

# Joint Research Centre

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## The Informational Basis of Collaborative Governance: Evidence from Innovation Policies in Europe

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# Outline

- 1. The information dilemma in policymaking & collaborative governance**
- 2. A framework to study collaborative search (hard/soft data)**
- 3. Evidence from innovation strategies in the EU**
- 4. Conclusions**

# Research design

**Q1:** *What kind of information and how much of it is actually used in policy documents to justify policy prioritization? How collaborative is search?*

**Q2:** *Which organizational features explain varying degrees of collaborative search?*

## **Method:**

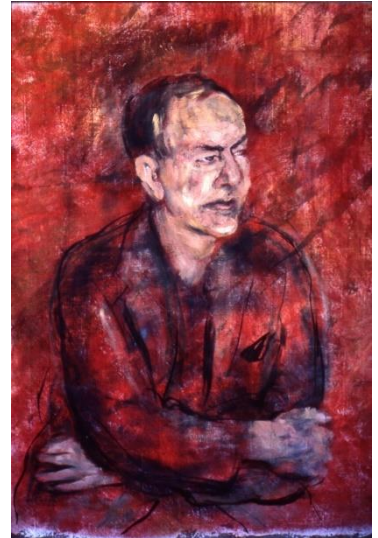
- Qualitative and quantitative analysis of innovation strategy documents (66 regions + 9 states in EU)
- OLS and GLM regressions

**Goal:** Provide parsimonious measure of informational base in collaborative STI governance & understand variation

# Information dilemma // trade-off

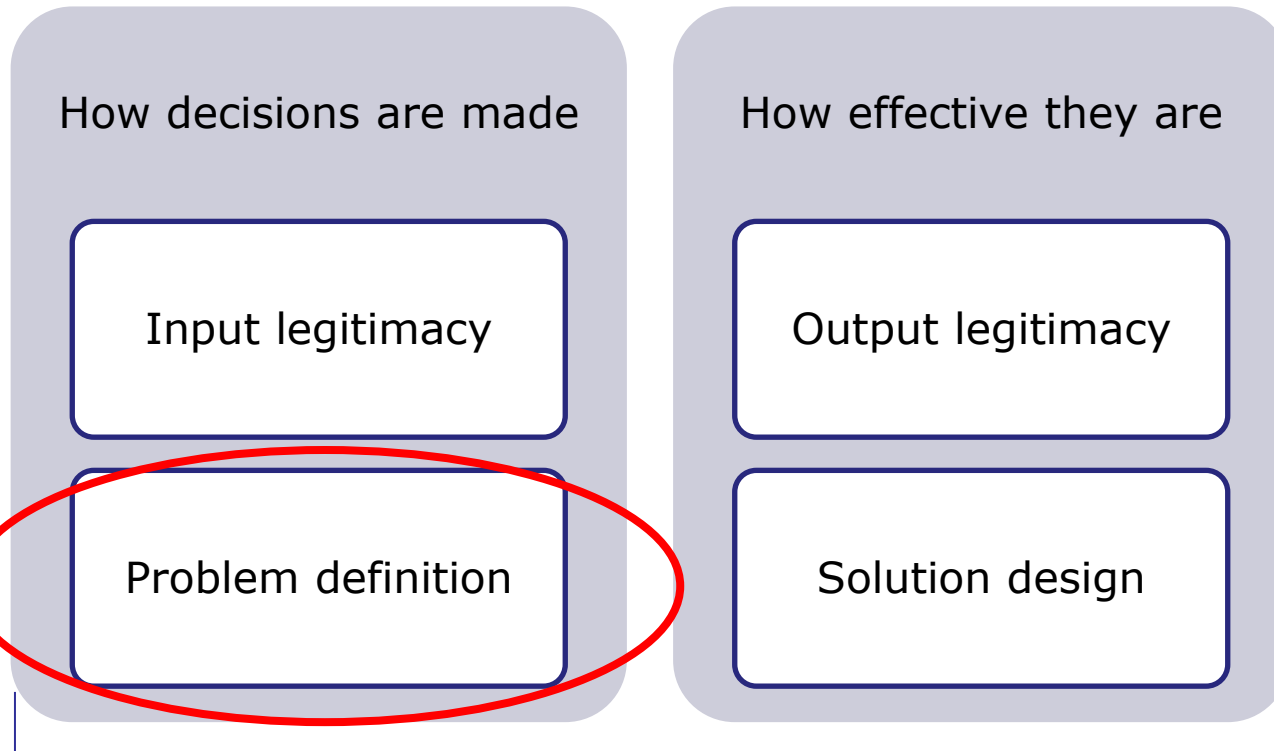
*What information consumes is rather obvious: It consumes the attention of its recipients. Hence a **wealth of information creates a poverty of attention**, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.*

