Methodological approaches in Regional Studies

Martin Heidenreich

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1. Fuzzy concepts or conceptual coherence?

- "A fuzzy concept is one which posits an entity, phenomenon or process which possesses two or more alternative meanings … `How do I know it when I see it?'" (Markusen 1999)

  What about
- *Industrial districts*: regional embeddedness; networks; interactive learning, trust
- *New economic geography*: forward and backward linkages, transaction costs, spillover
- *Innovative milieux*
- *Regional innovation systems*: Interacting knowledge generation and exploitation sub-systems
- *Regional economics*: Untraded interdependencies, learning, reflexivity, noncodified and noncosmopolitain knowledge
- *Learning regions*: 'sticky', non-codified knowledge, local buzz …
- *Clusters??*

An example for a fuzzy concept: Clusters

Cluster concept	Conceptual/ definitional depth	Empirical methodology	Ease of measurement	Empirical support
Co-location	Shallow	Top-down	Easy to measure (quantitative)	Indirect evidence
Co-location and technological proximity	↓	↓	↓	↓
Input–output table and complementarities	↓	↓	↓	↓
Co-location and superior performance	↓	↓	↓	↓
Marshallian externalities	↓	↓	↓	↓
Network firms	↓	↓	↓	↓
Explicit collaboration	↓	↓	↓	↓
Informal knowledge spillovers	Deep	Bottom-up	Hard to measure (qualitative)	Direct evidence

„Porter's cluster idea displays all of the key features needed for such a metaphor to assume the **power of a successful 'brand' (or even myth …).** First, the metaphor must accord with some strong, if not always clearly defined, aspirations – in this case promoting innovation and competitiveness. It must be expressed in language sufficiently flexible as to permit a wide range of interpretations ... The metaphor must have authority ... It must be capable of continual and consistent re-invention and re-application .... And the language of the metaphor must allow the possibility of providing practical action – the cluster as a policy tool."

Source: Martin, R. and P. Sunley, 2003, "Deconstructing clusters: chaotic concepts or policy panacea?". In: Journal of Economic Geography, vol. 3, pp. 5-35.

2. Contrasting case-based („qualitative“) and variable-based („quantitative“) research

Criterion	Qualitative	Quantitative
Approaches to explanation	Explain individual cases; ‘‘causes-of-effects’’ approach	Estimate average effect of independent variables; ‘‘effects-of-causes’’ approach
Conceptions of causation	Necessary and sufficient causes; mathematical logic	Correlational causes; probability/statistical theory
Multivariate explanations	INUS causation; occasional individual effects	Additive causation; occasional interaction terms
Equifinality	Core concept; few causal paths	Absent concept; implicitly large number of causal paths
Scope and generalization	Adopt a narrow scope to avoid causal heterogeneity	Adopt a broad scope to maximize statistical leverage and generalization
Case selection practices	Oriented toward positive cases on dependent variable; no (0,0,0) cases	Random selection (ideally) on independent variables; all cases analyzed
Weighting observations	Theory evaluation sensitive to individual observations; one misfit can have an important impact	All observations are a priori equally important; overall pattern of fit is crucial
Substantively important cases	Substantively important cases must be explained	Substantively important cases not given special attention
Lack of fit	Nonconforming cases are examined closely and explained	Nonsystematic causal factors are treated as error
Concepts and measurement	Concepts center of attention; error leads to concept revision	Measurement and indicators center of attention; error is modeled and/or new indicators identified

An INUS cause is neither individually necessary nor individually sufficient for an outcome. Instead, it is one cause within a combination of causes that are jointly sufficient for an outcome

Three different research strategies

- **Qualitative research on commonalities**
  - Commonalities: “multiple cases as many instances of the same thing”
  - Interest in the “comprehensive examination of historically defined cases” (Ragin (1987: 53) => “interest in clarifying categories and concepts”
- **Comparative research on diversity**
  - “in research that emphasizes diversity the focus is on the similarities within a category of cases with the same outcome (…) that (1) distinguish that category from other categories (…) and (2) explain the outcome manifested by that category. In other words, the study of diversity is the study of patterns of similarities and differences within a given set of cases” (106)
  - Qualitative diversity is more important than quantitative differences (types instead of variables) => Construction of different ideal types
- **Quantitative research of differences among cases (Covariation of variables across cases)**
  - “The goal is to explain the covariation of one variable with another, usually across many, many cases”
  - “the focus is on differences in levels and how different variables like income and education covary across cases” (107)

