



Foundation for  
Polish Science



# Alternatives to peer review

novel approaches to research evaluation

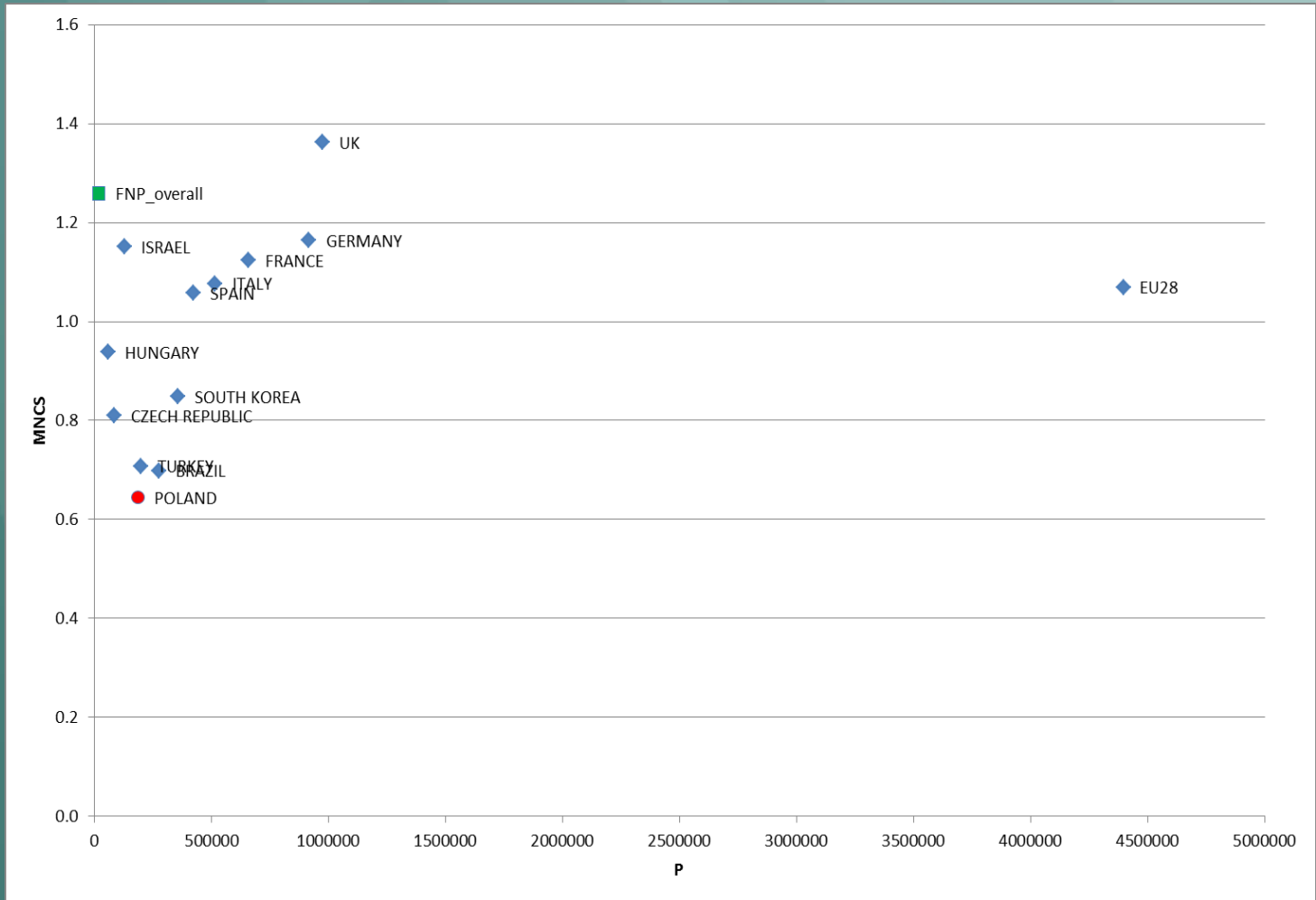


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# Foundation for Polish Science

the largest non-governmental organization  
funding research in Poland

- Created in 1991
- Investing in **PEOPLE**
- Funding based on **SCIENTIFIC EXCELLENCE**
- Annual spending (2013–2015) around 20 mln
- **HARD MONEY** principle



