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Inspire Policy Making with Territorial Evidence

RIS3 in macroregional strategies: tools to design and monitor integrated territorial development paths

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Introduction

The current debate on post 2020 EU Cohesion Policy should capitalize on:

- **macro-regional strategies** (MRS)
  a policy tool aiming at enhancing **inclusive and sustainable development**,
  by means of **synergies among neighbouring regions**
  (COWI, 2017).
- **research and innovation strategies for smart specialisation** (**RIS3**)
  which identify strategic areas for intervention, based both
  on the analysis of the strengths and potential of local economy
  and on an Entrepreneurial Discovery Process
  (Foray et al., 2012; Foray, 2015; McCann, 2015; McCann & Ortega-Argilés, 2015) .

If macro-regions represent relevant territorial units
to enhance bottom-up policy planning,
how can be its integrated territorial development supported?

Research questions & tools

Two specific research questions:

- Which comparative framework on **RIS3** could help policy makers/stakeholders in improving their innovative performance by **learning from other regions**?
- What can we learn with regard to **synergies and complementarities,** to be enhanced within the **MRSs**?

We suggest to endow policy makers/stakeholders with **a set of tools** on:

- **RIS3 priorities** (the intended development path that the regions aim at), Pavone et al. (2018)
- **socioeconomic conditions** (structural features, from official Eurostat data), Pagliacci et al. (2018)

These tools address multidimensional perspective to set a comparative analysis

needed to measure and monitor the impact of integrated investments on the development of the territory across sectors

RIS3: categorisation of priorities and association of categories to regions

- **Information about RIS3** → the online tool implemented by JRC

  "Eye@RIS3: Innovation Priorities in Europe" (http://s3platform.jrc.ec.europa.eu/map).

- **Automatic classification of RIS3s' priorities,** as they are described by regions (Pavone et al., 2018)

  in free text format + related codes (of economic domains, scientific domains and policy objectives)

- **With regard to regions**:

  each category of free text descriptions refers to
  a statistically significant semantic domain in which the words used by regions are associated to

  each category of codes embraces
  a statistically significant combination of the different sets of codes.

- **Outcome**:

  a set of categories of priorities (and related 'dictionaries') + associating each of them to regions

