
UNDERSTANDING THE “REGIONAL POLICY MIX” A CLASSIFICATION AND ANALYSIS OF EUROPEAN REGIONS’ SUPPORT POLICIES

Henning Kroll, Fraunhofer ISI

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1. Motivation and Research Questions
 2. Dataset
 3. Methodology
 4. Results
 5. Discussion & Conclusion

Motivation

Open Questions - Conceptually

- What do we mean by „getting the policy mix right“?
- Is there such a thing?
- If yes, what does it mean – if we do not believe in ‚recipes‘?

Open Questions - Empirically

- Too much individual storytelling, too little cross-cutting empirical data
- Limited consideration of different dimensions of policy making
 - Target group
 - Objective
 - Means available

A New Dataset

The Regional Innovation Monitor Project

Regional Innovation Monitor Plus

- data for a large majority of European regions (> 200)



- database built and maintained since 2009

for each: detailed information on the six most important policy measures (“important” according to local correspondents, taking into account central criteria)

Baden-Württemberg

Region

[DEUTSCHLAND](#) > [BADEN-WÜRTTEMBERG](#)



Introduction

Baden-Württemberg is one of 16 German federal states located in the southwest of the Federal Republic of Germany. On the basis of the number of inhabitants (10.9m, end of 2013) and surface (35.751 km²) Baden-Württemberg stands at the third place compared to the other federal states in Germany. The population density of Baden-Württemberg accounts for 305 inhabitants per km². Baden-Württemberg has borders with France, Switzerland and within Germany with Bavaria, Rhineland-Palatinate and Hessen. Baden-Württemberg's capital city is Stuttgart.

Economy

[Research, Development & Innovation](#)

[Regional Innovation Scoreboard results](#)

[Governance](#)

[Policy](#)

[Activities linked with Advanced Manufacturing](#)

[Complete Regional Profile](#)

[Repository](#)

Support Measures

- [Cluster policy Baden-Wuerttemberg](#)
- [Innovation coaching](#)
- [Innovation vouchers](#)
- [RegioWIN](#)
- [Technology financing of the State Bank for Baden-Wuerttemberg](#)
- [Young innovators](#)

A New Dataset

Concrete Attributes of Policy Measures

- **aiming where?:** main thematic and target group orientation
 - Supporting classic, mostly public R&D: institutionally, through competitive calls, with infrastructure,
 - Supporting science-industry co-operation,
 - Supporting the creation of human resources for science, technology and innovation,
 - Supporting business R&D and innovation,
 - Supporting innovation climate and business eco-system.
- **doing what?:** method of funding allocation / intervention type
 - Grants, direct subsidies,
 - Public loans at favourable conditions,
 - Public guarantees for private loans,
 - Venture capital,
 - Tax incentives,
- **what role of EU funding?:** implicitly: amount of funding allocated
 - Share of EU funding in total allocated

Open Research Questions in Detail

1. Given the diversity of policy practice in Europe, are there at all indications of different generic “types of policy mixes”?
2. If there are, can their geographical distribution be explained by the location of regions in particular Member States?
(theory: varieties of capitalism, governance capabilities, administrative traditions)
3. If there are, can their geographical distribution be explained by the degree of economic development of the regions in question?
(theory: place-based policies, evidence-based policies, smart specialisation)
4. If there are, are there (without specific controls) any signs that regions deploying a particular policy mix are faring better than others?

Empirical Approach: Cluster Analysis on the Available Data

- z-transform values of the following variables
 - Share of funding in the respective target categories (5 variables by type)
 - Share of funding in the respective intervention types (6 variables by type)
 - Share of EU funding in all regional measures total funding (proxy for EU-Orientation)
- centroid-based clustering, testing different options
- exclusion of some regions due to obvious errors in data
- elaboration of those solutions that yield relevant findings from a content perspective
- **below 5 clusters too diffuse, above 6 clusters too chaotic**
- **2 meaningful solutions to be considered**

Five Cluster Solution

- Cluster 1 **Business-Oriented Policy Mixes**, based on grants , myopic on business
- Cluster 2 **Business-Oriented Policy Mixes**, based on grants & loans, addressing framework
- Cluster 3 **Systemic Policy Mixes**, based on grants & investments
- Cluster 4 **Systemic Policy Mixes**, based on other approaches
- Cluster 5 **Convergence Cluster**