(Simon, 1971)



# Governmental search processes

2 sides of govt performance (Baumgartner & Jones 2015; Scharpf 2003)



**Collaborative  
governance:  
complex innov  
pol**

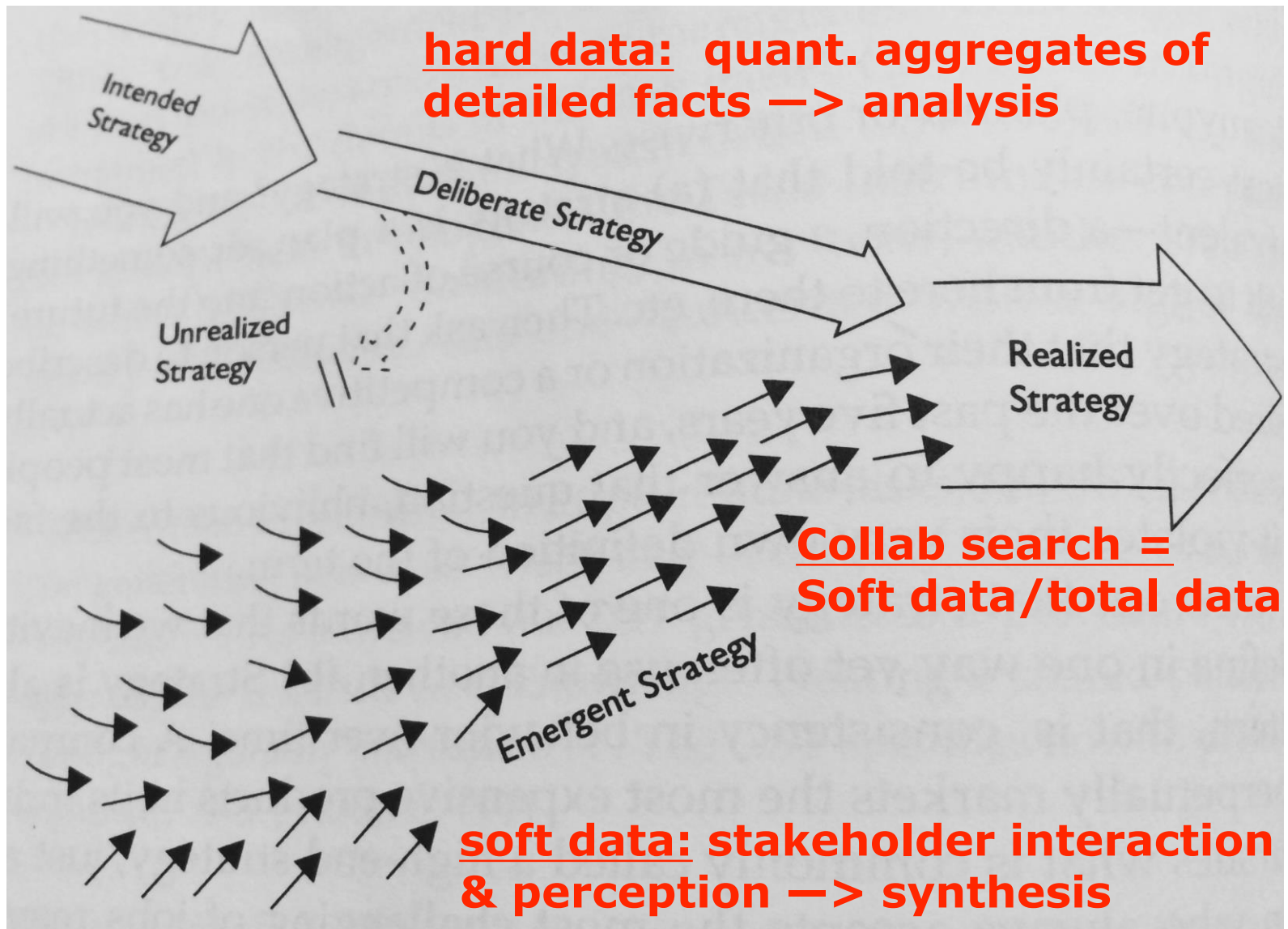
## Information crucial for both

- Policy analysis: information as expertise
- Entropic search: information as diversity

