RESPONSIBLE RESEARCH AND INNOVATION: A BRIEF MEASUREMENT PERSPECTIVE

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SUPER MoRRI REFLECTION WEBINAR
Evaluation practices of research, and how responsibility is included

OECD
BETTER POLICIES FOR BETTER LIVES

RRI in OECD policy work

[OECD Legal Instruments](#) - Some examples:

- Daejeon Declaration on Science, Technology and Innovation Policies for the Global and Digital Age, 2015

- OECD Recommendation on Responsible Innovation in Neurotechnology, 2019

- Recommendation of the Council concerning Access to Research Data from Public Funding, 2021

- Recommendation of the Council concerning a General Framework of Principles for International Co-operation in Science and Technology, currently being updated

RRI a key issue for several OECD projects and [current policy interests](#):

- digitalisation of science policy

- future of research careers, transdisciplinarity,

- mobilizing S&T for greater resilience and sustainability

RRI from a measurement perspective: two interrelated angles

Measuring responsible research and innovation behaviours and practices

What for? Avenues? Where do we stand?

Responsible generation and use of indicators of research and innovation

Assessment and evaluation as a particular case of indicator use

What defines "Responsible" assessment of RRI

Measuring responsible research and innovation behaviours and practices

- The conceptual and practical challenges of RRI are common to those of measuring the features and impacts of R&D and innovation.

- Traditional "neutral" fmk stance about R&D and innovation, but this stance is hardly neutral in practice.

- Definition: The Oslo Manual defines an innovation as "a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)"

  - Para 1.26. This definition uses the generic term "unit" to describe the actor **responsible for innovations**. It refers to any institutional unit in any sector, including households and their individual members.

  - Para 2.22. **Value** is [...] an implicit goal of innovation, but cannot be guaranteed on an ex ante basis because innovation outcomes are uncertain and heterogeneous. Value-related measures are thus important for understanding the impacts of innovation, although there is no single measure of economic or social value in established statistical frameworks.

- Projects like SuperMORRI can provide helpful avenues and suggestions for wider diffusion

