

S&T and innovation indicators for the New Member States – CEECs

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Basic questions:

- a) whether policy intelligence tools adopted for advanced countries are appropriate for less developed countries (and in particular, whether S&T/innovation indicators used in the OMC are fully appropriate for the EU-10 New Member States – CEECs)?
- b) if not, which complementary S&T/innovation indicators and studies should be foreseen and proposed?

EU-15 and EU-10 are characterized by:

- (partially) dissimilar economic structure and innovation systems.
- (partially) disparate R&D systems and management practices.
- (partially) divergent policy aims, agendas and (partially) dissimilar institutional set-up of the policy-making process.

(Partially) disparate R&D systems and management practices:

Government and education sectors dominate.

Academic drive very strong.

Disciplining mechanisms (accountability, policy evaluation, public debate, management techniques) weaker.

Existing incentives pushes much more towards international cooperation than intra-and-intersectoral research cooperation.

In effect -

***Intelligence tools* used by the EU do not seem to be (fully) appropriate for the NMS CEECs.**

Created to describe and understand advanced economies of the old EU member states do not always help to understand policy problems of less advanced NMS.

Why policy intelligence matters

The scope of EU policy is expanding over time. Inside each policy the scale of intervention is increasing and the EU is deploying more and more policy instruments.

EU is consisting of increasing number of more than ever diversified countries.

In consequence - forms of policy coordination and policy intelligence approaches at EU level are changing.

(Simplifying: from “integration by law” to “integration by figures” (indicators and benchmarks) in the Open Method of Coordination).

Silently accepted assumptions

If “integration by figures” is becoming more and more important, statisticians should disclose silently accepted background assumptions of statistics and statistical analysis in the OMC process and in all kind of “country fiches” used by DG-Research.

Silently accepted assumptions :

- context independency (equality of importance of variables despite of different context). “Ceteris paribus” principle and equal relevance of each indicator (variable) for each country,
- normal distribution of data/indicators,
- importance of “statistical average” (“European average”),
- High level of aggregation of data/indicators (mainly on National level),
- linearity of social systems... (and many others)

Are these assumption valid taking into account

- strength of context dependency,
- power-law distribution of many key R&D indicators,
- weak explanatory power of “average” and “European average” concepts (“Power-law distributions in social phenomena destroy the idea that that what matters is `average’” (P. Anderson),
- importance of regional and sectoral disaggregation,
- non-linearity of social systems (effects not proportional to the cause, increasing/ decreasing returns) etc.

Criticism

Recently, these silently accepted assumptions are becoming more and more criticized inside and around DG-Research:

- *Strengthening the foundations of the European Research Area. European Perspectives on Science and Technology Policy*, EC DG Research 2003.
- Robert Kaiser and Heiko Prange, *Managing diversity in a system of multi-level governance: the open method of co-ordination in innovation policy*, "Journal of European Public Policy" 11:2 April 2004
- Research project *The role of Science and Technology for Catching-Up Economies* (Production and Analysis of R&D Policy Indicators) 2006

How to translate these criticism into new proposals and analytical approaches?

Problem	Key issues	Proposals
Policy-making		
Public R&D systems and management practices		
Connections between the R&D system and innovation and economic systems		
