

# Integration of European Research Systems: A Multi-Dimensional Phenomenon

Presentation at the Conference  
"Towards a European Research Area"  
Speyer, October 19-21

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# Overview

- **European Research Area: A historic ambition**
- **Questions, approach, main argument**
- **Integration within the EU system: Examples**
- **Integration outside of the EU system: Examples**
- **Guiding questions, preliminary answers**
- **Towards a better understanding?**

# European Research Area: A historic ambition (I)

- **The ambition: An open, competition-driven, competitive, attractive space for science, research, education and innovation across Europe – stop national segmentation and fragmentation**
- **ERA initiative in 2000 – Commission's management by surprise: addressing a broad range of S&T and education policy areas, at multiple levels - regional, national and EU**
- **Involving a number of different instruments and measures such as**
  - **EU Framework Programmes: 6th FP (2003-07) with New Instruments and ERANET: new forms of trans-national self-organisation**
  - **Open method of coordination: new forms of trans-national learning**
  - **'Barcelona' target to spend 3% of GDP on research: a European rhetoric normative target widely used in national policy-making**
  - **Schemes for intra- and extra-EU mobility of scientists and technologists**
- **2004 ff – even more ambitious: serious will of relevant institutional actors on national and transnational levels to create a pan-European funding agency for basic research ("European Research Council") in due time – almost unthinkable until the late 1990s**

# European Research Area: A historic ambition (II)

- **Do ERA-Developments signal the emergence of a post-national stage of knowledge production and exploitation?**
  - **New knowledge regimes: Increasing specialisation of knowledge production and division of labour globally**
  - **Big MNEs: global knowledge exploitation and knowledge generation**
  - **Big research organisation: global positioning**
  - **Individual excellent researchers: borders meaningless?**
- **Answers at what level?**
  - **Intensified competition of nation-states and national policy-making?**
  - **Integration into a European System? What forms? Has "Lisbon Agenda failed" (Romano Prodi) or will efforts intensify?**

# Guiding questions

- (1) Evidence of an increasing integration of research systems and their governance in Europe? What forms?**
  - (2) What role do national policy actors (governments, research councils and relevant public research organisations) play in the process of Europeanisation? Shaping, supporting, by-passing, blocking or ignoring ERA-related initiatives?**
  - (3) Consequences for governance of national policymaker's? Novel policy-mixes? New governance pattern dawning?**
- **Thorough answers require comparative research, in-depth and long-term ex post: Not possible yet!**
  - **Instead: speculation about intermediate results, based on informed observation, limited empirical analysis, and involvement in related strategic intelligence and policy consultancy.**
  - **Implicitly: a future research agenda**

# Conceptual approach

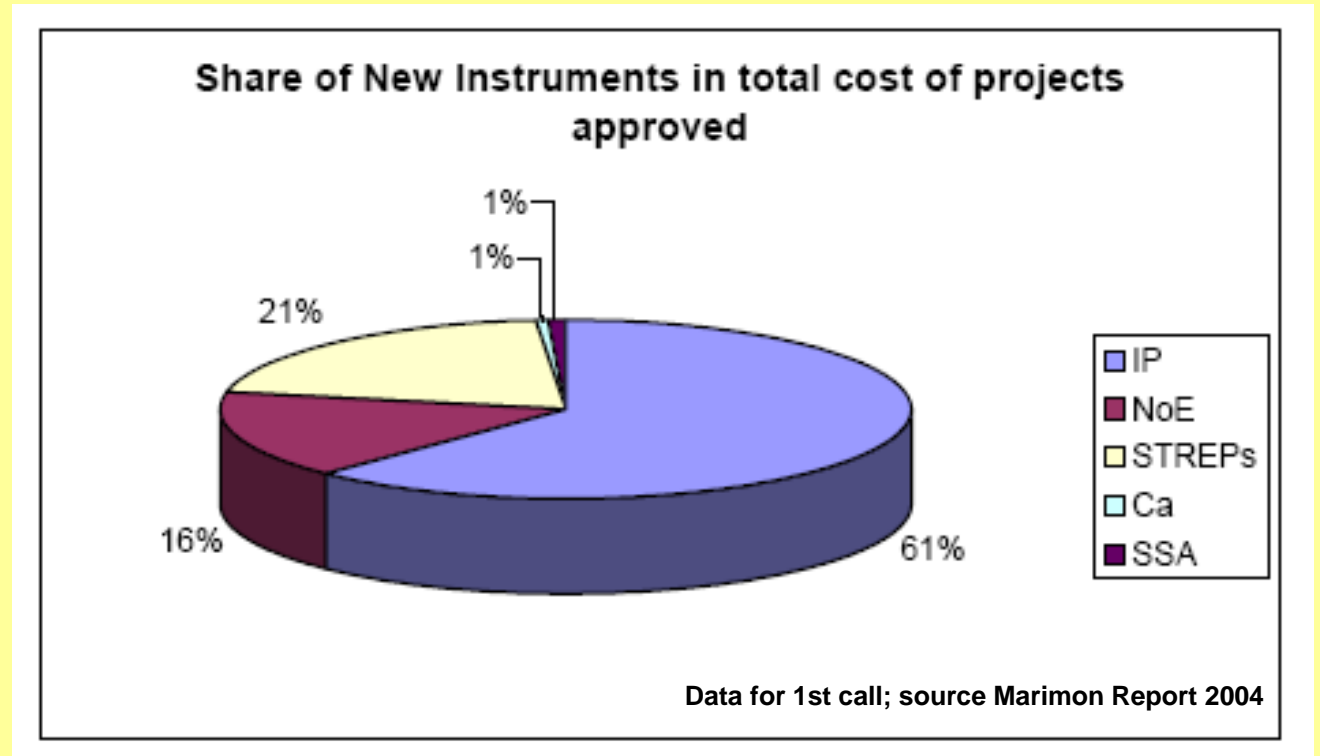
- **Unit of observation: Research systems in Europe and their governance**
- **Major premise: Integration of research systems and their governance is a political, economic and social process**
- **Political elites (codifying this integration), economic processes and social actors drive integration – and need to be analysed**
- **Working definition of integration:**
  - **Integration is "the creation and maintenance of intense and diversified patterns of interaction among previously autonomous units" (Wallace 1990, 9) ....**
    - ***Informal* integration "consists of patterns of interactions which develop without the impetus of deliberate political decisions, following the dynamics of markets , technology, communications networks and social change"**
    - ***Formal* integration consists of "changes in the framework of rules and regulations" impinging upon the informal flows and interactions.**