RIS3' priorities
by category of descriptions and codes

categories of codes

categories of descriptions		Agrofood, forestry and tobacco	Health & Life Science	New technologies for health	Sc.domains enhancing social activities	Creative industry & cultural and recreative	ICT & digital transformation	Social innovation & education	Traditional Tourism	Energy Production	Energy efficiency & Sustainability	Environment Protection (water, sewerage, waste)	Bioeconomy & Waste collection, treatment etc	Blue economy_fishing and aquaculture	Blue economy_transport, marine resources	Advanced manufacturing systems & Mechatronics	Aerospace	Automotive & Aeronautics industry	Basic metals, traditional & machinery manuf. aiming	Sc.Domains enhanging traditional manufacturing	Smart Mobility System & Transport equipment	Transport & logistics	total share by category of descript
		Agrofood, fores. & tobacco	Health & Life Science			New Economy & Leisure industry				Bio Economy & Energy						Logistic & Manufacturing							
Agrofood	Agrofood	7.4	0.2	0.1	0.1						0.1		0.7	0.1		0.1				0.2		0.1	9.0
	Healthy Food	1.3	0.1	0.1											0.1								1.6
Health & Life sc.	Health	0.2	1.5	3.8	0.7	0.2	0.1				0.1		0.2										6.7
	Life Science	0.1	1.2	4.2	0.2																		5.8
New Economy & Leisure industry	Creative industry					0.7	0.2		0.6														1.4
	Digital &ICT	0.1	0.5	0.2	0.1	0.6	6.7	0.6		0.1	0.4	0.2	0.2			1.2		0.2	0.2	0.1	0.1		11.2
	Fashion								0.1										0.7				0.8
	Growth & Welfare	0.1	0.2	0.2	0.4	0.1	0.2	1.1	0.2	0.1		0.2				0.3	0.1		0.1	0.2	0.2		3.7
	ICT & Tourism					1.1	0.1	0.2	0.9		0.1								0.1				2.4
	Tourism	0.2	0.3	0.1		1.8	0.2	0.1	2.9		0.1		0.1		0.1								5.9
	Bioeconomy	0.6	0.1	0.4	0.2	0.2	0.2	1.0	0.2	0.4	0.5	0.2	0.5	0.1		0.7			0.1	0.5	0.2	0.1	6.0
Prod. & Transp. Manufact. & Energy	Energy Production									2.5	0.7				0.1	0.1							3.4
	Sustainable Energy	0.4								3.6	3.8	2.6	0.9		0.1	0.2			0.1	0.4	0.3		12.4
	Manufacturing	0.3	0.1			0.1				0.2	0.5	0.1	0.2			0.5		0.1	2.4	1.1	0.3	0.2	6.0
	Automotive	0.2	0.1					0.2		0.2	0.5	0.1	0.2		0.2	1.6	0.4	0.6	1.6	0.7	0.6	0.2	7.2
	Marine & Maritime		0.1							0.7			0.1	1.1	1.1						0.2	0.2	3.4
	Mechatronics			0.1							0.2					1.0		0.2	1.7	0.1	0.2		3.4
	Optics			0.1							0.1					0.2			0.1				0.4
	Photonics		0.1				0.4					0.2			0.1	1.1	0.2		0.7	0.2			2.9
	Water jet cutting																		0.1				0.1
	Transport & Logistics									0.1	0.2					0.3	0.6	1.6	0.2		1.3	1.2	5.4
	no description	0.16	0	0	0	0	0.1	0.2		0.1				0.1		0.1			0.2	0.1	0.1		1.0
total share by category of codes		11.0	4.3	9.2	1.7	4.6	8.2	3.3	5.0	7.8	7.3	3.6	3.0	1.4	1.6	7.3	1.2	2.5	8.2	3.4	3.4	2.0	100.0
total share by macrocategory of codes		***11.0***	***15.3***			***21.0***				***24.7***						***28.0***							***100.0***

figures: % total records

Data refer to 1225 records (covering 206 territorial entities), entered in the database Eye@RIS3, 01/10/2018

Source:
Authors' elaboration on Pavone et al. (2018)

Socioeconomic benchmarking

- **Data** on NUTS2 EU-28 regions (Eurostat data), Pagliacci et al. (2018)