# Peer review in context

1. Well-known weaknesses of the system (subjective, conservative, discriminating, biased)
2. Polish research system
3. Bibliometric indicators
4. Limited funding

## Context 2: Polish research system

Until recently money for research distributed mostly on administrative basis (irregardles of the research quality)

- Foundation for Polish Science –1991
- The National Centre for Research and Development – 2009
- The National Science Centre – 2010
- Performance-based criteria for institutional funding –

## Context 2: Polish research system

- 50% of the Polish scientific output comes from mere 10% of Polish researchers
- 43% of Polish researchers has not published anything for the last 3 years
- 26% of Polish professors have not applied for grants for the last 5 years
- The more dynamic research career , the more activity in securing grants. Younger professors more often apply for grants seeking

## Context 3: Bibliometric indicators – how we use them

### Bibliometric analysis of FNP's laureates

- **Main questions:**
  - How do the FNP grantees perform compared to Poland and other EU28 countries, and other relevant countries?
  - What are the thematic strengths of FNP supported research?
- **Sample:** 543 laureates of different funding schemes
- Center for Science and Technology Studies (CWTS)

## Context 3: Bibliometric indicators – FNP's creed

Negative response of our researchers to the bibliometric analysis (inspite of their excellent results)

**Foundation does not apply bibliometrics to select and evaluate individual researchers**

Peer-review approach with scientific excellence as the most important criterion in awarding support

2014: San Francisco Declaration





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## Context 3: Bibliometric indicators – not an alternative to peer review

- mechanistic, reductionistic
- very tricky and can be misleading
- **not applicable to assessment of individual achievements**
- depicts the past
- takes the ability to judge science away from researchers

## Context 3: Bibliometric indicators – *qualitative study of FNP laureates* *(2013–15)*

- Research cannot be reduced to a single indicator  
**But:** successful research is about measurable effects
- Indicators can be misleading  
**But:** treated carefully indicators are better than no objective assessment (vide: Polish research system)
- When talking about other scientists, researchers themselves often use bibliometric indicators. **The same applies to reviewers**

## Context 4: limited funding – *quantitative study of Polish professors* *(2014–15)*

- **Main question:** how do Polish senior researchers perceive the current funding system (and the role of FNP)
- Survey sent to **5832 Polish professors**, up to 70 years old, working in research institutions, available email addresses
- **Return:** 678 surveys – 12%

## Context 4: limited funding

### – *quantitative study of Polish professors*

### cont.

- Over 50% declare they had to abort a promising research project because they had no funding
- They mostly blame the research funding system (insufficient institutional funding and low success rates in grant competition)
- Low success rate = lottery or conspiracy. Over 25% feel they had been wronged by the system. 7% even see the system as a conspiracy.
- Grant system and peer review are held responsible for exclusion of many researchers
- Grant system is based on subjective (mistaken, unfair) opinions (peer review)

# Peer review – how to enhance its quality?

- Careful choice of reviewers (over 5.000 reviewers in our database)
- Quality of reviews
- Foreign reviewers (2016): 80%
- Multilevel process (panel → written reviews → panel)
- Number of reviewers/panelists per application (2016): 4– 12
- **Benefit of a doubt**



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## Peer review – European Charter for researchers from a funder’s perspective

- Transparency
- Reviewers’ responsibility (anonymous reviews?)
- Feedback/discussion with panels
- Rebuttals

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HR EXCELLENCE IN RESEARCH

## Improving of peer review – barriers

- **Time** (How long can the process take? How much time can we allow for discussions, rebuttals)
- **Cost** (how much can you spend on reviews? Should the quality of review depend upon the value of funding?)
- **Reviewers fatigue** (where is the trade-off between having a perfect review and not having it at all)

# Evolution of peer review – new challenges

## New expectations of research and researchers

- Socio – economic impact of research
- Public engagement



- new criteria in research funding
- new stakeholders
- New selection mechanisms??





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# Thank you for your attention!

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