	1	2	3	4	5
Number of Regions	53	35	39	13	42
Share of EU funding in total budget	0.14	0.38	0.28	0.27	0.78
Grants, direct subsidies,	0.94	0.65	0.98	0.27	1.00
Public guarantees for private loans	0.00	0.00	0.00	0.00	0.00
Other (e.g. non financial)	0.02	0.01	0.01	0.71	0.00
Public loans at favourable conditions	0.01	0.28	0.01	0.00	0.00
Venture capital	0.03	0.01	0.00	0.02	0.00
Classic R&D, mostly public	0.03	0.06	0.11	0.05	0.08
Science-Industry co-operation	0.06	0.04	0.67	0.37	0.09
Human Resources for STI	0.01	0.01	0.01	0.01	0.03
Business R&D and innovation	0.81	0.38	0.11	0.28	0.72
Innovation climate and business eco-system	0.09	0.51	0.04	0.29	0.06
User driven / procurement	0.00	0.01	0.01	0.00	0.00
Public sector / social / internationalisation	0.00	0.00	0.05	0.01	0.03

Five Cluster Solution - Details

Cluster 1 **Business-Oriented Policy Mixes**, based on grants , **myopic on business**

- **limited share of European funding (~14%)** in regional support policies and a next to exclusive reliance on grants. Next to exclusive focus on business R&D and innovation measures (81%)

Cluster 2 **Business-Oriented Policy Mixes**, based on grants & loans, **addressing framework/ecosystem**

- **notable share of European funding (~38%)** in regional support policies and split focus on grants (2/3) and loans (1/3) Focus on measures supporting the innovation climate and the business ecosystem in a broader sense (50%)

Cluster 3 **Systemic Policy Mixes**, based on grants & investments

- relevant share of EU funding (~28%) in regional support policies – **next to exclusive reliance on grants** Focus on science-business collaboration (67%), complemented by public and business R&D investments (10% each)

Cluster 4 **Systemic Policy Mixes**, based on other approaches

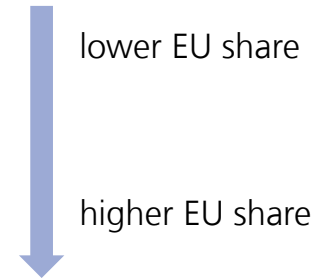
- relevant share of EU funding (~27%) in regional support policies – **focus on 'other', less money-based measures** Broad-based approach involving science-business collaboration, business R%D, and framework/ecosystem

Cluster 5 **Convergence Cluster**

- high share of EU funding (~78%) in regional support policies and a next to exclusive reliance on grants Policies very strongly focused on business R&D and innovation measures, **generally rather uncreative**

Six Cluster Solution

- Cluster 1 Policy Mixes that focus on **Business Support**
- Cluster 2 Policy Mixes that focus on **Science-Industry Collaboration**
- Cluster 3 Policy Mixes that focus on **Innovation Climate & Ecosystem**
- Cluster 4 Policy Mixes that focus on **Public R&D Investments & Complementary**
- Cluster 5 Policy Mixes pursuing an **Holistic Approach, Including Human Capital**
- Cluster 6 **Convergence Cluster**



	1	2	3	4	5	6
Number of Regions	45	35	29	16	11	46
Share of EU funding in total budget	0.10	0.29	0.34	0.44	0.49	0.68
Grants, direct subsidies, Public guarantees for private loans	0.73	0.87	0.81	0.82	0.97	0.98
Other (e.g. non financial)	0.07	0.12	0.11	0.05	0.00	0.00
Public loans at favourable conditions	0.17	0.01	0.06	0.01	0.03	0.01
Venture capital	0.03	0.00	0.02	0.00	0.00	0.01
Classic R&D, mostly public	0.03	0.01	0.01	0.52	0.05	0.02
Science-Industry co-operation	0.05	0.81	0.04	0.17	0.20	0.06
Human Resources for STI	0.01	0.01	0.00	0.01	0.14	0.01
Business R&D and innovation	0.89	0.12	0.19	0.23	0.47	0.78
Innovation climate and business eco-system	0.03	0.05	0.75	0.06	0.12	0.07
User driven / procurement	0.00	0.00	0.00	0.02	0.02	0.00
Public sector / social / internationalisation	0.00	0.01	0.00	0.00	0.00	0.06

