European experiences with national research evaluation systems

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1. Definitions
   - National research evaluation systems
   - Performance-based institutional funding systems

2. A typology:
   - Four types: United Kingdom, Sweden, Norway, the Netherlands
   - More examples: Belgium (Flanders), Croatia, Czech Republic, Denmark, Finland, Italy, Portugal

3. Experience-based advice:
   - Evaluations and funding based on peer review
   - Indicator-based funding systems
   - General advice
Definitions

- **National research evaluation system**
  - A policy tool to advise, manage and improve the activities of public sector research organisations.
  - May also be used to change the distribution of funding among research organisations.

- **Performance-based research funding system (PRFS)**
  - The part of the organisational level (institutional) funding system that is allocated on a competitive basis.
The dual funding system
Our focus is on institutional level evaluation and/or funding

Government

**Competitive grants**
Projects and Programmes
Evaluation of individual applications for external funding

**Institutional funding**
- Historical
- Political
- Strategic
- **Performance-based**

Research organizations
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- **Hicks (2012) defines PRFS as related to both purposes; they are**
  - “national systems of research output **evaluation** used to distribute research **funding** to universities”. 
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Four types: United Kingdom
Combines two purposes: Research evaluation and funding

Seven major research assessments since 1986.

Originally, evaluation based on peer-review was the method and funding allocation was the purpose.

Now, the method has become an even more important purpose.
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The Metric Tide report (Wilsdon et al., 2015): “Metrics should support, not supplant, expert judgement.”
Four types: The Netherlands
Only one purpose: Research evaluation

This country does NOT have a PRFS.
It has a national research evaluation system. It’s purpose is to provide advice for improvement.
The results of the evaluation do not influence the funding.
Four types: Norway (1)

Two systems, one for each purpose: The research evaluation system

National research assessments inspired by the UK are performed at intervals.

Like in the Netherlands, they do not influence funding.
The aim of the subject-specific evaluations is to provide a critical review of the Norwegian research system in an international perspective, and to provide recommendations on measures to encourage increased quality and efficiency of research.
Four types: Norway (2)
Two systems, one for each purpose: The indicator-based funding system

- National budget for HE institutions
  - Not performance-based 69%
  - Performance-based 31%

  - Educational activities 85%
    - Study points
    - Student mobility
    - Final master degrees
    - Final PhD

  - Research activities 15%
    - EU external funding
    - Publication Points
    - National external funding
    - Revenues from contract research
Four types: Sweden 2009-2014
Purpose: Institutional funding

PRFS reallocation of a small portion of institutional funding based on two indicators:

1) External revenues
2) Publications and citations in Web of Science
Four types: Sweden in 2014: A change of model?
Combines two purposes: Research evaluation and funding

A UK-inspired model was designed by the Research Council and presented to the government.
Four types: Sweden
Purpose: Institutional funding

The Government chose not to implement the model.

PRFS still reallocates of a small portion of institutional funding based on two indicators:

1) External revenues
2) Publications and citations in Web of Science

Research evaluation will have to be organized locally at each institution.
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Four types: United Kingdom, Czech Republic?, (Italy)
Combines two purposes: Research evaluation and funding
Four types: The Netherlands, Norway (1), Portugal
Only one purpose: Research evaluation
Four types: Sweden, Belgium (Flanders) until 2009, (Italy)

Purpose: Institutional funding
Four types: Norway (2), Belgium (Flanders) from 2009, Denmark, Finland

Purpose: Institutional funding

Coverage of peer reviewed scholarly publications (Norway)

- Health Sciences
- Natural Sciences
- Engineering
- Social Sciences
- Humanities

<table>
<thead>
<tr>
<th>Category</th>
<th>Scopus</th>
<th>Web of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Sciences</td>
<td>80%</td>
<td>70%</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Engineering</td>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>50%</td>
<td>40%</td>
</tr>
<tr>
<td>Humanities</td>
<td>40%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Incomplete coverage of international journals in the social sciences and humanities.

Very limited coverage of books.

Random or no coverage of the national level (books and journals)

100 per cent?
UCD Dublin and Swedish universities

Purpose: Local needs
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Mutual Learning Exercise on PRFS in 2017
Organized by the European Commission for member states

Performance-based Research Funding Systems (PRFS) are one of the mechanisms through which countries try to increase the performance of their public sector research systems. The nature of these systems – based on peer reviews, metrics or a combination of both – varies considerably among countries. The MLE will provide a learning opportunity for countries willing to better understand the advantages and drawbacks of various options, improve ongoing PRFS and deepen the assessments of the impact of different systems.

