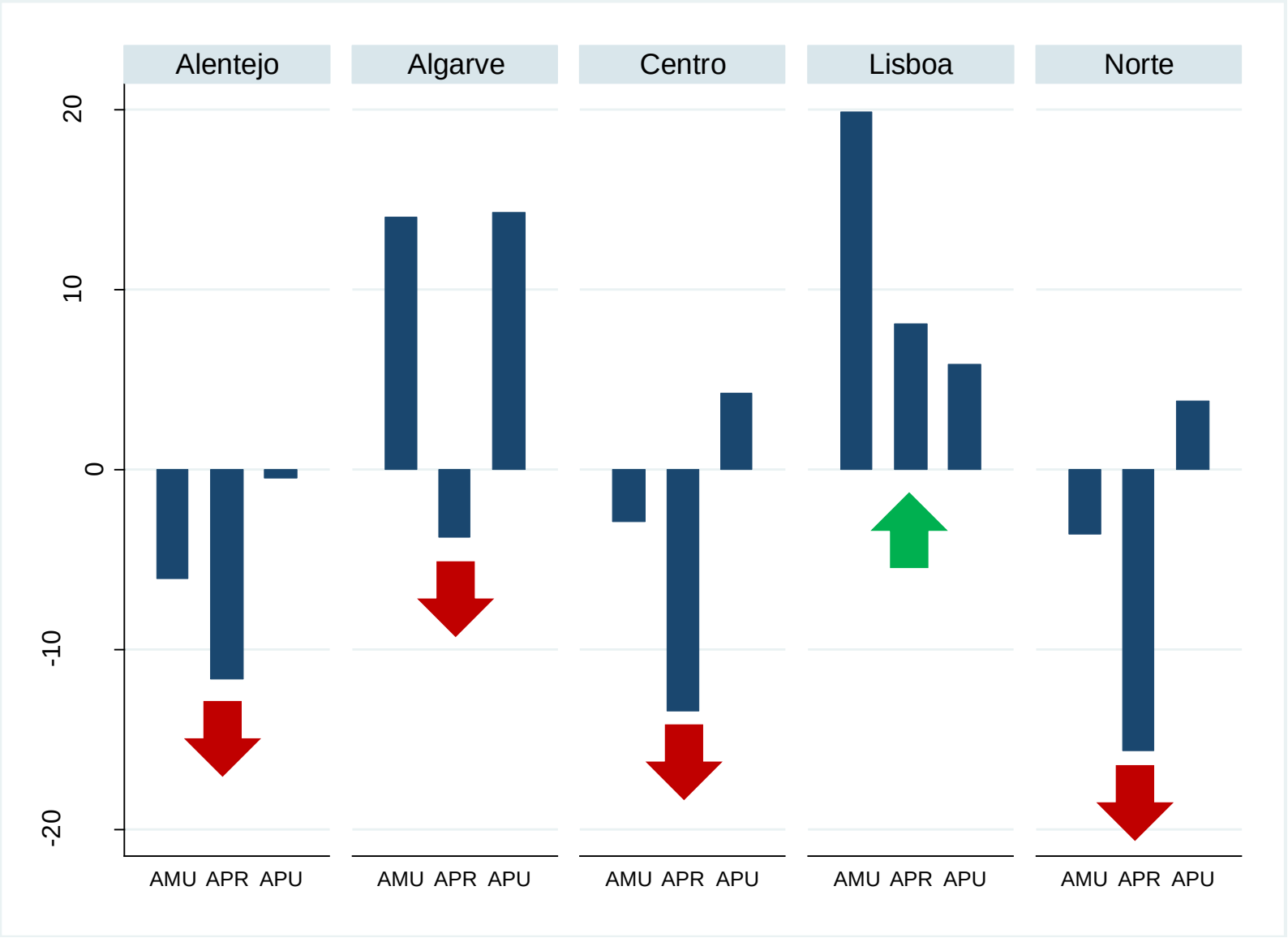


TIPAU of *freguesias*	%Δ(1991-2001) across *freguesias*	%Δ(2001-2011) across *freguesias*
APU (898)	10.50%	4.33%
AMU (1050)	2.77%	-2.79%
APR (2089)	-11.70%	-13.81%
Total (4037)	-3.00%	-6.91%