# Collaborative governance

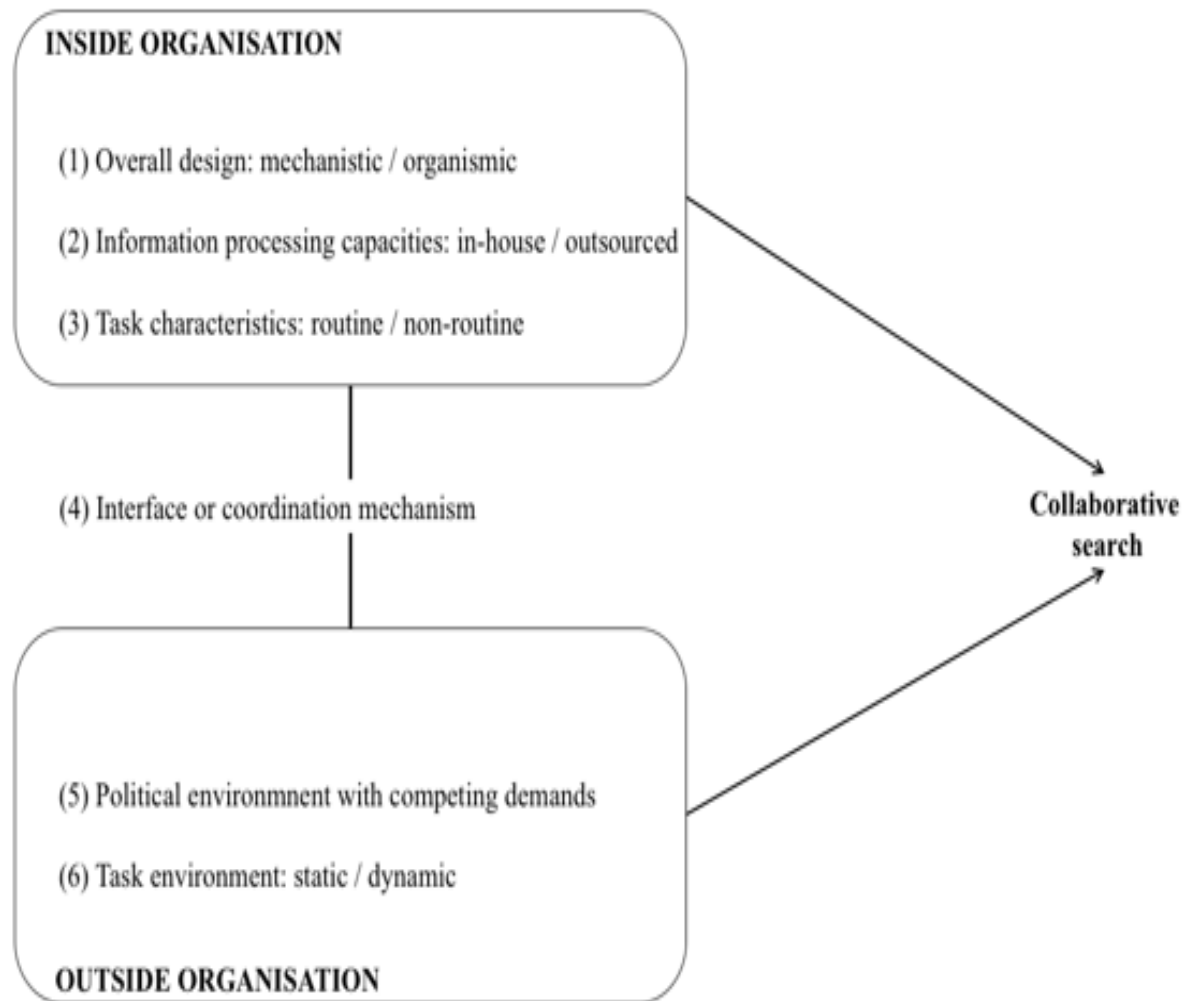
- = a formal arrangement in which state and non-state organizations and individuals interact, deliberate and **decide** in a network rather than in a hierarchy to jointly engage in **problem definition** and problem solving (Ansell & Gash 2008; O'Leary et al. 2006; Fung 2003)
- > implications for informational basis given it's a decision process?
  - > **vague answers in literature**: "joint fact-finding", face-to-face dialogues & procedural transparency (Ansell & Gash 2008)
  - > more focus in information & organizational failures
  - > **critical external information** must be identified and translated for being used internally + limited attention span of decision makers for immediate and distant actions must be maintained
  - > deliberation theory: **stakeholders may lack certain pieces of unattainable or costly information**, but they also "can contribute information about their diverse preferences and values that is unavailable to policymakers" by providing feedback on programs and improving accountability (Fung 2003, 343)

# What kind of information?



Source: Based on Mintzberg (1994: 24).