Six Cluster Solution - Details

Cluster 1 Policy Mixes that focus on **Business Support**

- **low share of EU funding (~10%)** and an above average focus on loans (17%) and venture capital (3%)
dominant focus is on business innovation (89%)

Cluster 2 Policy Mixes that focus on **Science-Industry Collaboration**

- **relevant share of EU funding (~29%)** and a pronounced focus on grants (87%) and other measures (12%)
clear focus is put on science-industry collaboration (81%)

Cluster 3 Policy Mixes that focus on **Innovation Climate & Ecosystem**

- **relevant share of EU funding (~34%)** and a pronounced focus on grants (81%) and other measures (11%)
clear focus is on innovation climate and ecosystem support (75%)

Cluster 4 Policy Mixes that focus on **Public R&D Investments & Complementary**

- **notable share of European funding (~44%)** and a pronounced focus on grants (82%).
strong focus on public R&D (52%) complemented by business R&D (23%) and science-industry collaboration (17%).

Cluster 5 Policy Mixes pursuing an **Holistic Approach, Including Human Capital**

- **notable share of European funding (~48%)** and a next to exclusive focus on grants (97%).
clear focus on business innovation (47%), also: sci.-ind. coll. (20%), human resources (14%), innovation climate (12%)

Cluster 6 **Convergence Cluster**

- **high share of European funding (~68%)** and a next to exclusive focus on grants.
dominant focus is on business R&D and innovation (78%)

Research Question 2: Regional Distribution by Member State

	FR	AT	BE	UK	DK	FI	IE	CZ	GR	NL	SE	BG	HU	PL	PT	RO	SK	IT	ES	DE	Total
Business , standard	11	4	2	8		1		2		2	1				2	3		5	7	4	52
Business, framework	3		1	1	5	2	2					1		7		1		6	3	2	34
Systemic, grants	5	2				1		5	4	4	3				1		1	5	2	6	39
Systemic, other	2	1		1						1	4							2	2		13
Convergence Cluster									2			5	7	9	3	4	3	3	2	4	42
Outlier/No Data	5	2		2		1		1	7	5					1				3		27
Total	26	9	3	12	5	5	2	8	13	12	8	6	7	16	7	8	4	21	19	16	207

	FR	AT	BE	UK	CZ	GR	NL	SE	DK	FI	IE	SK	BG	HU	PL	PT	RO	IT	ES	DE	Total
Business Oriented	7	3	2	8	2		2			1								5	8	5	43
Science-Industry	4	2			4	4	4	5				1				1		3	2	5	35
Innovation Ecosystem	5		1	1			1	2	5	2			1		3		1	6	1		29
Public R&D	3				1			1			2	3		1	2			1	2		16
Holistic/H. Resource	1	2												2	1			3	1	1	11
Convergence Cluster	1			1		2				1			5	4	10	5	7	3	2	5	46
Outlier/No Data	5	2		2	1	7	5			1						1			3		27
Total	26	9	3	12	8	13	12	8	5	5	2	4	6	7	16	7	8	21	19	16	207