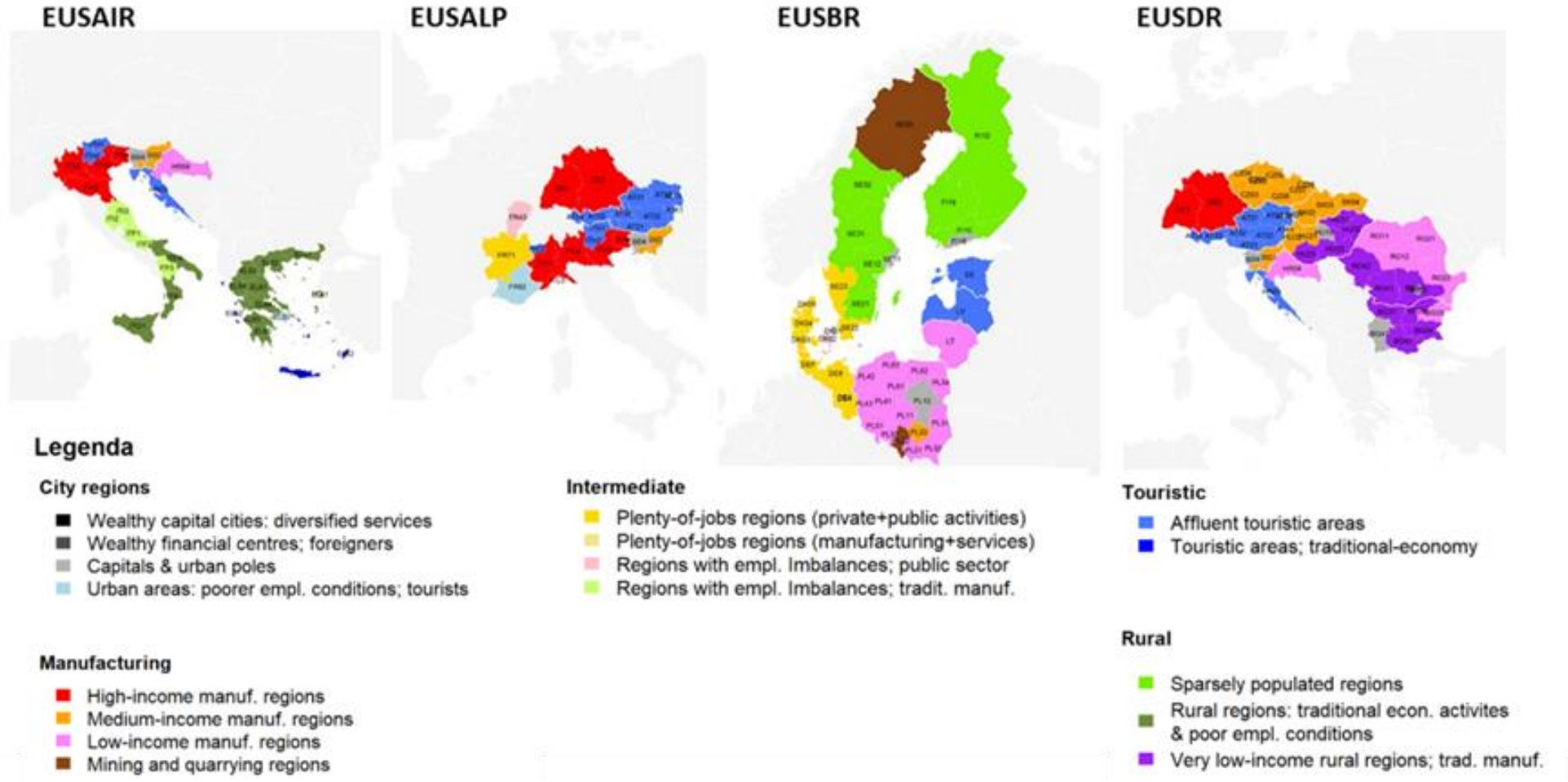
  a set of 31 input variables that cover three domains:

  - Population and other demographic features (6 variables);
  - Regional economy and the labour market (3 variables);
  - Sectoral structure, by covering both sections (agriculture, industry, construction, Wholesale and Trade) and division of the manufacture (22 variables).

- **Outcome**: a classification of socioeconomic features that returns

  - 17 clusters of regions, comprised in five main groups:
    - city regions
    - manufacturing regions
    - intermediate regions
    - touristic regions
    - rural regions

Socioeconomic clusters of regions, by macroregion



Source: Authors' elaboration on Pagliacci et al. (2018)