Source: Ragin, Charles C., 1994: Constructing Social Research. The Unity and Diversity of Method. Thousand Oaks/London/New

Three traditions in regional research

- **Case-oriented studies using qualitative and quantitative methods. (e.g. Silicon Valley, Nuremberg)**
  - Case study: An intensive study of a single unit with an aim to generalize across a larger set of (similar) units => case studies assume a distinction between formally and informally studied units (Gerring 2004)
- **Comparative, case-based studies of regions (qualitative and quantitative) (ERIS, EUROCAP …)**
  - Criteria for selection of cases (most-similar and most different designs)
  - Holistic approach
  - different causal factors
  - Large number of variables, but small N

  => Ideal types
- **Variable-based, quantitative comparative research using national and international datasets (analysis of regional inequalities)**

Three forms of generalization

- **Case-based research**
  - Interest in the historical origins of diversity among concrete cases
  - Genetic explanation and historically concrete generalization
  - **Ideal types** are selectively developed theoretical models (Ragin/Zaret 1983)
  - Ideal type concepts cannot be used in the formulation of testable generalisations which enables the explanation and prediction of phenomena (Papineau 1976)
- **Comparative inquiries**
  - They allow generalizations on the basis of the logics of most similiar or most different systems designs
- **Variable-based strategies:** Seeks transhistorical generalizations, not concrete knowledge about specific cases (Ragin/Zaret 1983)
  - Generalizations are based on inductive reasoning on the basis of a sufficiently large and representative sample representing the whole population. They allow the explanation and prediction of phenomena

3. The Nuremberg region: A regional case study as an example for a qualitative research on commonalities

-Analysis of the whole case, because single aspects cannot be understood without reference to the whole

-Empirical basis: Analysis of statistics and documents on the region and 16 interviews conducted from January to March 2004 with representatives from regional companies, trade unions, business associations, the regional Chamber of Commerce and Industry and different regional networks of competence

The theoretical interest: The renewal of regional capabilities

- *Regional capabilities:* The capability to provide collective competition goods and to stimulate and stabilize communication and cooperation between regional companies, schools, universities, technology transfer, research and development facilities and political and administrative actors
- The capabilities of a region consist in
  - The *organizational* capabilities of the regional companies
  - its institutionally stabilized regional patterns of competition and cooperation (*networks*)
  - its regional *institutions* providing collective resources which can be used in organisation in order to advance organisational, technical and social innovations

Interview Guide for the EUROCAP Study (extracts)

1. **Questions About the General Field of Duty**
- What are the exact duties of your institution?
- What are your duties within this institution?

2. **R&D Activities**
- On which fields do the research activities concentrate in this region?
- Who are the crucial protagonists in research and development according to your opinion?
- To what extent do you work together with other businesses, universities, research facilities etc? How does this cooperation look like?

3. **Connections Between Businesses in the Region**
- Do you know to what extent the supply relationships of the businesses are regional?

4. **Connections with Regional Associations and Political Facilities**
- How did the regional government react to different kinds of crisis in the past? What effect did they have on the local economy?

5. **Workforce/Education**
- What are the strengths of the regional education facilities and what are the weaknesses?

6. **Regional Welfare**

7. **General Questions**
- What are the strengths and the weaknesses of this region?