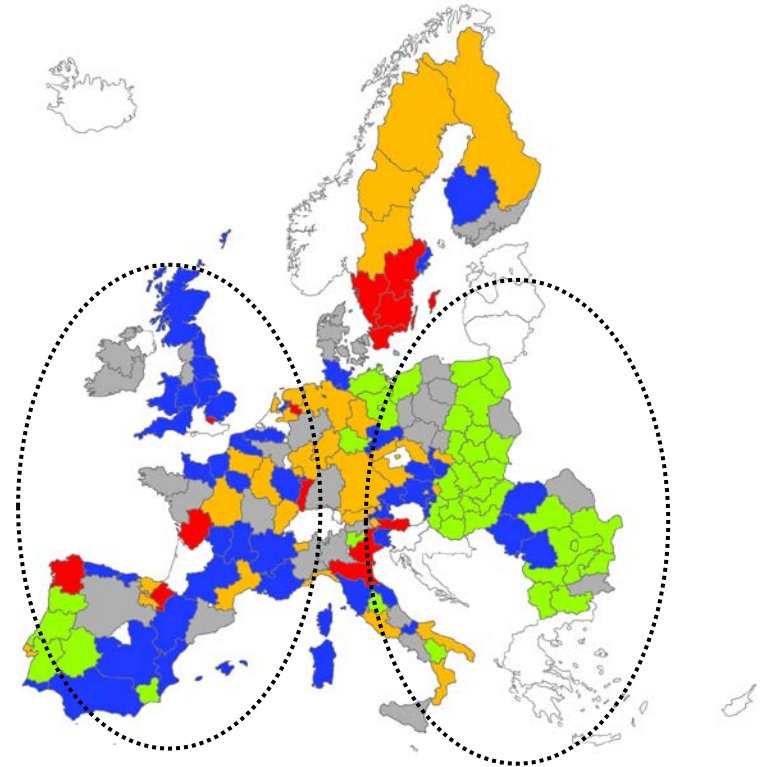
Results: Research Question

Influence of National Context

- The national framework that a region is located in **does indeed play a decisive role**, e.g.
 - 5 out of 5** DK regions have Business-Oriented Mixes, myopic on business
 - 8 out of 10** UK regions have Business-Oriented Mixes, addressing framework/ecosystem
 - 5 out of 7** CZ regions have Systemic Policy Mixes, based on grants & investments
 - 7 out of 7** HU regions belong to the Convergence Cluster
 - **Large Member States with fairly autonomous regions** (e.g. ES, FR, DE, IT), however, **display diverse approaches**. Often, no more than 50% of their regions apply the same mix
- national attribution does influence yet not predetermine the choice of a particular policy mix,
 - regions are to a certain extent free to take their own choices,
 - influence also of disparities in development and different degrees of regional autonomy.

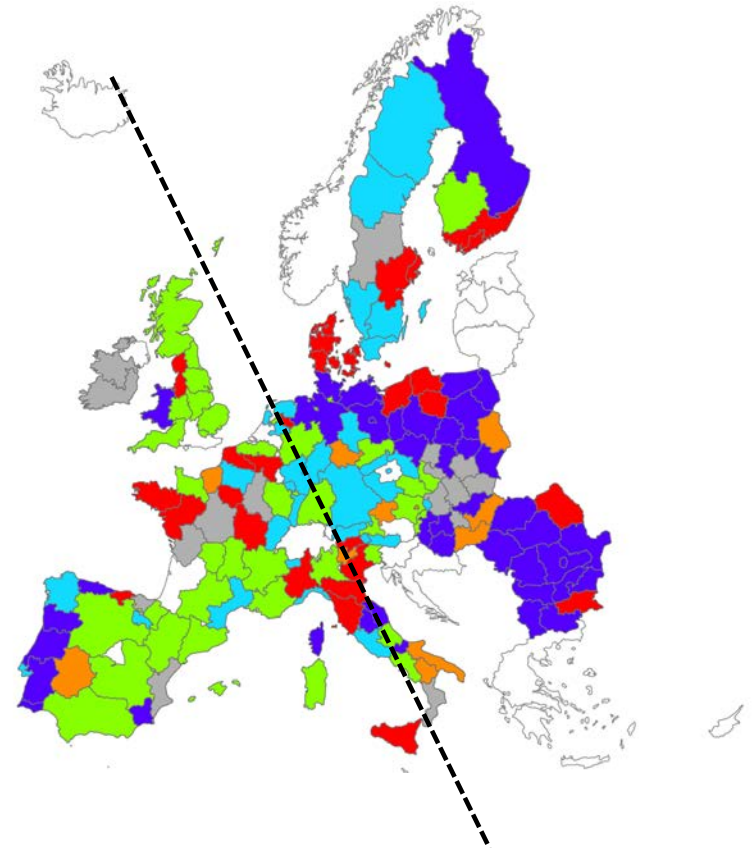
Research Question 3a: Economic Disparities & Five Cluster Solution

- **blue:** **business-oriented, grant-based, standard**
- grey: business-oriented, grants & loans, addressing framework
- **orange:** **systemic, grants & investments**
- red: systemic, other approaches
- **green:** **Convergence**



Research Question 3b: Economic Disparities & Six Cluster Solution

- **green:** **business-oriented**
- turquoise: science-industry collaboration
- grey: public R&D investment & compl.
- **red:** **innovation climate & ecosyste**
- orange: holistic approach incl. HR
- **violet:** **Convergence**



