

Improving the knowledge base for Norwegian research and innovation policy

Focus on evaluations and indicators

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Sources for improving the knowledge base

- Through statistics and indicators
- Through evaluations, monitoring, foresight studies
- Through other kinds of analyses, ad-hoc studies, etc
- Through (learning)arenas for dialogue, co-operation, discussions/debate

Focus on Research Evaluation

- The Research Council of Norway (RCN) – the main body for research evaluations in Norway
 - – in addition to ministries and the two innovation agencies: Innovation Norway and SIVA
- 1992 – five research councils merged into one
- Long tradition for carrying out research evaluations.
 - The five research councils were all active in commissioning evaluations from the late 1970ies
- Evaluation is highly prioritised in Norwegian research and innovation policy

Research Evaluation in RCN

- RCN's evaluations shall contribute to enhance the quality, efficiency and relevance of the research sector.
- The evaluations activities shall
 - facilitate RCNs *funding* allocation
 - support the RCNs *advisory role* towards the Norwegian government, ministries and the research community/research institutions
 - Inform STI policy *debate*

RCN's evaluation activities

- Subject-specific evaluations/discipline evaluations
- Evaluations of institutes
- Evaluations of funding instruments, programmes or other council activities
- Research based evaluation of political reforms
- Foresight exercises

A shift in RCNs evaluation orientation/activities

- More weight on prioritizing evaluations with regard to the need and usefulness
- Stronger focus on follow-up and use of evaluations
- Stronger focus on RCN's own activities to develop further funding instruments
- Impact and programme evaluations are increasing

Strengths and weaknesses

■ Strengths:

- The legitimacy of evaluation activities is rather high
- The evaluations activities are continuously under discussion (how to be more useful, better designed, more adequate methods, etc)
- The cycles of discipline evaluations - proved valuable – highlight on a regular basis the strengths and weaknesses of Norwegian research

■ Weaknesses:

- Lack of an overall strategy in RCNs evaluation activities?
- Lack of evaluation studies taking a long-term perspective
- Lack of attention to the *aggregate strategic value* of evaluations
- Lack of ex ante evaluation tradition

A new evaluation strategy is in progress

- Focus will be on:
 - Systematic approach on initiating evaluations
 - Systematic approach on carrying out evaluations
 - Systematic approach on follow-up and use of evaluations

Major evaluation exercises conducted recently

- RCN is (2011- 12) evaluated by Technopolis Group
- Evaluations of the two innovation agencies in Norway - Innovation Norway and SIVA (The Industrial Development Corporation of Norway)
- These evaluations will be followed up by White Papers

Indicators in RCN knowledge base



RCN involvement in indicators

- National responsibility for statistics on R&D and innovation delegated from government
- Funding of projects and studies
- Development of in-house statistics and analyses
- Participation in international activities
(e.g. OECD/NESTI, ESF, ENID)

RCN national responsibilities

- Commission national R&D and innovation statistics
 - National statistics based on OECD framework
 - Bibliometrics and other studies
 - Carried out by NIFU and Statistics Norway
 - RCN: Activity funding, quality assessment, further development of indicators
- National science and innovation indicators report
 - Annual edition
 - as a book
 - dynamically on the web
 - Developed by NIFU and Statistics Norway
 - Contents:
 - Presentation of national R&D and innovation statistics
 - International comparisons (data from OECD and Eurostat)
 - Includes also indicators on higher education, patents, bibliometrics, collaboration, EU FP participation etc

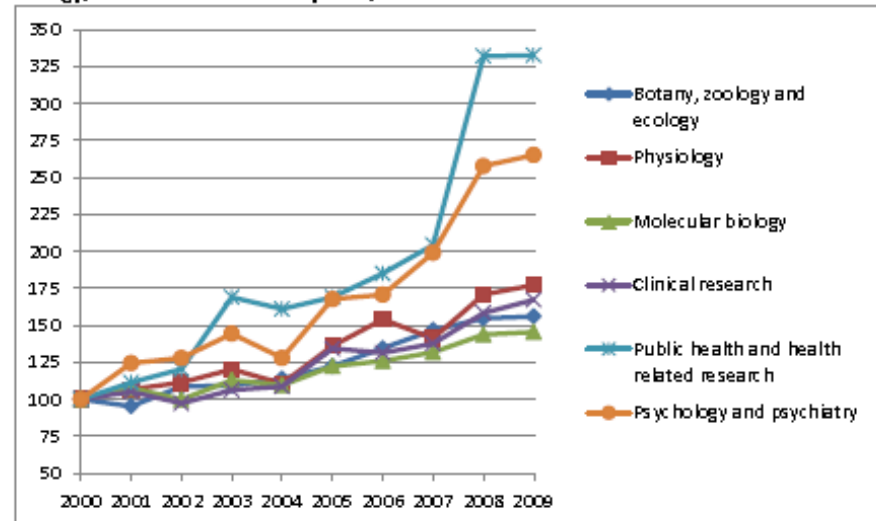
Commissioned reports

- example 1: bibliometrics

- Strengths and weaknesses of the national R&D system
 - Publication patterns
 - Citations
 - International comparisons
- Background information for evaluations
- Strategic advise and new instruments
 - Emerging fields
 - Collaboration patterns

