Agenda

1. Cluster Policy and Economic Geography
2. Action Spaces and Rationalities: A Public Choice Perspective
3. Research Methodology
4. Empirical Findings
5. Implications and Outlook
In early 2005, the Second Global Cluster Initiative Survey identified 1,400 cluster initiatives worldwide.

Global Surge of Cluster Initiatives

Survey in early 2003

Tidal Wave: Cluster Policies in Germany*

**Federal Government (for new Länder)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiative</th>
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<tbody>
<tr>
<td>1995</td>
<td>High-Tech Initiative Bavaria</td>
</tr>
<tr>
<td>1999</td>
<td>Saarland Innovation Strategy</td>
</tr>
<tr>
<td>2000</td>
<td>Fields of Competence for Ruhr Area (NRW)</td>
</tr>
</tbody>
</table>

**State Governments**

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Schleswig-Holstein Cluster Policy</td>
</tr>
<tr>
<td>2003</td>
<td>Regional Growth Concepts Lower Saxony</td>
</tr>
<tr>
<td>2004</td>
<td>Brandenburg Cluster-oriented regional policy Berlin Innovation Strategy</td>
</tr>
<tr>
<td>2005</td>
<td>Cluster Initiative Bavaria</td>
</tr>
<tr>
<td>2006</td>
<td>Regional Networks Mecklenburg</td>
</tr>
<tr>
<td>2007</td>
<td>NRW Cluster Contests Cluster Contests Hesse, Baden-Württemberg</td>
</tr>
</tbody>
</table>
| 2008 | }
Federal Cluster Contests

Rationales
- regional networks for national technological competitiveness: biotech ⇒ open contest
- innovative capabilities in the new Länder ⇒ convergence

Recent Spitzencuster Contest
- leading-edge cluster contest
- 600 m € in three rounds for up to five cluster initiatives each
- applications for second round currently under review

http://www.ideen-zuenden.de/de/468.php

Cluster Policy

Cluster Initiative vs. Cluster Policy

Cluster Initiative = an organised effort to increase the growth and competitiveness of a cluster within a region, involving cluster firms, government and/or the research community
(Sölvell/Lindqvist/Ketels 2003, p. 31)

(Regional) Cluster Policy
- all efforts of government to develop and support clusters (in a particular region) (Hospers/Beugelsdijk 2002, p. 382)
- Industrial, structural, technology or innovation policy promoting regional specialisation
- Public efforts to develop concentrations of industry or network structures into clusters, or to promote existing clusters (cf. Bruch-Krumbein/Hochmuth 2000, p. 69 ff.)
### Dimensions of Cluster Policy

<table>
<thead>
<tr>
<th>Governance¹</th>
<th>Public</th>
<th>PPP</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster reference¹</td>
<td>Implicit</td>
<td>Explicit</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>Single Instrument</td>
<td>Holistic Approach</td>
<td></td>
</tr>
<tr>
<td>Cluster Orientation</td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Coherence</td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Institutionalisation</td>
<td>Weak</td>
<td>Strong</td>
<td></td>
</tr>
<tr>
<td>Maturity</td>
<td>Embryonic</td>
<td>Completed</td>
<td></td>
</tr>
</tbody>
</table>

1) cf. Fromhold-Eisebith/Eisebith 2005, p. 1256

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### Clusters and Networks: Conceptual Differences...

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>‣ Spatially bounded</td>
<td>‣ No spatial dimension</td>
</tr>
<tr>
<td>‣ Focuses co-operation and competition</td>
<td>‣ Focuses co-operation only</td>
</tr>
<tr>
<td>‣ Element of networks (external dimension)</td>
<td>‣ Part of clusters, but usually extending beyond clusters’ spatial confines</td>
</tr>
<tr>
<td>‣ Policy: Concept</td>
<td>‣ Policy: Instrument</td>
</tr>
</tbody>
</table>

...but commonly equated in policy and practice!
Scholarly Advice in German Regional Policy

“Over the years, geographers have developed a disturbing – even dysfunctional – habit of missing out on important intellectual and politically significant debates, even those in which geographers would seem to have a major role to play.” (Dicken 2004, p. 5; emphasis added).