Date 12 January 2017 to 11 September 2017
Exercise type Mutual learning
Geo coverage Austria, Croatia, Cyprus, Czech Republic, Estonia, Italy, Armenia, Moldova, Norway, Portugal, Slovenia, Spain, Sweden, Turkey
Mutual Learning Exercise on PRFS in 2017
Organized by the European Commission for member states

Performance-Based Funding of University Research

Performance-based Research Funding Systems (PRFS) are one of the tools for measuring the public sector research systems. The nature of these systems varies across countries. The MLE will provide a learning opportunity for countries to improve ongoing PRFS and deepen the assessments of the importance of research and innovation.

Date: 12 January 2017 to 1 February 2017
Exercise type: Mutual learning
Geo coverage: Austria, Croatia, Cyprus, Portugal, Slovenia, Spain
Best practice or mutual learning?

PRFS need to be examined in their national contexts to understand their motivations and design. While research is mostly international, research funding is mostly national. Country differences in the design of a PRFS and its motivations should be expected and respected.

The Metric Tide report (Wilsdon et al., 2015): “Metrics should support, not supplant, expert judgement.”
Outline

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1. Quantitative indicators cannot replace the judgment of expert assessors, but they can be used to help support them.
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2. Evaluation of research activity has to adapt to the mission and objectives of the institution, individual or group being evaluated.

3. Indicators need to be developed that reflect the impact of research activities locally and regionally, and those that are developed in languages other than English.

4. The data collection and analysis processes have to be open, transparent and simple.

5. Those evaluated have to be able to verify the analysis of the indicators being used for the evaluation and, if they disagree, request re-evaluation.

6. The differences existing in terms of impact in different fields of research have to be taken into account when producing indicators.

7. Individual evaluation of researchers has to be based on qualitative assessment of their portfolio. Indicators cannot be used without taking into account the researcher’s context.

8. False precision and misplaced concreteness must be avoided.

9. The effects of certain indicators as incentives for certain activities and disincentives for others must be taken into account.

10. The indicators have to be reviewed and updated regularly.
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Bibliometrics for indicator-based PRFS: Ten considerations

1. **Bibliometrics is not ‘objective’**. Use independent expertise and avoid power games in the design process.

2. Design the indicators in **dialogue** between the funder and the funded organisations and represent all areas of research in the process.

3. **Economic incentives** are inherently strong. Should not be stronger than necessary.

4. **Data sources**. Try to provide comprehensiveness and a balanced representation of all fields and publication practices.

5. **Definitions and delimitations**. Any chosen data source or indicator represents a definition and delimitation. Discuss definitions and their limitations.

6. **Indicators**. Discuss the dimensions of performances that indicators may represent, and whether they are available and valid across all fields.

7. **Field normalization** is needed because institutions have different research profiles. Field normalisation methods for citation indicators need to be supplemented with a balanced representation of productivity across fields.

8. **Counting methods**. They should be balanced between fields with different co-authorship practices, and should promote collaboration without stimulating the inclusion of authors with minimal contributions.

9. **Weighing of publication types**. Again: Balance the indicators across subfields with different publication practices, and stimulate a favourable development of those practices.

10. **Ranking of publication channels**. Stimulate quality and societal relevance at the same time.
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Unique, but still best practice? The Research Excellence Framework (REF) from an international perspective

Gunnar Sivertsen

ABSTRACT Inspired by The Metric Tide report (2015) on the role of metrics in research assessment and management, and Lord Nicholas Stern’s report Building on Success and Learning from Experience (2016), which deals with criticisms of REF2014 and gives advice for a redesign of REF2021, this article discusses the possible implications for other countries. It also contributes to the discussion of the future of the REF by taking an international perspective. The article offers a framework for understanding differences in the motivations and designs of performance-based research funding systems (PRFS) across countries. It also shows that a basis for mutual learning among countries is more needed than a formulation of best practice, thereby both contributing to and correcting the international outlook in The Metric Tide report and its supplementary Literature Review.

A bibliometric indicator with a balanced representation of all fields

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Abstract
As research in progress, we present two studies aimed at redesigning the bibliometric indicator of the “Norwegian Model” as response to an evaluation in 2013. The indicator is supposed to give a balanced representation of all fields, also those that are constructed as “peripheral” in traditional bibliometrics because of limited coverage in databases. The first study deals with balancing between different field-dependent co-authorship practices in the indicator, the other with the possible addition of a measurement of citation impact that could be applicable across all fields.

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General advice:
National institutional evaluation and/or funding systems

- Recognize that such systems are necessarily embedded in national contexts and policies: Seek mutual learning rather than ‘best practice’

- The system may do harm or may have positive effects, depending on how it is designed and implemented

- The system should be only one policy tool among several others. Create an ecology rather than a monoculture of funding mechanisms and incentives

- Consult several independent experts