Embedding of RRI perspectives into measurement and assessment

Consider the logic model from different perspectives and possible outcomes

Anticipatory processes and foresight

Ex post measurement along the logic model

Inference/ attribution - Hindsight

Capture inputs, processes, outputs, outcomes

Collect data from multiple actor perspectives

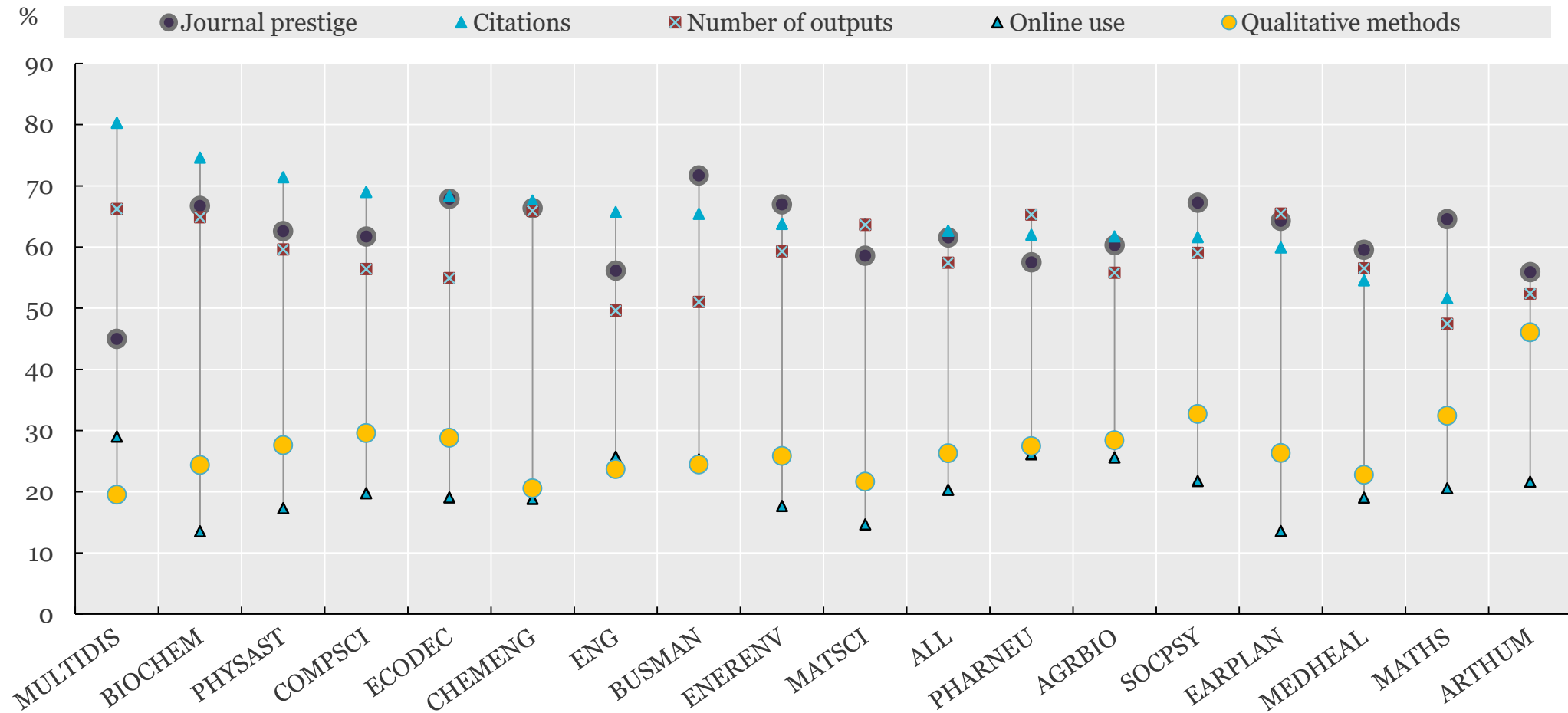Linkages to trace

Meaningful comparisons

Policy designs to attribute effects to causes

METRICS AND ASSESSMENT: RESPONSIBILITY ISSUES
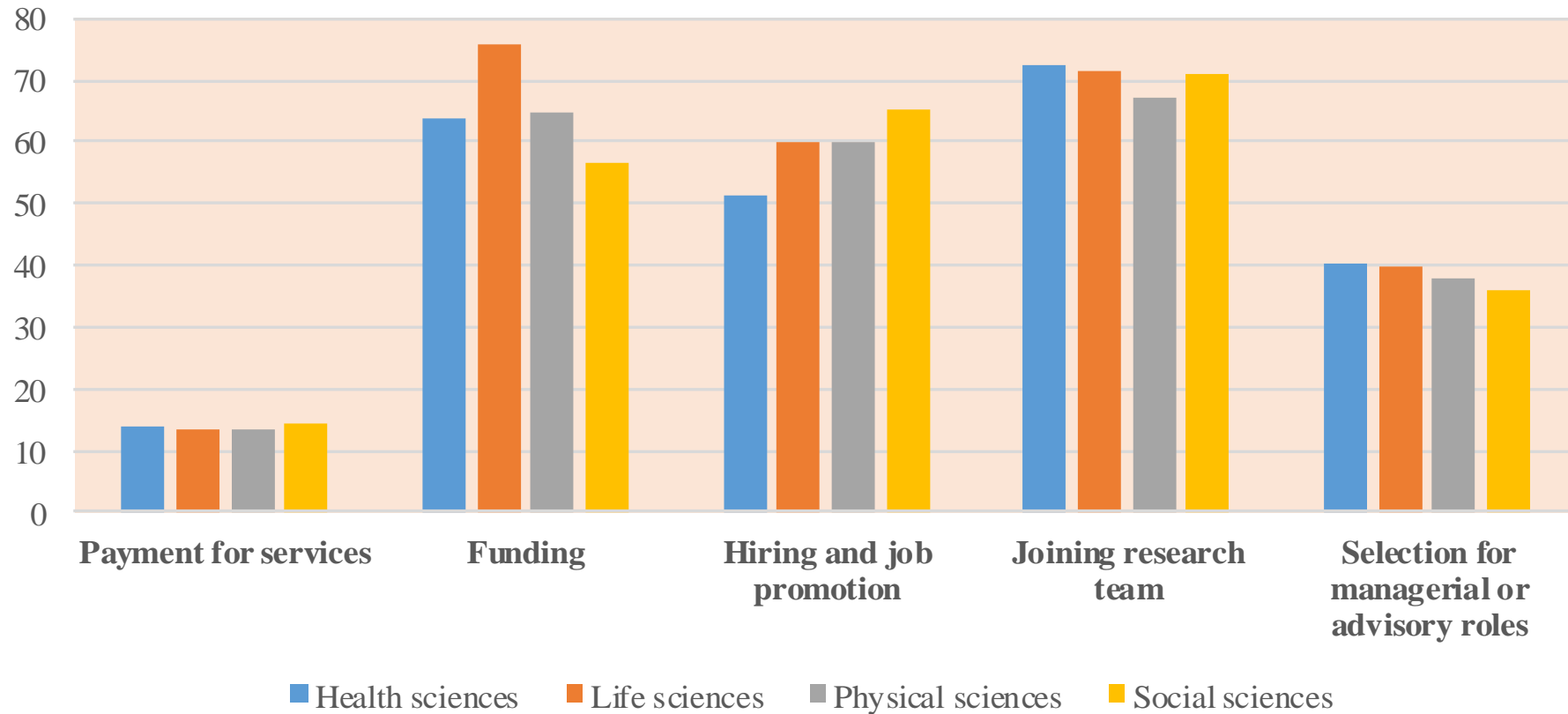
Use of research metrics, by type and field, ISSA2018

Note: Weighted estimates based on sampling weights adjusted for nonresponse.
Source: OECD International Survey of Scientific Authors (ISSA), 2018. http://oe.cd/issa .