| 1960s to 1970s | • Federal-state joint task (*Gemeinschaftsaufgabe*, *1969)  
| | • Export base theory, decentralisation of growth ⇒ spatial equity  
| | • Scholars: defining indicators ⇒ eligible areas; evaluation  
| Late 1970s to 1990s | • Endogenous potential  
| | • EU assuming conceptual leadership  
| | • Scholars ⇒ moderators, strategic actors  
| from 1990s | • Cluster approach  
| | • Case studies, typologies, best practice  
| | „first losing orientation and then track of policy“  


Public Choice Economics

- Uses instruments of (neoclassical) economic theory to explain the behaviour of actors in politics and practice (administration)
  - Methodological individualism
  - Rational behaviour
- **Self-interest axiom**: Political actors are striving to maximise their individual benefits, not public welfare (**economic rationality**, cf. Vanberg 1996)
- Incomplete information ⇒ **bounded rationality**
**Action Spaces of Cluster Promotion**

- **Conceptual Action Space**
  - **Economic Rationality** = pursuing maximisation of public welfare (cf. Vanberg 1996, p. 6 f.)
  - Includes objective, open-ended identification of target clusters
  - Functions of policy advice
    - information
    - legitimation
  - But: Academic advisors and professional consultants may also pursue their self-interest
    - e.g. convergence of interests btw politicians and advisors during selection process (cf. Frey/Kirchgässner 2002, p. 449 f.)

- **Political Action Space**
  - Implementation

- **Practical Action Space**
  - Votes

- **Academia**
  - Advice

Cf. Kiese 2008, p. 133
**Political Action Space**

- Politicians’ incentives
  - Maximising votes / chances for (re-)election
  - Prestige
  - Promotion into higher offices
  ⇒ **Opportunism / political rationality**

- Preference for short-term measures with high visibility for the public ⇒ **symbolic politics** (Edelman 1964, Meyer 1992)

- Neglect of long-term options
  - Poorly visible
  - Complex interrelations btw means and ends
  - Election cycles as planning horizon

- **Rent seeking** by organised minorities ⇒ political capture

**Practical Action Space: Bureaucracy**

- Key assumption: Bureaucrats also pursue their self-interest by maximising their
  - budgets (staff, responsibilities...; Niskanen 1971)
  - discretionary power (Williamson 1964)

**Consequences**

⇒ **Struggle for power and resources** between and within bureaucracies

⇒ Exaggeration of demand + understatement of costs = **oversupply of public goods** (Niskanen 1975) ⇒ cluster policy?!

⇒ Preference for **prestigious and highly visible projects**

⇒ Preference for „proven solutions“ (Franke 2000, p. 104) ⇒ structural inertia

⇒ **implicit theories** (Hofmann 1993) and accumulated experience ⇒ incremental, path-dependent *learning by doing*
Information Asymmetries in Cluster Policy

- **Principal** commissions **agent** with a task about which the agent has superior knowledge
  - hidden information
  - hidden action
  - hidden characteristics

⇒ **Asymmetric information** ⇒ **control problem**, agent may act opportunistically (**moral hazard**)

- **Cluster policy** = **multilevel principal-agent problem**
  - voter (P) ⇒ politician (A)
  - politician (P) ⇒ conceptual action space (e.g., consultants = A)
  - politician (P) ⇒ practical action space (bureaucracy = A)

Cf. Kiese 2008a, p. 134
Implications of Public Choice Economics

“Even if the public authority that oversees the cluster is highly competent and attempts to maximise local welfare, an optimal cluster policy looks like something extraordinarily difficult to achieve.”

“Cluster policies that already look fraught with difficulties in a world of benevolent governments look extremely unappealing when political agency is explicitly taken into account.”