# Main argument

- We experience a qualitative change in the integration of European research systems: both within and outside the EU System of governance. This integration is both formal and informal and it is driven by political, economic, social dynamics at various levels. Developments are complex, interdependent and influence each other.
- National governments still set the authoritative decisions shaping the EU system.
- But: the "expansion of trans-national society, the pro-active activities of a supranational organisation, and the growing density of transactions and rules ... gradually, but inevitably, reduce the capacity of the member states to control outcomes" (Stone Sweet / Sandholtz 1997, p. 299-300).
- Thus, new governance schemes are emerging – and called for - at all levels, in order to optimise social benefits of international activities in Europe – and beyond.

# Integration *within* the EU system: New Instruments (1)

- The New Instruments (IPs; NoE) have taken the large majority of the funds (77%) from the start of the 6th Framework Programme (1st call)
- 32 participants on average in New Instruments vis-à-vis 17, 5 for FP in general = broader integration on level of researchers



# Integration *within* the EU system: New Instruments (2)

- **New governance: private companies and research organisations from across Europe organise the final distribution of the budget they are allocated.**
- **E.g. Networks of Excellence have set up governance mechanisms such as**
  - **formal calls for proposals**
  - **peer review procedures and other quality checks**
  - **'democratic' decision-making mechanisms and delegations of power**
  - **internal communication infrastructures and external dissemination channels.**
- **For the first time: structures in place that have the means to largely govern themselves**
- **These structures and their backing by large players (research organisations) signal a next step of strategic integration independent from the national ministries or funding structures.**
- **Frictions: Smaller MS – and smaller research actors / SMEs feel disadvantaged – traditional logic that small countries benefit more than big ones, has been shaken.**

# Integration *within* the EU system: Open method of Coordination (1)

- OMC introduced to all kinds of policies within the EU, especially in areas where "national diversities and regional particularities have to be taken into account carefully" (Presidency Conclusion 2000).
- 5 working groups of high level representatives of National Ministries responsible for Research have been set up: definition and exchanges of benchmark indicators and policy practice as the creation of a common basis upon which better coordination of national and regional policies may occur in the future.
- So far integration through OMC concerns methodological approaches, discursive practices and normative orientations in policy-making administrations rather than integration of policy-making itself.
- CREST-Report: The establishment of "networks of national policy-makers who may or may not work together on a multilateral basis through OMC or other formations" is one "concrete benefit" of the OMC.