Analytical dimensions	Central Franconia
Political, economic and cultural identity	Yes, as Nuremberg-Erlangen region
Major economic clusters	Medicine-pharmaceutics-health, energy and environment, transport and logistics, communications and multimedia
Entrepreneurial structure of the region	One very large companies (Siemens), a lot of endogenous SME firms and foreign-owned firms
Sectoral structure	Electrical and mechanical engineering; Advanced technology manufacturing
Export intensity of the industry	42 % (2002)
R&D infrastructure	Patent- and research-intensive firms and institutes
Industrial relations	Established patterns of collective negotiations; peripheral role of trade unions in the industrial restructuring
Public welfare	Relatively uniform, nation-wide provision of public services
Labour market (Unemployment rate 2002, employment rate 2001)	8.8 %, 69.3
Qualification	Huge share of low-skilled employees
Major challenge	Updating traditional capabilities; restructuring of a mature industrial region; overcoming lock-in-effects
Recent achievements	Gradual development of production-related services; closure of traditional plants

From an Industrial Region to a Technology-based Service Region
- Crucial role of big companies (Siemens: 33,000 employees in the region)
- Quick deinstrialization (Grundig, Triumph Adler, ADtranz, Cebal, ABB/ALSTOM) and development of the service sector (creation of 170,000 jobs in the service sector, while 100,000 industrial jobs have been lost in the last three decades)
- Knowledge-based economic structure: High patent ratio; high share of advanced tech[illegible]

Population, labour market und innovation in Central Franconia

	Central Franconia	Germany	EU 15
Population in 1000, 2000	1685	82188	375,460
GDP per capita (PPS 2000, EU15 = 100)	126,3	106,4	100
Employment rate (ages 15-64 as % of pop. aged 15-64), 2001	**69,3**	65,7	64,3
Unemployment rate (%) Total, 2001	5,2	7,8	7,6
Long term unemployed, 2001 (% of total unempl.)	46	49,6	42,5
Agricultural employment (% of total), 2001	2,9	2,6	4,1
Industrial employment (% of total), 2001	**36,7**	32,8	28,5
Services employment (% of total), 2001	60,4	64,6	66,7
Low educational attainment of persons aged 25-59 (% of total), 2001	18,6	16,1	34,2
Medium educational attainment of : persons aged 25-59 (% of total), 2001	56,7	59,7	43,5
High educational attainment of : persons aged 25-59 (% of total), 2001	24,7	24,2	22,3
R&D Expenditure in % GDP (1997)	2,5	2,3	1,85
High and medium high tech manufacturing (in % of total employment; 2002)	**14,1**	11,4	7,4
High-tech manufacturing (in % of total employment; 2002)	**2,5**	1,9	1,3
Knowledge-intensive services (in % of total employment; 2002)	31,1	31,8	33,3
EPO patent applications per million inh., average 98-99-2000	**445,5**	271,9	140,1
High tech patent applications - 2000 per million inhabitants	**95,18**	49 (2001)	32 (2001)

Case studies are not based only on interviews, but on a method mix including quantitative evidence as well

Development vision of the Nuremberg economic region (1998)

- Aim: A better cooperation between economy, science and politics and a focusing of the Bavarian innovation policy on the regional strengths
- Actors: Unions, regional Chamber of Industry and Commerce (IHK), regional cities and rural districts, the federal state of Bavaria
- Definition of core competences
  1. Medical Technology and Pharma
  2. Communication and Multimedia
  3. Energy and Environment
  4. Transport and Logistics
  5. New Materials and Process Technology
- The selection of the five competence fields was a compromise between actors interested in the path-dependent development of existing industries (especially the unions) and public actors interested in investments in new technologies

Our practical conclusion: The prerequisites of a successful regional policy

- Careful selection of regional strengths (consensus, but not too many „bad“ compromises“
- A competence initiative for each regional cluster (with an own office and representation)
- Innovation- und technology centres (attached to the competence initiatives)
- No diffuse networking, but specialized project teams
- Effective use of public money (70 projects; DM 750 million): Investment in the five competence fields
- Currently no close cooperation between the regional industry and universities

Our theoretical conclusion: Regional experimentalism

- Classic forms of regional support: Public provision of collective competition goods or “real services”. What type of public goods are required?
- “The aim of regional experimentalism is to create an organization capable of re-evaluating and revising its substantive purposes … experimentalist institutions will find out and adjust means and ends accordingly” (Sabel 1996)

⇒A new, processual type of regional governance: “Learning” regional institutions which create the conditions for a creative interpretation of new situations and opportunities