(Duranton 2008, p. 25 f.; emphasis added)

- Welfare-enhancing cluster policies threatened by
  - multiple information asymmetries
  - political and bureaucratic rationalities
  - lobbying und rent seeking

Research Design I: Qualitative Case Studies

- **Cluster Policies** of three Länder in West Germany
  - NRW ~ structural change (Ruhr area)
  - Bavaria ~ late industrialisation, high-tech state
  - Lower Saxony ~ 'grey mass' region

- Seven case-studies at sub-state level
- 110 semi-structured interviews in 2006/2007 with 134 practitioners, consultants and independent observers, including
  - understanding of clusters & role of cluster theory
  - methods of cluster identification
  - policy advice & bureaucratic rationality
Research Design II: Postal Survey of C&N Managers

- Survey of 326 regional cluster and networks managers (CNM) across Germany in September 2008
- 123 usable responses = 37.7% response rate
- all relevant target industries and technologies

Publicised Understanding of Clusters

<table>
<thead>
<tr>
<th>State/Region/City</th>
<th>Publicised cluster understanding</th>
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</thead>
<tbody>
<tr>
<td>NRW</td>
<td>Porter + value chains + cluster management (state-wide + RegioClusters)</td>
</tr>
<tr>
<td>Lower Saxony</td>
<td>Regional Growth Concepts should reflect value chains</td>
</tr>
<tr>
<td>Bavaria</td>
<td>Organised state-wide networks btw firms / btw industry and research organisations to accelerate commercialisation of scientific knowledge (tech transfer); reference to Porter</td>
</tr>
<tr>
<td>Dortmund</td>
<td>Spatial concentration of firms and institutions within a specific industry</td>
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<tr>
<td>“Triangle”</td>
<td>Fields of competence ~ Porter</td>
</tr>
<tr>
<td>Wolfsburg</td>
<td>Cluster = Networking of all activities around a specific topic at a given location</td>
</tr>
<tr>
<td>Hannover</td>
<td>Porter with emphasis on networks</td>
</tr>
<tr>
<td>Brunswick</td>
<td>Regional concentration of industry and networks; Porter reference</td>
</tr>
<tr>
<td>Central Franconia</td>
<td>Networking of manufacturing, technology, services, R&amp;D; alignment with state government’s understanding of clusters as organised networks</td>
</tr>
<tr>
<td>Regensburg</td>
<td>Heterogeneous; variations of Porter</td>
</tr>
</tbody>
</table>
Cluster Understanding in Politics and Practice

- **Porter’s definition** only academic/theoretical reference
  - Cluster = “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, and trade associations) in particular fields that compete but also cooperate” (Porter 1998, p. 197 f.)

- General scepticism of theory; **practical know-how** and experience-based learning dominates
  - daily duty leaves no time to deal with fragmented theory
  - no recognition of practical value
  - ‘academic’ approach conflicts with mobilisation of firms

- **Technocratic** understanding: clusters are ‘made’ and often equated with organised effort (initiative/policy) ⇒ danger of overlooking / crowding out organic cluster development

- Equation of clusters and networks ⇒ institutionalisation

- Superficial reference to **value chains** ⇒ selectivity ⇒ rhetoric?!

Cluster Understanding: Postal Survey

- Technocratic perspective confirmed: Almost all CNM agree that a **qualified management is a necessary precondition** for clusters and networks to fulfil their demanding tasks.

- 60% of respondents believe that CNM should become an integral part of early-stage cluster development, while 5% think CNM joining in later might still be sufficient.

- Despite lack of unitary theory and ambivalent evidence: 90.4% of CNMs believe that clusters and networks stabilise and enhance their region’s economic fabric ⇒ **positive perception of clusters** hardly challenged

⇒ strong indication for **implicit theories** in policy and practice
Learning From Best-practice Case Studies

Do you draw on best-practice case studies of cluster development and critical success factors derived from them to support your practical work?

While cluster theory is generally disregarded, best-practice case studies of cluster promotion are occasionally referred to.

n = 117

Relevant CNM Activities and their Governability

n = 126
### Objectives of Cluster & Network Promotion

- Knowledge Transfer
- National/international visibility
- Firm growth and employment
- Enhance structures for communication
- Engage local policy and business
- New firm foundation and attraction
- Enhance structures for communication
- Engage local policy and business
- New firm foundation and attraction
- Mobilise funding
- Regional pool of specialized labor
- Root actors in the region