# Organizational design as explanans





# Empirics: Innovation strategies in EU

- ca. **€40bn** ERDF **for innovation until 2020**
- Novel 'smart specialization' **conditionality**:
  - involve stakeholders in a participatory **discovery process**
  - based on **SWOT to concentrate resources** on a limited set of R&I priorities
- 182 authorities submitted in total; **current sample: 66 regions & 9 states** - 119 docs - 9565 pages

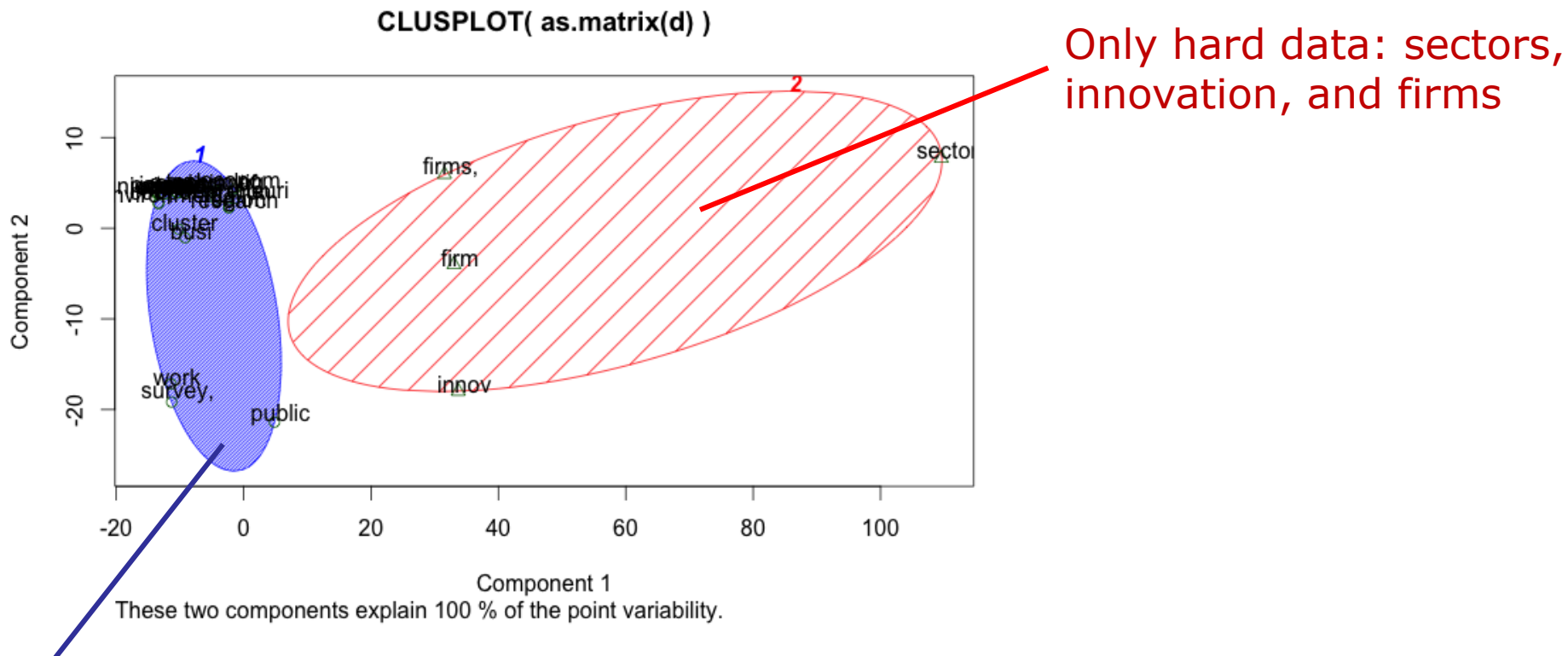
Case selection following VoC (Hall and Soskice 2001; Nölke and Vliegenthart 2009)