⇒“Pragmatistic collaboration” in which “each collaborator can continuously monitor the performance of the (relevant) others, while learning from them and acquiring skills” (Helper et al., 2000: 445)

Methodological questions and criteria

- Advantages
  - Holistic approach: Sensitivity to complexity and historical specificity
  - Generation of new conceptual schemes
  - Connection to social and political issues
- Interview selectivity
- Informant veracity
- Interviewer neutrality
- Generalizability: findings are specific o one case
- Replicability: Qualitative work should be transparent to others, so that findings can be verified independently
- Completeness of included factors: For example Exclusion of external ties to other firms and organizations, particularly the state, outside the region which are inappropriately eliminated from the analysis?
- Causation: Outcomes are analysed in terms of intersection of conditions: Which combinations of conditions produce a specific outcome? More concretely: Industrial networks, competence centers etc. may not the only or dominant reason for regional economic success

Source: Markusen (1999); Ragin (1987: ix).

4. Polish and German regions: Four regional case studies as examples for a comparative research on diversity

Territorial capabilities. The broad theoretical framework

- In the Eurocap-project we assumed institutions and organizations as "conversion factors" or collective actors able to convert local resources into **local collective and individual capabilities** (Negrelli/Pichieri)
- We defined regional or territorial capabilities as **local resources converted into individual and collective capabilities** in many fields: innovation, markets, products, work, quality of life, etc. And in the territory, the capabilities for innovation are particularly facilitated by the institutions able to convert resources like high education, entrepreneurship, research teams, tacit and explicit knowledge." (Negrelli/Pichieri)
- Territorial capabilities for voice are shaped by:
  - capabilities for social recognition (refer to unions and employers' organizations, civil society)
  - capabilities for collective action and social negotiation;
  - capabilities for social argumentation or social discussion/participation
- The **production of local collective competition goods** can improve the economic performance of a local system (and of its firms), without mechanically producing an improvement in personal capabilities
- The only ethically legitimate standard for public action is *the person*, precisely the *state of the person* as regards the scope of real freedoms available in choosing and leading the life he or she wishes" (Salais) => local collective competition goods are *resources* which *can* become, but not necessarily become *personal capabilities*.

The analytical distinction of two dimensions of regional capabilities

The renewal of regional capabilities depends on two conditions:

1. The **regional provision of collective competition goods** (LCCG) (subsidies, qualified employees, R&D facilities, technology transfer, access to advanced suppliers and services …) => heterodox perspective of Storper
2. A "learning" institutional environment facilitating the simultaneous **"reinvention" of organisational and regional capabilities (=>** reflexive perspective of Storper or "**Second order LCCG")**: Complementary to the restructuring of the regional firms, the region, its boundaries, its identities, its governance structures, its local collective competition goods and its political and associational actors have to be "re-invented" in order to face the uncertainties of an international competition on costs and innovation. The simultaneous and reciprocal "reinvention" of regional firms and governance structures is only possible in an experimental, discursive way which has been described

"Second order LCCG": Learning and trust-based relations

- Creation and better use of „first oder" collective competition goods (educational institutions, common R&D activities, technology transfer institutes) by a closter integration of public agencies and companies

Means and strategies

- Dialogue on strategic regional issues
- Information on new markets, scientific and technological opportunities, new competitors, products
- Collaborative R&D and training in order to develop new products or processes
- Identification of technological, qualificational or scientific bottlenecks in existing networks
- Creation of specific R&D and training facilities
- Inter-firm networking; brokers which bring firms and other stakeholders together
- Informal contacts through "industrial circles"
- Financial support for collaborative research, training, product development and technical services.
- Financial and other support for networks and inter-firm co-operation
- Contacts between various partners to develop new technologies, products or services

The common Eurocap-guidelines for the comparative description of French, British, Italian, German and Polish case studies