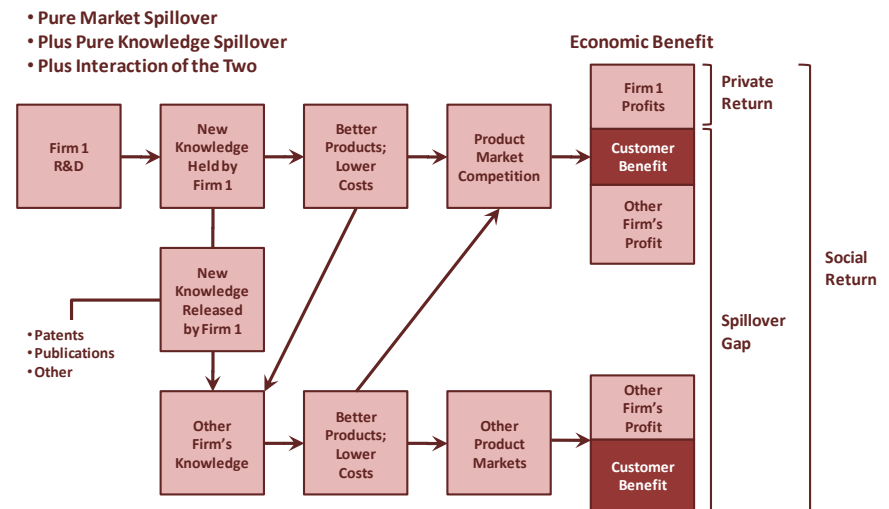
Example: Bibliometrics used in evaluations

Figure 3.1.3 Relative increase in the scientific publishing during the period from 2000 to 2009 in biology, medicine and health by field, index: 2000=100.



Commissioned studies, example 2: Private and public economic return / benefit from R & D / innovation (RCN funded projects)

- Indicators of success within the company
- Indicators of private economic returns
- Indicators of external effects
- Assessment of social and economic benefits



In-house data and analysis

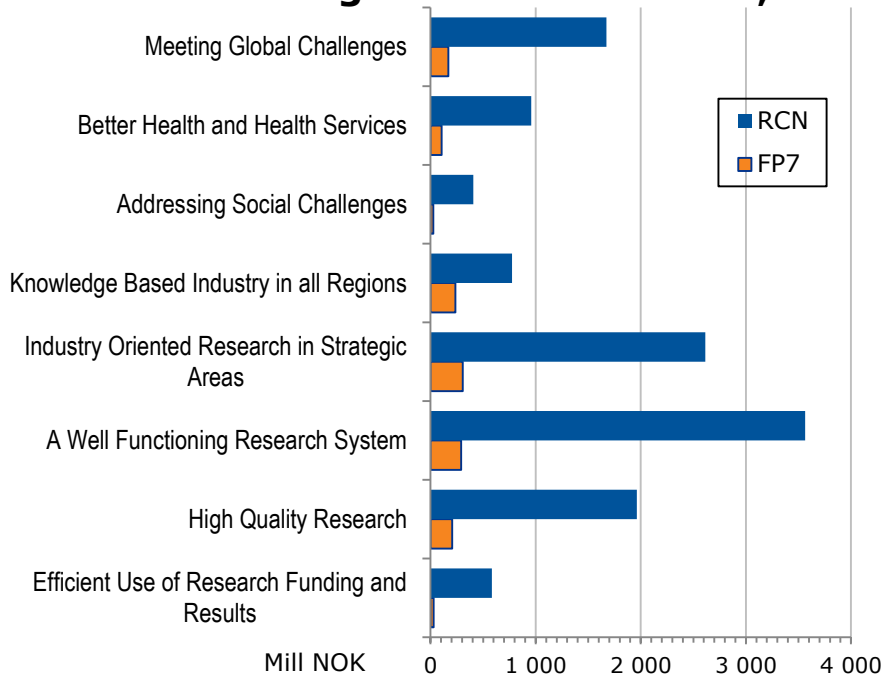
- Data collected through electronic handling of proposals, proposal evaluations, contracts, and reports
- All funded projects are tagged according to a set of dimensions, e.g.
 - RCN instruments (3 levels)
 - Disciplines, technologies and thematic focus (e.g. energy, health)
 - Types of research (basic, applied etc)
 - Data on the project (who, cooperating with whom, where, amounts of funding etc)
 - E.g. institutions, business sectors, regions, countries of international cooperation,
- Norway's participation in EU FPs analysed from Ecorda-data