- CME: firm behavior & coordin result of strategic interactions with govts and other actors – DE, AT; n = 27
- LME: firm behavior & coordin largely determined by demand & supply in markets – UK, IE, NL; n = 9
- MME: large agricultural sector & widespread state interventionism – MT, ES; n = 19
- DME: strat coordin & investments dominated by MNCs – CZ, EE, HU, PL, SI; n = 20

**→ Revealed informational basis of collaborative governance**

<b>Hard data</b>	<b>Soft data</b>
Funding sources and R&D performers (business enterprise, higher education sector, government, private non-profit sector)	Stakeholder and citizen survey  Self-assessment
Macro-economic structure (GDP, sectoral composition and trends, employment, productivity, labor cost, gross value added, gross asset value, trade balance and openness, foreign direct investment, specialization patterns/localization coefficients, capital accumulation, public debt, credit market)	Peer review  Semi-structured interview  Continuous policy platform (council, committee, fare, cluster dialogue, forum, conference, steering group, online portal)
Micro-economic statistics (segmenting firms and higher education institutions by characteristics, new firm entrants, entrepreneurial intensity, cooperation among stakeholders, tax credit)	Ad hoc meeting (site visit, roundtable, workshop, focus group)
R&D output and outcomes (patent, impact of scientific publications, success rate for grant applications)	Public inter-agency committee
Human resources (R&D personnel, wages, educational attainment, specialization patterns, life quality, demand for specialists)	Social media interaction  Reputation through awards
Demography Environmental conditions (energy efficiency, CO2 emissions) Needs analysis Technology audit Past evaluation	Expert support (panel, commission, review, Delphi)
Aggregate indicator/ ranking (universities, competitiveness, innovation, revealed competitive advantage) Mapping (stakeholders, projects, infrastructure) Scenario analysis	Foresight

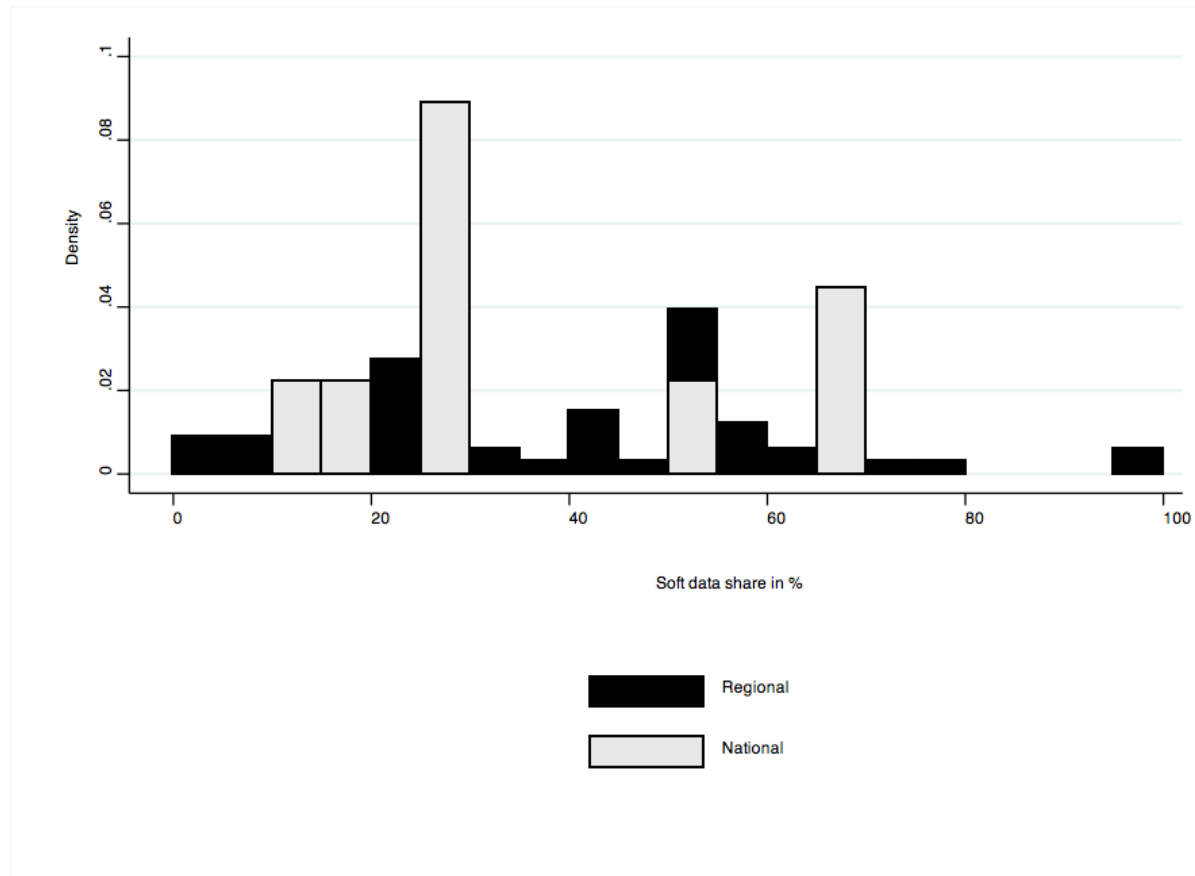
Source: Compilation based on qualitative text analysis following the typologies by Mintzberg (1994) and OECD (2015).