- The boundaries of the "local system" (e.g. a region or sub-region), the "economic identity", and the "local social identity"; historical context (e.g. a brief description of the last 10-15 years and two or three key turning points for the region).
- The institutional structure; the local system of "governance"
  - Industrial relations
  - Public welfare
  - R&D transfer
  - Education, qualifications, skills
  - New markets
- Description of the industrial structure (e.g. global players, small and medium enterprises, networks: horizontal and vertical)

Some empirical illustrations. Regional policies in Lower Silesia and Lesser Poland

1. The major focus: The attraction of foreign direct investors
   - Advantages: numerous and qualified workers; public subsidies, good traffic connections (motorways to Germany and the Czech Republic)
   - Limited local research and development capacities in production facilities
2. Technology transfer and new businesses
   - „Lower Silesian scientific Technology Incubator"
   - No systematic cooperation between universities and enterprises. But: Wroclaw Centre for Technology Transfer (WCTT)
3. Barriers to a regional cluster policy
   1. Sectoral and economic heterogeneity within the regions
   2. No consensus on a common developmental vision
   3. Limited involvement of regional actors in the definition of regional development projects
   4. But: Regional institutions for a cluster policy
   5. But: In principle good prerequisites for knowledge-based production processes (renown universities, huge student population, logistics

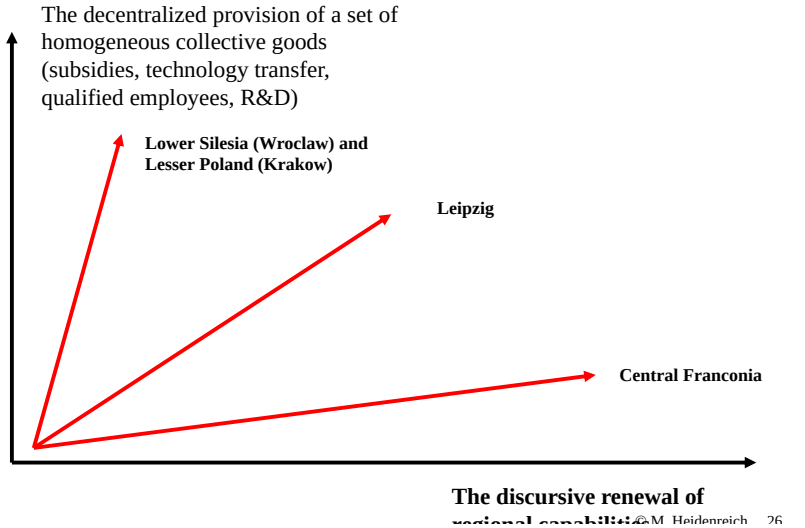
Regional policies between stabile regional orders and the discursive renewal of regional capabilities

	Support of regional firms and networks by a set of stable regional institutions	**Discursive, experimental construction of regional capabilities**
Strategic dimension	Provision of a stable set of local, mostly public competition goods	Procedural, experimental definition of required collective goods
Normative dimension	Stable, public, associational or trust-based norms facilitating credible interorganisational commitments	Discursive, negotiated development of rules; important role of experimental learning
Cognitive dimension	Institutional support for interorganisational, networked forms of learning based on tacit, non-codified knowledge (focus: learning organisations)	Continuous evaluation of the performance of regional arrangements supporting interorganisational learning (focus: learning organisations *and* institutions)
Regional identities	Regions defined by clear political and administrative boundaries	Regions sometimes have to redefine their boundaries also taking into account interorganisational networks and regional value chains
Crucial actors	Existing public agencies and intermediary associations (to a large extent shaped or created by national institutions and decisions)	Construction of a collective regional "steering committee" involving political, administrative, economic and (sometimes) scientific actors
Regional strategies	Often reflect national institutions and strategies	Consensual decision on the selective support of regional strengths by network policies and the provision of collective goods

Five crucial questions for a discursive renewal of regional capabilities

	Ger-many	Poland
1. What is the relevant region? Redefinition of the region and its boundaries => Relative coherence of institutional regions and socio-economically coherent territorial units	Yes (CF); No (L)	No
2. Creation of a regional "steering group" (or coordination platform) which embraced also unions, employers and business associations	Yes (CF); no (L)	No
3. Common and consensually developed vision integrating the various interests, experiences, visions, time-horizons, and success criteria of economic, scientific, and political actors into a common regional project => Effective use of public money	Yes (CF); no (L)	No (first steps)
4. New institutional infrastructure (competence centres, business incubators and technology transfer centres, network brokers …)	Yes	In some aspects
5. A central authority able to monitor the institutional changes at the regional level and to assist the regions to continually revise their strategies	No	Yes