Tools in action: focus on EUSALP RIS3 and socioeconomic features

RIS3 priorities: categories of codes

RIS3 priorities: categories of descriptions		Agrofood, forestry and tobacco	Health & Life Science	New technologies for health	Sc.domains enhancing social activities	Creative industry & cultural and recreative	ICT & digital transformation	Social innovation & education	Traditional Tourism	Bioeconomy & Waste collection, treatment etc.	Environment Protection (water,	Blue economy_transport, marine	Energy Production	Energy efficiency & Sustainability	Advanced manufacturing systems &	Aerospace	Automotive & Aeronautics industry	Basic metals, traditional & machinery	Smart Mobility System & Transport	Transport & logistics
Agrofood	Agrofood	AT12 AT31 FR43 ITC1 ITC4 SI								AT12										
	Healty Food	ITH1 ITH2 ITH3 ITH4																		
Health & Life science	Health	AT11	AT12 SI	AT33 DE1	AT34 ITC3 ITC4		AT34													
	Life Science		DE2 FR82	AT13 AT31 AT32 FR71 ITC1 ITH1 ITH4																
New Economy & Leisure industry	Bioeconomy			AT22																
	Creative industry					ITC4														
	Digital &ICT		ITH2			AT32 FR82	AT21 AT32 AT33 FR71 ITC2							ITH1 DE1	DE2 DE2 FR43 ITH1 ITH3				ITC2 ITH4		
	Fashion																		AT34		
	Growth & Welfare						AT13				AT33				AT13						
	ICT & Tourism					AT33 ITH1 ITH4													ITH3		
	Tourism			AT33		AT13 FR71			AT13			SI									
Prod. & Transp. Manufact. & Energy	Energy Production												FR71	FR71							
	Sustainable Energy									ITC1	AT22 AT12		AT11 AT34 DE1 ITH1	AT21 AT12 ITH2 SI FR43 ITC2 FR82					AT31		
	Manufacturing																		AT12		
	Automotive							FR82 SI				ITH4	ITC4	AT32 ITC3 SI	AT34 DE2 ITC1 SI	ITC1	ITC1		AT21 ITH3		
	Marine & Maritime											ITC3									
	Mechatronics														AT12 AT33 DE2 ITC1 ITH2				AT11 AT21 AT31 ITC4 SI		
	Photonics		AT12								FR71 DE2								AT32 FR43		
	Transport & Logistics													FR43	FR43	ITC4				AT31 DE1 FR71	AT22 ITC4
	no description														AT13						

Legend of regions' socioeconomic features, NUTS codes and names of regions

macrocatogory	categoy	NUTS	Name
touristic	Affluent touristic areas	AT11	Burgenland (AT)
touristic	Affluent touristic areas	AT12	Niederösterreich
city regions	**Capitals & urban poles**	AT13	Wien
touristic	Affluent touristic areas	AT21	Kärnten
touristic	Affluent touristic areas	AT22	Steiermark
touristic	Affluent touristic areas	AT31	Oberösterreich
touristic	Affluent touristic areas	AT32	Salzburg
touristic	Affluent touristic areas	AT33	Tirol
touristic	Affluent touristic areas	AT34	Vorarlberg
manufacturing	**High-income manufacturing regions**	DE1	Baden-Württemberg
manufacturing	**High-income manufacturing regions**	DE2	Bayern
intermediate	Regions with empl imbalances public sector	FR43	Franche-Comté
intermediate	**Plenty-of-jobs regions (private+public activities)**	FR71	Rhône Alpes
city regions	**Urban areas poorer empl conditions tourists**	FR82	Provence-Alpes-Côte d'Azur
manufacturing	**High-income manufacturing regions**	ITC1	Piemonte
touristic	Affluent touristic areas	ITC2	Valle d'Aosta/Vallée d'Aoste
manufacturing	**High-income manufacturing regions**	ITC3	Liguria
manufacturing	**High-income manufacturing regions**	ITC4	Lombardia
touristic	Affluent touristic areas	ITH1	Provincia Autonoma di Bolzano/Bozen
touristic	Affluent touristic areas	ITH2	Provincia Autonoma di Trento
manufacturing	**High-income manuf regions**	ITH3	Veneto
manufacturing	**High-income manuf regions**	ITH4	Friuli-Venezia Giulia
Not available		SI	Slovenia

* No information on Eye@RIS3 on Switzerland

Source: Authors' elaboration on Pagliacci et al. (2018) and on Pavone et al. (2018)

Discussion

From a multidimensional perspective on regions (RIS3 and socioeconomic features)

→ a significant set of insights emerge (on similarities, on specific conditions, on best practices,...)

They might support local stakeholders and policy makers

- in **further implementation of their own RIS3s** (e.g. by considering specific projects)
- in **designing more integrated territorial strategies,** capitalizing on both intra- and inter-MRS multidimensional comparison of the RIS3s *(the intended development path that the regions aim at)* and socioeconomic conditions *(summarising the current structural features)*.

→ further and better information could be shared through the Eye@RIS3 platform

- if information is regularly updated, categorisation (& the understanding) of what regions aim to do in the RIS3 will be improved as well

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Thank you

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