RCN Annual report

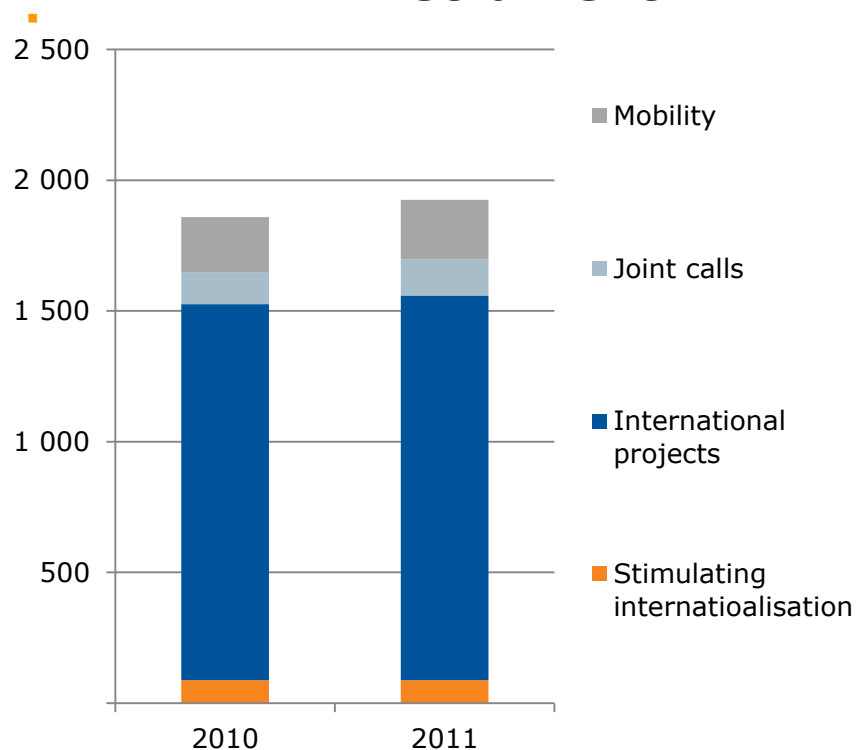
- includes indicators on many aspects of national policy and RCN funding

National research priorities

Funding from RCN and FP7, 2011



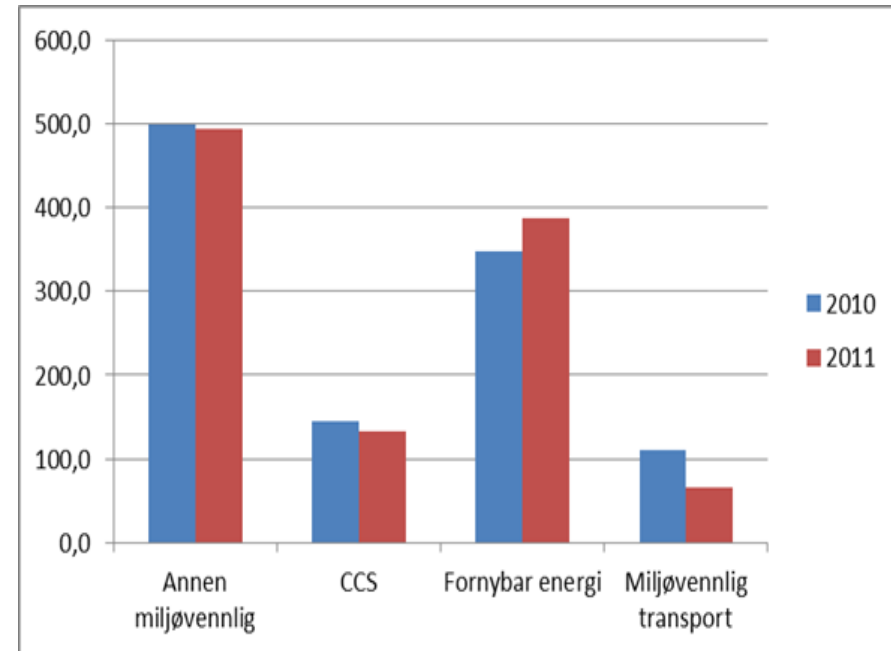
RCN internationalisation by instrument



Challenges for indicators

- Emerging fields of science
 - Which field to prioritize?
- Results and effects
 - Added value of RCN funding?
 - Business relevance?
- Increased international collaboration and JPIs
 - Volume and effects?
- Identifying prospective collaboration partners
- Comparative analysis

Example: Categories of energy research funded by RCN



What are the combined effects of RCN funding and other sources of funding?