# Integration *within* the EU system: Open method of Coordination (2)

- Earlier and parallel initiatives for an intelligence and discourse structure at *European* level, e.g.:
  - DG Enterprise's 'Trend Chart' and 'Score Board' on innovation policy;
  - DG Research's ERAWATCH on research and innovation policies, an incoming reference system for potential use at European and national level, i.e. funding agencies, business federations, large research organisations and even representatives of sub-national entities.
- OMC's consequences for national policymakers, so far?
  - European discourse exerts a normative and rhetoric pressure, via the benchmarking and reflexive coordination activities at European level ...
  - ... but also provided them with strong arguments for more research funding (3% Target)
  - ... and with opportunities for mutual, reflexive learning, finally a basis for policy co-ordination and competition on a higher level.

# Integration *within* the EU system: ERA-NET (1)

- Support for transnational networking and coordination of national research programmes,
  - aimed at national and regional funders and programme managers,
  - in order to "establish a common platform for the exchange of horizontal issues", increase the "reflection on intensified trans-national co-operation" (EU-Commission 2004a, p. 7),
  - as regards, e.g., the internationalisation and opening up of programmes.
- Dedicated budget of €156 Million, funding costs of co-ordinating the exchange and common work by the administrations.
- Altogether 90 ERA-Net projects have been granted (46%), 894 participants (target group reached),
- Currently, the Commission prepares ERANET-Plus scheme, as an attempt to build a bridge towards a full-fledged joint programming by national governments via the flexible ERANET-approach: top up of joint calls (single calls).

# Integration *within* the EU system: ERA-NET (2)

- ERA-NET's consequences for national policymakers, so far?
  - Again: Reflection, mutual learning, competition, but on additional levels
  - Integration of research policies *from below* as the research supporting system starts to integrate. High potential for more (analysis would be needed now)
  - ERA-NET (and ERA-NET-Plus) *potentially* enlarges the leverage of national policymakers, if international participation in their programmes can be aligned with their national programme strategies;
  - In some countries interesting tension between bottom up dynamic and reluctance / uncertainty at top level of ministries. National analyses running to make sense of this dynamic.

# Integration *outside* the EU system (1)

- ERA directly or indirectly stimulated an increasing number of '*bottom-up*' *trans-border collaborative research and/or funding initiatives* between research organisations and research funders, e.g.
  - Strategic cooperation of major public sector organisations (e.g. CNRS/FhG; CNRS/MPG; TNO/Joanneum Research; ...)
  - Joint initiatives along the lines of the 26 CNRS virtual “Laboratoires Europeens Associes” (LEA)
    - Common activities, each partner finances own activities, common search for sources
  - EUROCORES scheme implemented through the European Science Foundation
  - EUROHORCS' (Heads of Research Councils) and ESF (2003): joint EURYI-scheme (European Young Investigator Award),
    - Five years research in European country, research teams
    - Funding by members and co-funding by Commission, national and European selection process (European review panels)
    - Meanwhile 21 funding organisations from 17 countries participating,
    - strong interest / over-application (25, less 5% success)
  - Research training collaborations (e.g. NordForsk)

# Integration *outside* the EU system (2)

- ERA directly or indirectly stimulated *cross-border national funding streams* , e.g.
  - Mutual transfer of NRC grants over national borders
    - “money follows person”, "money follows cooperation line"
    - e.g. DACH (D – A – CH, to be extended with NOW and Scandinavian Councils)
    - 10 NRC have signed principle declaration of interest 2004)
  - French gov't announces opening of innovation-support to international application
  - Austria: Christian Doppler Labs abroad (Europe, but maybe even beyond)
  - Austria: CIRCE Programme (Cooperation for Innovatio and Research wiwth Central and Eastern Europe)
    - Co-operation and networking, firms and intermediary organisations (competence centres)
    - CEEC-actors participation mandatory, funded by Austrian government up to 40%

# Integration *outside* the EU system (3)

- ERA directly or indirectly stimulated *integration in structural terms*, e.g.
  - Forward Looks activities, ESF:
    - Aim: definition of future research priorities and agendas for funding at national and European level
    - European future oriented discourse of scientific community, funding agencies and policymakers (scientific foresight, research planning)
    - Bottom up (calls), implemented through ESF (150 KEURO), studies, workshops, conferences
    - ESF: Forward looks...also supports the "development of pan-European approaches by member organisations"
  - Increased international exchange of referees, joint review panels, quality benchmarks
  - Increasing representation of foreign scientists in strategic boards of institutes
  - Increasing interest representation of research organisation in Europe