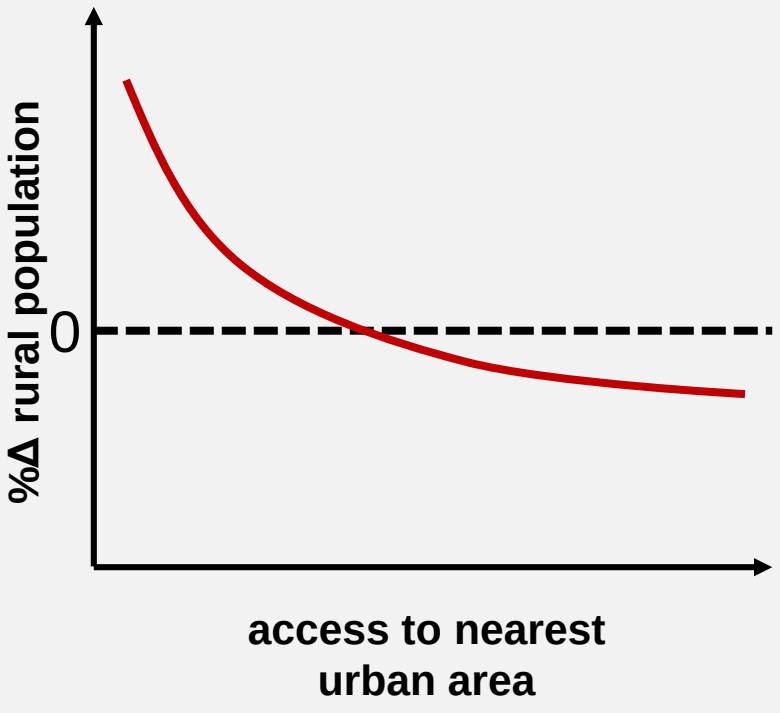
Population dynamics by TIPAU & NUTS2

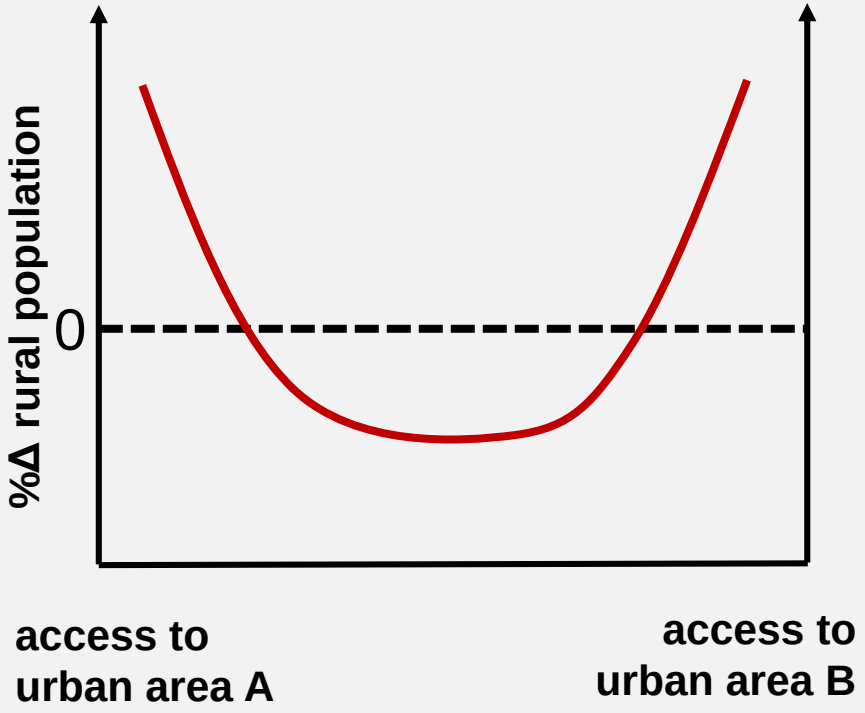


Population dynamics by TIPAU & NUTS2



The hypotheses to be tested…

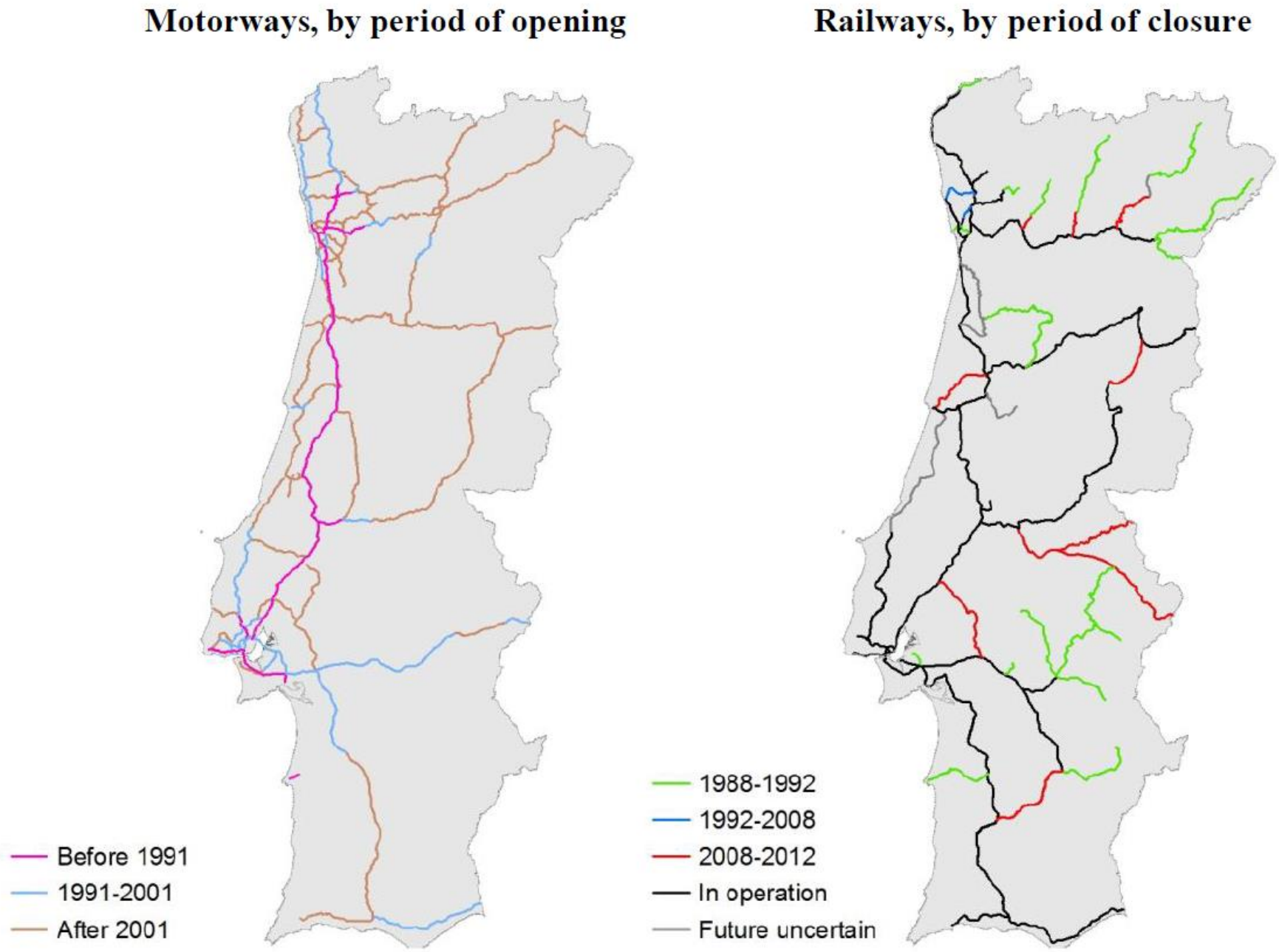




$$\%\Delta POP_{r,(t-t_0)} = f\left(ACCES_{r,t_0}; DEM_{r,t_0}; ECO_{r,t_0}; NAT_{r,t_0}; \sigma_k\right)$$

where:

r: rural area; t, t_0: 2011, 2001, 1991; k: wider geography (e.g. municipality, NUTS3)



Source: Anciães, P. R. (2016), Population decline and accessibility in the Portuguese interior.

Next steps

- Propose a classification of rural areas according to accessibility from/to urban areas and their functional aspects: accessible vs remote – **which thresholds for urban size and travel time are more relevant? Distinguish also if within Metropolitan Area?**

- Discuss how this classification will be enriched when looked **at and across lower administrative levels and scales**, potentially providing a more accurate picture of territorial heterogeneity,

- Estimate regression models for **rural population change between 1991-2001 & 2001-2011 and test if (how) accessibility to the urban hierarchy affected performance**……

- ….and last, consider the possibilities to ellaborate (and apply) an **Index of Territorial Diversity/Heterogeneity** that allows us to move beyond a neo-classic perspective of performance towards a sustainable development one, and that operates at/across regional to lower scales/levels……

ITD = $f_{(x)}$ **(*P, E, EA, RI, SS, LUC, TI, NH, CH….?*)**

∀

P = Population composition & change

E = Education level and infrastructures

EA = Economic Activities & Specialisation

RI = Regional/Territorial Interdependences

SS = Social (Public & Private) Services & Infrastructures

LUC = Land Use/Cover Change

TI = Transport Infrastructures (accessibility & Connectivity)

NH = Natural Heritage

CH = Cultural/Built-Up Heritage