Results: Research Question 3

Influence of Economic Development

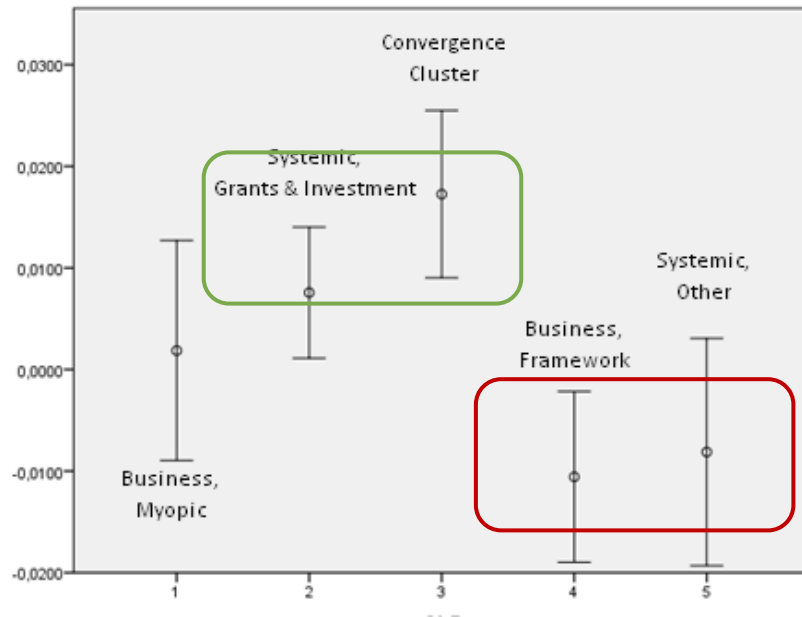
- there is a characteristic **“Convergence Policy Mix”** emerging in many less developed regions yet the geographic distribution of regions with this policy mix is far from deterministic, even in Romania and Bulgaria, however, single regions opt for other policy strategies.
- **low level of development** and the associated high endowment with EU funding appears to be **a necessary condition for a “allocation-based” policy regime, yet no sufficient condition for this policy mix to emerge.**
- mirroring these findings, **business-oriented policy mixes** with a very low reliance on EU funding are by definition more commonly found in Western Europe’s more developed regional competitiveness and employment regions that receive less ERDF funding in the first place
- the **limited availability of external funding** limits options or at least tends to influence choices on how to allocate the limited funding available – often to businesses
- “systemic” policy mixes are found scattered across Europe – from Spain to Romania, from Finland to Italy
- **apparently, the decision for systemic policy mixes is in essence a strategic one rather than contextually predetermined**

Research Question 4a: Growth/Resilience & Five Cluster Solution

Convergence Cluster
performs ,best'

Systemic Mixes, Grants & Investment
performs,second best'

Business Mixes, acknowledging Framework
& Systemic Mixes, using „other approaches“
lag behind



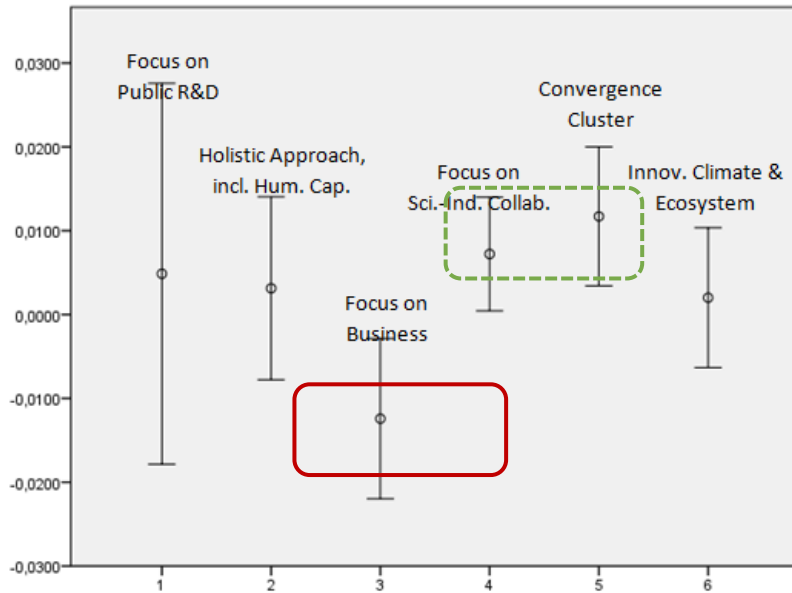
Average per capita Income Growth 2007-10