**Objectives of Cluster & Network Promotion**

**Perceived Risks of Cluster & Network Promotion**

- Divergent interests/objectives
- Overspecialisation, picking losers
- Closed shop & lock-in
- High costs for members
- Exclusion of other promising industries/technologies
- Securing network funding
- Networking as end in itself (lack of commitment)
- Dominance of single/few actors
- Instrumentalisation
- Knowledge leakage
- Unrealistic expectations and subsequent frustration
- Quality of CNM
- Loss of image and trust through failure to deliver

**Perceived Risks of Cluster & Network Promotion**
How Are Target Clusters Identified?

<table>
<thead>
<tr>
<th>Method</th>
<th>NRW</th>
<th>LS</th>
<th>Bav</th>
<th>Dort</th>
<th>Δ</th>
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<th>Hano</th>
<th>Bru</th>
<th>CF</th>
<th>Reg</th>
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</thead>
<tbody>
<tr>
<td>1. Expert opinion &amp; reports</td>
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<td>2. Moderation of regional actors</td>
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<td>3. Measures of concentration (absolute/relative)</td>
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<td>4. Dynamic analysis (e.g. shift-share)</td>
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<td>5. Input-output analysis</td>
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<td>6. Functional value chain analysis</td>
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<td>7. Network analysis</td>
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<td>8. Contests</td>
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<tr>
<td>Industry/technology growth forecasts ('Megatrends')</td>
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<tr>
<td>Decision by shareholder (politics) taken before the analysis</td>
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</table>

Methods based on Bergman/Feser 1999 and Krätke/Scheuplein 2001

Identification of Target Clusters

- Identification governed by politics and bureaucracy \(\Rightarrow\) legitimisation, no open-ended discovery process
- Time and budget constraints \(\Rightarrow\) cluster identification and concept development restricted to a few months, at the regional scale usually led or mediated by professional consultants
  - incomplete utilisation of available methods
  - improper methodology, technical flaws
- Megatrends tend to dominate at the expense of specific regional trajectories
  \(\Rightarrow\) Inflation and convergence of cluster portfolios
  \(\Rightarrow\) Danger of herd behaviour and promotion of 'wishful thinking' clusters (cf. Enright 2003, p. 104)
  \(\Rightarrow\) Conceptual action space governed by politics & bureaucracy
  \(\Rightarrow\) Cluster orientation subsequently declining
Professional Advisors in Cluster Policy Design

<table>
<thead>
<tr>
<th>State/Region/City</th>
<th>Consultant</th>
<th>Function/Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRW</td>
<td>IAT / RWI / FhG-ISI / Prognos AG</td>
<td>Strategic Reports</td>
</tr>
<tr>
<td>Lower Saxony</td>
<td>McKinsey &amp; Co., Dr. Heuser AG¹</td>
<td>Methodology of regional growth concepts as controllable business plans; stage model of cluster development process</td>
</tr>
<tr>
<td>Dortmund</td>
<td>McKinsey &amp; Co.</td>
<td>Concept and project development with controllable business plans; Governance by quantitative employment targets; transfer of process know-how (start-up contests); initially also involved in project realisation</td>
</tr>
<tr>
<td>&quot;Triangle&quot;</td>
<td>Dr. Vieregge GmbH</td>
<td>Report analysing pre-given fields of competence; identification of activity spaces within them</td>
</tr>
<tr>
<td>Wolfsburg</td>
<td>McKinsey &amp; Co.</td>
<td>Concept and project development with controllable business plans; Governance by quantitative employment targets; initially also involved in project realisation (Wolfsburg only)</td>
</tr>
<tr>
<td>Hannover</td>
<td>McKinsey &amp; Co., Dr. Heuser AG¹</td>
<td>Concept and project development with controllable business plans; Governance by quantitative employment targets; initially also involved in project realisation (Wolfsburg only)</td>
</tr>
<tr>
<td>Brunswick</td>
<td>McKinsey &amp; Co., Dr. Heuser AG¹</td>
<td>Concept and project development with controllable business plans; Governance by quantitative employment targets; initially also involved in project realisation (Wolfsburg only)</td>
</tr>
<tr>
<td>Central Fonia</td>
<td>Prognos AG</td>
<td>Moderation of regional actors to develop joint vision and consensus cluster portfolio (2005)</td>
</tr>
<tr>
<td>Regensburg</td>
<td>Ramboll Management</td>
<td>Moderation of strategic partnership; project development</td>
</tr>
</tbody>
</table>