The two dimensions of regional capabilities



Methodological questions and criteria

- The advantages and questions are the same as in the case-oriented research (Interview selectivity, informant veracity, interviewer neutrality, generalizability, replicability, completeness, causation)
- Justification of the criteria for the selection of cases: Differences or commonalities
- Logics of most similar and most diffent designs
  - „Most similiar design": By the choice of similiar countries/regions „the number of 'experimental' variables, although unknown and still large, is minimized. It is anticipated that if some important differences are found among these otherwise similar countries, then the number of factors attributable to these differences will be sufficiently small to warrant explanation in terms of these differences alone." (Przeworski/Teune 1970)
  - „Most different systems": Explanation in terms of commonalities
- Logic of a most-different design: The question is what was sufficiently common among the different Polish and German cases to produce essentially similar outcomes (regional development). For example the provision of local collective competition goods by the German and Polish regional policies?
- Logic of a most similar systems design within Poland: Differences between the largely comparable Krakow and Wroclaw regions allow the explanation of different outcomes (for example the industrial tradition of W. may explain the higher level of FDI in spite of similar regional policies

5. Patterns of regional inequalities in Europe. An example for quantitative research of differences among cases

Regional economic inequalities

	Gini (1995)	Rank	Gini (2003)	Rank	MLD (1995)	Rank	MLD (2003)	Rank	Changes (1995-03)
Poland	0.147	11	0.202	17	0.034	10	0.089	19	163%
Latvia	0.182	17	0.275	21	0.056	15	0.135	21	140%
Portugal	0.124	7	0.190	15	0.030	8	0.060	12	101%
Ireland	0.117	5	0.150	9	0.022	5	0.038	8	77%
Sweden	0.072	1	0.096	1	0.010	1	0.017	1	71%
Hungary	0.196	19	0.245	20	0.066	19	0.109	20	65%
Estonia	0.167	14	0.212	19	0.053	13	0.086	18	64%
Czech Rep.	0.127	9	0.145	8	0.035	11	0.057	11	62%
UK	0.158	12	0.184	13	0.055	14	0.078	16	42%
Finland	0.108	3	0.124	5	0.019	2	0.026	5	38%
Slovenia	0.119	6	0.135	7	0.024	6	0.033	7	38%
France	0.164	13	0.166	11	0.056	16	0.075	15	33%
Slovakia	0.181	16	0.188	14	0.062	17	0.082	17	31%
Netherlands	0.110	4	0.121	3	0.019	3	0.024	4	27%
Greece	0.092	2	0.099	2	0.020	4	0.023	2	16%
Belgium	0.198	20	0.198	16	0.063	18	0.067	13	7%
Germany	0.213	21	0.206	18	0.072	20	0.075	14	4%
Spain	0.127	8	0.126	6	0.026	7	0.024	3	-5%
Austria	0.171	15	0.165	10	0.047	12	0.043	9	-9%
Denmark	0.135	10	0.122	4	0.032	9	0.026	6	-18%
Italy	0.195	18	0.172	12	0.075	21	0.049	10	-35%
EU25 total	0.239		0.225		0.107		0.090		**-16%**
Within					0.052		0.060		
					48%		**67%**		
Between					0.055		0.030		
					52%		**33%**		

Decreasing regional inequalities between states and increasing inequalities within states

The above values refer to the gross national product per inhabitant (in purchasing power standards) for the 1.214 NUTS3-regions of the EU 25. The values are each weighted with the number of the population. Source: Eurostat, Regio Database (accessed 4/12/2005)

Convergence of the regional GDP per capita in 254 European NUTS2-regions (1995-2003; PPP)