Research Question 4b: Growth/Resilience & Six Cluster Solution

no / less clear cut picture

Convergence Cluster still performs ,best

Focus on Business Cluster lags behind



Average per capita Income Growth 2007-10

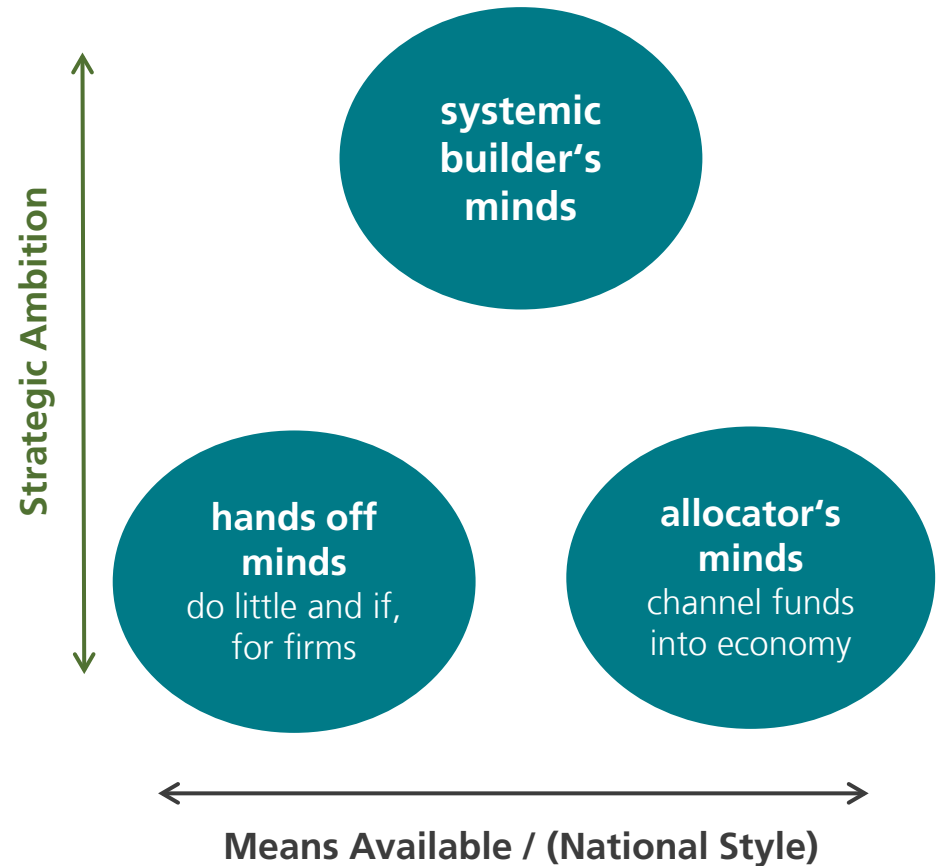
Results: Research Question 4

Growth & Resilience

- **highest average growth rate** can be found among the regions of the **Convergence cluster**, i.e. those that deploy a traditional policy mix and distribute a lot of funding (**caveat**: group involves very low income regions in which even large relative changes occur easily)
- indication that **regions deploying an integrated, systemic approach**, i.e. one that supports collaboration and addresses public and private research and innovation **fared economically better than those with a pure business focus**.
- cf. Results Research Questions 2 and 3:
the explanation of these patterns can hardly be a national one alone.