Decisions in research systems informed by quantitative indicators of research

Percentage of respondents indicating different channels of indicator-based influence on their careers
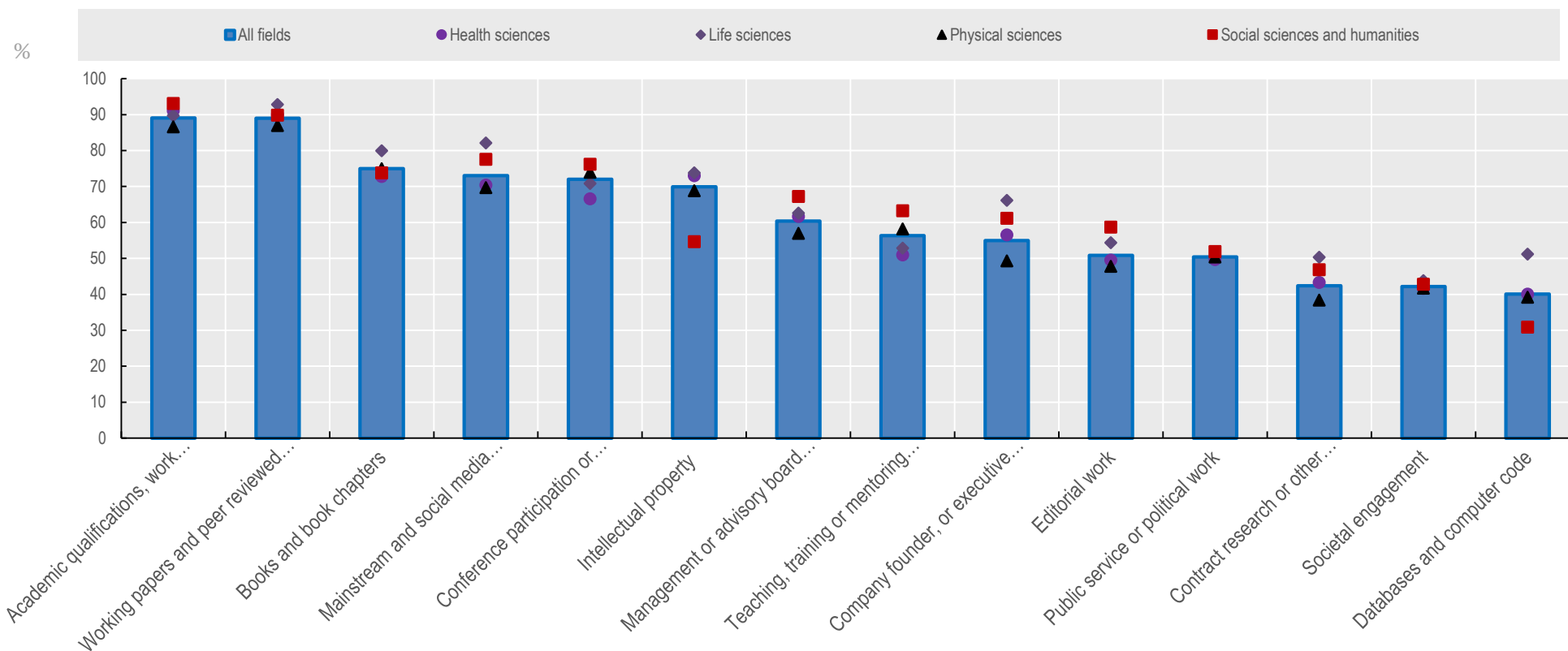
The uncertain "promise" of more Quant-metrics for research assessment

Self-reported online availability of information on research-related activities
As a percentage of respondents engaged in the relevant activity, by broad area of research

Note: Weighted estimates based on sampling weights adjusted for nonresponse.
Source: OECD International Survey of Scientific Authors (ISSA), 2018. http://oe.cd/issa

Trade-offs between the micro and macro levels of data analysis and indicators

Greater detail, flexibility, scope for analysing and understanding relationships
Less reliable indicators

going micro

National system

Institutions
Groups of researchers/projects

Individual researchers or projects

going macro

Higher robustness, less manipulable indicators
Less flexibility and information

And when to quant? Principles of low stakes measurement

Our own position at OECD in our STI stat work

- Responsibility towards governments (members and partners) and civil society in our indicators
  - Code of practice, OECD Recommendations on Statistical Best Practice, OECD Statistical programme of work.
- Stance on level of detail at which results are made available, rankings, composites, etc...
  - https://www.oecd.org/sti/scoreboard.htm
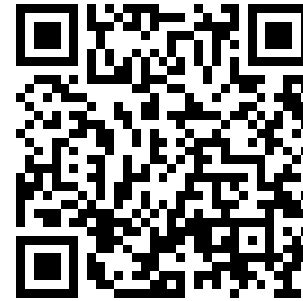- Challenges esp. in relation to our access and use

Thank you for your attention

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Help us map research careers and the role of science in the society

OECD International Survey of Science:

INTERNATIONAL SURVEY OF SCIENCE

https://oe.cd/issa2021en