Values in PPP	(1)	(2)	(3)
	EU25	EU15	NMS10
Country dummies	No	No	No
Observations	254	213	41
R-squared	0.28	0.10	0.05
Speed of convergence	**0.019**	**0.015**	0.013
Half-life period	**36.3**	**45.4**	55.3

(Absolute) convergence rate of 1.9 % in the enlarged EU corresponds to results of Barro, Sala-i-Martin and Armstrong

Regional GDP, market and disposable income

	GDP (EU21)	Market income (EU21)	Disposable income (EU21)
Population change	8006.4	-5047.6	-3033.2
Participation rate	64.7**	23.9**	18.3*
Unemployment rate	-60.7**	-61.1**	-71.3**
High and medium high technology manufacturing	-128.8**	-114.1**	-77.1**
Low and medium low technology	-42.5*	-56.3**	-39.8**
Knowledge-intensive services	53.9**	12.3	12.6
Services with low knowledge requirements	-10.1	21.2**	32.5**
Tertiary education	47.7**	46.8**	40.3**
EPO-patent applications	2.7**	1.5**	0.7*
Population density	3.4**	0.3*	0.1
Settlement Structure	-321.2+	-213.8**	-123.6*
Pentagon	1307.2+	1618.9**	1188.5**
Daily market accessible by car in terms of GDP	0.0+	0.0+	0.0
Motorways	4641.9**	-356.4	458.3
Social benefits and transfers	-15286.7**	-18417.3**	-6329.6**

in 215 EU-Regions in 21 countries (1995-2003). Multilevel mixed-effects linear regression

Interpretation of the model

- **Labour market situation (H3)**
  - *Population change* in the EU is correlated positively with the regional economic and income situation
  - The *employment rate* has a positive influence on economic performance
  - The *unemployment rate* is negatively correlated with the regional economic and income situation

  =>The level of employment is a crucial factor for the explanation of the regional economic performance and income situation
- **Industrial, educational, and innovation structures (H4)**
  - *Industries with low technological capabilities* have a negative impact on regional economic performance and regional income
  - *High-technology industries* are also negatively correlated with economic performance and income
  - *Knowledge-intensive service* industries have a positive influence on regional economic performance, but not on regional income
  - *Less knowledge-intensive services are* positively correlated with the market income and the disposable income, but not with regional economic performance
  - Qualified employees with are an important determinant of the regional income situation
  - Many *patents* have a positive impact on the regional economic and income situation
- **Settlement structures (H5)**
  - High incomes and a high regional economic performance are concentrated in the classical *European agglomeration area*, the pentagon (London, Milan, Munich, Hamburg, Paris)
  - Income in *condensed, urbanized areas* with a good traffic infrastructure (i.e. with large number of *motorways*) is clearly higher
  - The *size of the market* has also a positive influence.
- The regional economic and income situation can be explained largely by the regional economic, labour market and settlement structures

Methodological questions and challenges

- **Comparability of the incomparable -** a critical assumption: Are the selected "variables" in different countries and regions or the unit of analysis (the regions) are really comparable?
  - If this question is answered negatively, only the reconstruction of historically singular constellations is possible (idiographic method)
  - Otherwise the formulation of general rules is possible (nomothetic method; cf. Przeworski/Teune 1970)
- Measurement problems
- Lack of robustness of findings as an indicator for a fundamental **problem of dealing with complex macrophenomena** especially if the behavior of organized collectivities is the result of organized, collective action based on strategic interaction within and between the units of analysis (Kittel 2006)
- **Galton's problem/cross-border influences**: If transnational processes do exist, they would traverse all units of analysis and violate the closed system assumption of the comparative method … If supranational decisions are increasingly affecting national states, markets and societies in Europe and elsewhere, studies of international co-operation, world market interdependence or global cultures may provide better insight => analysis of the interactions between units of a transnational system (Ebbinghaus 1998)

6. Conclusion and outlook

- Three different research strategies in regional research: Qualitative research on commonalities, comparative research on diversity, quantitative research of differences among cases
- There are no perfect solutions to the problems and challenges of these different research strategies
- Is the combination of these strategies at least a pragmatic or viable solution?

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