Summary of Findings

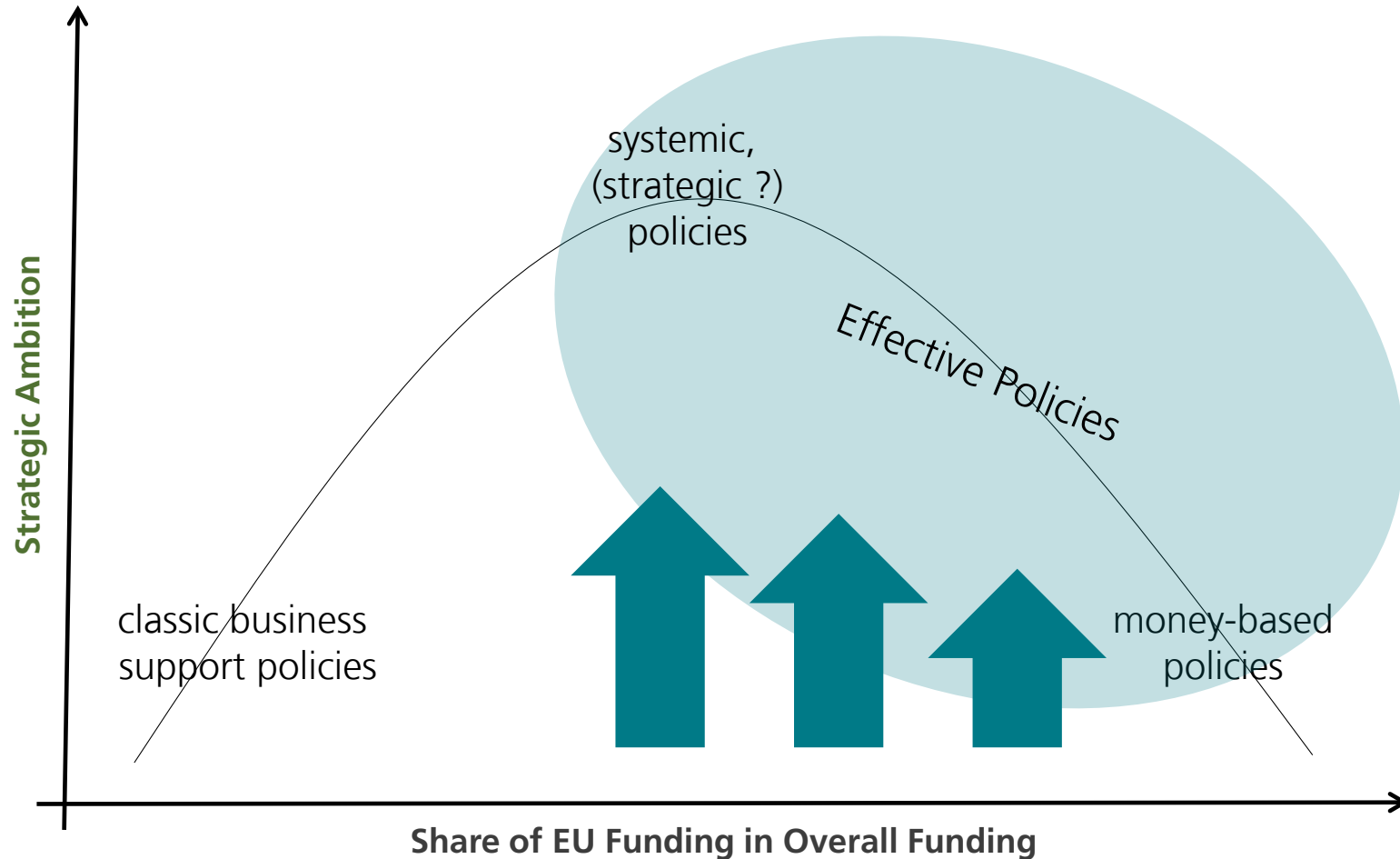
1. Apparently, **there are different types of overall policy concepts** that European regions pursue (or not) and which confirm that, despite all idiosyncrasy, the notion of policy mixes is indeed a useful one
2. Regional policy mixes **do indeed reflect national particularities** in policy making. In many cases, however, **there is also a large degree of variation** among regions of the same nation.
3. The overall level of development or, more specifically, **the availability of European funding is indeed a relevant impact factor**. However, regions retain autonomy in designing their policy mixes.
4. Economy-wide factors may counteract regional policy's direct effects. Still, we find that the choice of **certain policy mixes, notably more systemic ones, is to a significantly stronger extent associated with regional resilience than others.**



Policy Conclusions

- **there is not one “desirable” type of policy mix** to learn and be implemented by all as framework conditions matter
 - **indications that regions with systemic policy mixes are more successful** than those emphasising either side of the innovation system.
 - **(regional level) political choice does seem to be a central and valid factor** even under fairly different institutional & economic framework conditions
- **two roads to success?**
- ***the direct one***
injecting substantial amounts of money into the regional economy through grants (Convergence Cluster)
 - ***the sustainable one***
structural approaches can pay off even without large amounts of funding (systemic and co-operation-oriented mixes)

Food for thought: Six Cluster Solution



Thank you!

Contact:

Dr. Henning Kroll

Competence Center Policy - Industry - Innovation
Business Unit Regional Innovation Systems
Fraunhofer Institute for Systems and Innovation Research ISI
Breslauer Straße 48 | 76139 Karlsruhe | Germany
Phone +49 721 6809-181 | Fax +49 721 6809-176
henning.kroll@isi.fraunhofer.de