# Integration *outside* the EU system (4): European Research Council

- **Commission's report: a need to introduce a *European level support mechanism for individual teams' research projects*'.**
- **Principle political backing: The 2004 Spring Council, and later the informal Competition Council, welcomed this suggestion to create a mechanism to support basic research at European level.**
- **Towards consensus (?): February 2005: High Level Expert Group Report finalises reporting initiatives; backing by a number of prominent individuals. Some critics remain.**
- **Envisaged characteristics: institutionally independent body; awarding funding through grants to proposals on a competitive basis; sole criterion of scientific excellence, appraised by independent peer review; grants to individuals or teams; in either established disciplines or multidisciplinary fields; *no* requirement for multinationality.**
- **Frontier Research: forefront, risky, science *and* technology, beyond traditional disciplines**
- **Rationale / Added Value (High Level Group 2005): higher level of competition, broader peer review, more selectivity, higher status (attraction) and more visibility of talent, additional possibilities for excellent researcher (no limitation to national priorities etc.)**

# Integration *outside* the EU system (4): ERC (contd.)

- ERC's consequences for national policymakers and funders, so far?
  - Strong support by EUROHORCS (national research councils) hoping for leverage effects: more money for research; higher quality standards; more professional selection procedures, more attractive European research system.
  - Many gov'ts are supportive, some reluctant, a few negative (strengthen the strong?)
  - Fears of cutting back national funds
- Potential longer term impact: New division of responsibilities and complementarities between ERC and NRCs
  - National responsibility for basic research not exclusive (in times of knowledge based economy!)
  - ERC facilitates leading edge, risky, and novel type of research, irrespective of disciplinary and national borders, globally visible
  - NRCs concentrate on enhancement of structural competencies within national, regional nor sectoral research systems (young researcher, careers, responsive mode funding), thus enabling researchers to compete globally.
  - ERC/NRC/others functional overlap not considered harmful: more opportunities.
  - Catalyst for European reference system for excellent research, European identity (?)

# Guiding questions, preliminary answers

- (1) Evidence of an increasing integration of research systems and their governance in Europe?**
- **Yes. No systematic integration, no grand design, but a diverse dynamic at various level and with various outreach**
  - **Europe has become an experimentation lab for research governance**
  - **EU-Commission has learned lessons: towards moderation /inspiration rather than centralisation**
- (2) Role of national policy actors? Shaping, supporting, by-passing, blocking or ignoring integrative initiatives?**
- **A bit of all!**
  - **Many are puzzled.**
  - **General tendency: The more competitive, professionally managed and internationally oriented an organisation, the more prone to welcome 'de-nationalisation' and integration – understood as a basis for increased competitiveness.**
  - **National "activists" use normative leeway at home and influence discourse in Brussels**
  - **National "victims" blame Brussels for reduced leeway and normative**

# Guiding questions, preliminary answers

## **(3) Change or increase of national policymaker's leeway? Novel policy-mixes? New governance pattern dawning?**

- **General shift from oligopolistic power structure in research policy dominated by national policy-makers arenas to multi-actor, multi-level arenas, characterised by network governance (less national aggregation of interest/strategies, more dispersed )**
- **But: National reference system still dominant**
- **Signs for new wave of bilateral- / multilateral initiatives: extended leeway outside EU**
- **More fundamental shifts in power:**
  - **Large countries' national state institutions will remain strong in financial terms, but suffer from institutional inertia preventing them from intelligent and fast learning.**
  - **Large multinational companies and agile, flexible and internationally competitive regional entities (provided sufficient autonomy: small countries; 'Länder'; 'Regions') are the winners of shifting governance.**

# Towards a better understanding?

- At least one clear observation: Uncertainty at all levels:
  - "National" benefit of international activities of (public) research: is there an optimum scope and scale?
  - What role of national governments?
  - What about target conflicts between actors, between levels (cohesion, institutional vs. "national", knowledge generation vs. exploitation...)?
- ☞ Need for systematic observation and analysis
- ☞ Some activities running (national studies of internationalisation, ERAWATCH)
- ☞ But multi-dimensional phenomenon: Analytical adaptations needed:
  - ☞ Concept of integration / dis-integration?
  - ☞ Interdependence between the various dimensions of integration (political, economic, social) (formal and informal) (inside and outside EU system).
  - ☞ Different patterns of political dynamics (e.g. Commission has variety of "partners" ERC = strong national funding organisations, ERANET = supporting system, OMC = national policy makers)
  - ☞ Relation between de-nationalisation / internationalisation and European integration
  - ☞ Effects!? Structural / Knowledge / economic benefit ? For whom? At what level?
- ☞ NoE PRIME might start...

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## Presentation based on

**Edler J. / Kuhlmann S. (2005): Towards One System? The European Research Area Initiative, the Integration of Research Systems and the Changing Leeway of National Policies, in: Technikfolgenabschätzung – Theorie und Praxis Nr. 1, 14. Jg., März 2005**