IGU Commission on the Dynamics of Economic Spaces
Perth, Australia • 13-17 July, 2009

Assessing the Role of Cluster Policy Advice

- **Professional** management and policy consultants dominate
- Concept development more strongly internalised at state level (ministerial bureaucracy)
- Different forms of advice
  - Reports/expertises
  - Strategy, concept and project development
  - Moderation of regional actors
  - Implementation assistance
- Advice governed by orders containing narrowly defined tasks and methods ⇒ not independent
  - Information and legitimisation functions tend to blend
  - Conceptual action space governed by politics and bureaucracy ⇒ blurring spaces
### Academic vs. Professional Policy Advice

<table>
<thead>
<tr>
<th>Academic Advice (University Model)</th>
<th>Professional Advice (Management Consultancy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Analyse complex interdependencies</td>
<td>• Reduce complexity</td>
</tr>
<tr>
<td>• Conditional statements, differentiated recommendations, alternative options to choose from</td>
<td>• Prepare action and implementation</td>
</tr>
<tr>
<td>• Refrain from value judgements (?)</td>
<td>• Valuing options, forming strategic priorities</td>
</tr>
<tr>
<td>• Competent in methods and content</td>
<td>• Procedural knowledge &gt; content</td>
</tr>
<tr>
<td>• Independence (?) and transparency</td>
<td>• Intransparency (Proprietary methods as strategic assets)</td>
</tr>
<tr>
<td>• Long-term discourses</td>
<td>• Short-term results</td>
</tr>
<tr>
<td>• Policy advice may undermine scientific reputation</td>
<td>• Generate follow-up contracts</td>
</tr>
</tbody>
</table>

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### Fuzzy Action Spaces of Cluster Promotion

- **Conceptual Action Space**
  - Economic Rationality
  - Cluster Theory Methods for Cluster Identification & Analysis

- **Political Action Space**
  - Political Rationality
  - Blurred action spaces and rationalities:
    - Politics and Bureaucracy govern concept development
    - Action purpose-led ⇒ unity of reason? (cf. Wilgerodt 1994)

- **Practical Action Space**
  - Bureaucratic Rationality

- **Electorate**
  - Principal-Agent Constellation

Cf. Kiese 2008, p. 133
Conclusions (1/2)

- Explicit influence of cluster theory limited to Porter definition, implicit impact hard to separate from accumulated experience (learning by doing)
- Methods for identification of potential clusters underutilised
  - Political pressure ⇒ short-term savings may ultimately fall back as long-term costs of policy failure
- Cluster policy rarely based on objective and open-ended analysis ⇒ cluster Policy
  - “It is impossible to resist the conclusion that the policy tail is wagging the analytical dog and wagging it so hard indeed that much of the theory is shaken out.” (Lovering 1999, p. 390; emphasis added)
- Result: Cluster orientation of programmes tends to decline over time

Conclusions (2/2)

- Diverse functions of professional policy advice, but political and bureaucratic governance
- legitimation > information function of policy advice
- Systematic policy distance of academic advisors
Outlook (1/2)

• Cluster policy – „yet another missed boat“ for economic geography?!
• Partial cluster theories cannot explain political action in clusters.
• New perspective needed: Towards an economic theory of cluster policy
  • explaining real phenomena informed by traditional Public Choice Economics
  • instrumental in regaining lost orientation
  • necessary foundation for efficient policy advice ⇒ societal relevance

Outlook (2/2)

• Academics should ...
  • link up with policy and practice whilst preserving autonomy and independence ⇒ value neutrality vs. action-orientation
  • account for political and bureaucratic rationalities when advising politicians
  • publicly advocate common welfare when politics and bureaucracy go astray (policy advice, e.g. via media, cf. Cassel 2001)
  • engage in critical discourse with professional advisors
  • overcome fragmentation within and between academic disciplines

⇒ Economic Geography is predestined to engage in interdisciplinary cluster policy research!
References (1/3)


References (2/3)

References (3/3)