Soft data mixed with some hard data: workshops, working groups, public consultations, visits + technology, entrepreneurship, scientific, research, economy, business cluster, project, capital, cooperation, environment, universities, qualifications, and potential

Source: Own compilation. PCA text analysis using k-means and Euclidean distances in a matrix of all terms used to describe hard and soft data in policy documents (28 items in two dimensions). The intensity of shading is proportional to cluster density (number of items divided by the area of the ellipse).

# Distribution of collaborative search by governmental level



	(1) Intra- organizational	(2) Extra- organizational	(3) Mixed	(4) All organizational factors
Information processing capacity - medium	<b>16.85*</b>		<b>15.12*</b>	<b>16.74**</b>
	(2.94)		(2.74)	(3.22)
Information processing capacity - high	<b>7.750*</b>		6.949	8.239
	(2.92)		(1.13)	(1.28)
Organizational design	1.433			-.163
	(.31)			(-.05)
Task characteristics	4.589			.778
	(.51)			(.12)
Market economy - liberal	-.201	.	4.014	.
	(-.04)	.	(.66)	.
Market economy - mixed	-7.165	.	-0.815	.
	(-2.07)	.	(-.14)	.
Market economy - dependent	<b>9.663**</b>	.	<b>22.13***</b>	.
	(3.36)	.	(5.17)	.
Population log	<b>4.614*</b>	<b>5.545*</b>	<b>5.395**</b>	<b>5.627**</b>
	(2.44)	(2.69)	(3.20)	(3.47)
Government investment	<b>-.00982**</b>	<b>-.0109**</b>	<b>-.0131**</b>	<b>-.0131**</b>
	(-3.40)	(-3.27)	(-3.52)	(-3.15)
Task environment (squared)		<b>.0944*</b>	<b>.0780*</b>	<b>.0747*</b>
		(2.86)	(2.24)	(2.22)
Political environment		-.115		-.815
		(-.22)		(-1.55)
Interface outside lead organization			-3.130	-1.906
			(-.28)	(-.15)
Interface in-between			4.463	4.827
			(.47)	(.48)
Several interfaces			-10.30	-10.48
			(-1.37)	(-1.26)
Constant	-43.70	-45.69	-53.73*	-56.11*
	(-1.89)	(-1.41)	(-2.35)	(-2.86)
Observations	75	75	75	75
Number of clusters	12	12	12	12
r2	.206	.233	.329	.335
Root MSE	20.7	20.1	19.3	19.7
Degrees of freedom	11.0	11.0	11.0	11.0
Bayesian information criterion	699.9	688.7	691.5	690.9

- robust OLS regression results with country clusters

- Information processing capacity only IV that is significant also in GLM



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# Conclusions

- Govts use large variety of information in STI policy design with relatively high degree of collaborative search (1/3 of sample)
- Hard data or aggregated facts a first step based on which stakeholders and government agents discuss and agree on data interpretations and the definition of problems.
- The **same legal EU requirement** to adopt participatory and “evidence-based” STI policy strategies has **resulted in very different patterns of information and search**
- **Partly outsourcing policy design** & anchoring **several interface institutions** associated with more collaborative search
- No empirics on quality of data (hence no weightings applied)
- Can soft and hard data be easily compared?

# Thank you & stay in touch

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