Towards Responsible Research Assessment: Evidence from Survey and Focus Groups in Serbia

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Abstract
Research evaluation systems have traditionally relied on quantitative indicators such as publication counts and citation metrics. However, concerns have emerged about whether metric-based approaches adequately capture the diversity and complexity of research contributions. This paper examines researchers' perceptions of current research assessment practices and the values and assessment approaches they consider important for more responsible research assessment. The study draws on survey and focus group data collected from researchers and support staff at the Institute of Economic Sciences in Serbia within the ARISE project under the CoARA Boost Cascade Funding Programme. The findings show that although current evaluation procedures are generally perceived as transparent, researchers express concerns regarding the ability of quantitative indicators to adequately reflect research contributions. Rather than rejecting quantitative indicators, respondents support more balanced approaches that combine bibliometric evidence with qualitative assessment and peer review while recognising a broader range of academic contributions.

Keywords: responsible research assessment; research evaluation; researcher perceptions; research metrics; Serbia

1. Introduction

Research evaluation plays a central role in the governance of science, shaping decisions about research funding, academic careers, institutional reputation, and scientific priorities. Over the past decades, evaluation systems have increasingly relied on quantitative indicators such as publication counts, citation metrics, and journal-based indicators (Moed, 2005). While these indicators provide measurable evidence about research outputs, growing concerns have emerged regarding their limitations and unintended consequences. Excessive reliance on bibliometric indicators has been associated with a "publish or perish" culture and may oversimplify the complexity of research performance (Weingart, 2005; Wilsdon et al., 2015; Hicks et al., 2015). In addition, citation-based metrics may be affected by strategic citation practices and biases in citation indexing (Todd & Ladle, 2008; Simkin & Roychowdhury, 2006).

These concerns have stimulated interest in more balanced approaches to research evaluation that combine quantitative indicators with qualitative expert judgement. International initiatives

such as the San Francisco Declaration on Research Assessment (DORA) and the Coalition for Advancing Research Assessment (CoARA) advocate recognising a broader range of research contributions beyond journal-based metrics.

In the Serbian research system, research assessment operates at three levels: institutional evaluation, academic promotion, and the identification of excellent researchers. Across these levels, evaluation relies predominantly on quantitative indicators, including research funding, publication categories, and citation-based measures.

Recent studies have increasingly examined researchers' experiences and perceptions of research evaluation systems and performance indicators (Feenstra & Delgado López-Cózar, 2023; Rowlands & Wright, 2021; Caballero et al., 2025). At the same time, empirical studies have begun to examine how the principles of responsible research assessment and responsible metrics are interpreted and practiced in academic evaluation contexts (Rushforth & De Rijcke, 2024).

However, less attention has been paid to research systems where assessment remains strongly centred on quantitative performance indicators. Serbia provides an interesting case in this respect, as bibliometric criteria continue to play a dominant role in research evaluation despite growing international efforts to promote more responsible approaches to assessment. To address this gap, this study examines researchers' perceptions of current assessment practices, and the values and evaluation approaches they consider important for the development of more responsible forms of research assessment. Drawing on survey and focus group data collected within the ARISE project, the study explores both the strengths and limitations of existing evaluation systems and the broader contributions that researchers believe should be recognised.

The paper addresses the following research question: How do researchers perceive research assessment practices, and which values and evaluation approaches should guide the transition towards more responsible research assessment?

The study is designed as an exploratory institutional case study based on survey and focus group evidence collected at a Serbian research institute. It is not intended to provide statistically representative evidence for the Serbian research system.

2. Literature Review

Empirical evidence suggests that evaluation systems influence publication strategies, research agendas, career development, and broader academic practices. While assessment frameworks are often intended to promote research quality and accountability, researchers frequently express concerns regarding the behavioural effects of performance indicators and the extent to which existing evaluation systems capture the diversity of research contributions including changes in publication practices, research agendas, and other dimensions of academic work (Rowlands & Wright, 2021; Öztürk & Taşkın, 2024; Mertkan et al., 2022).

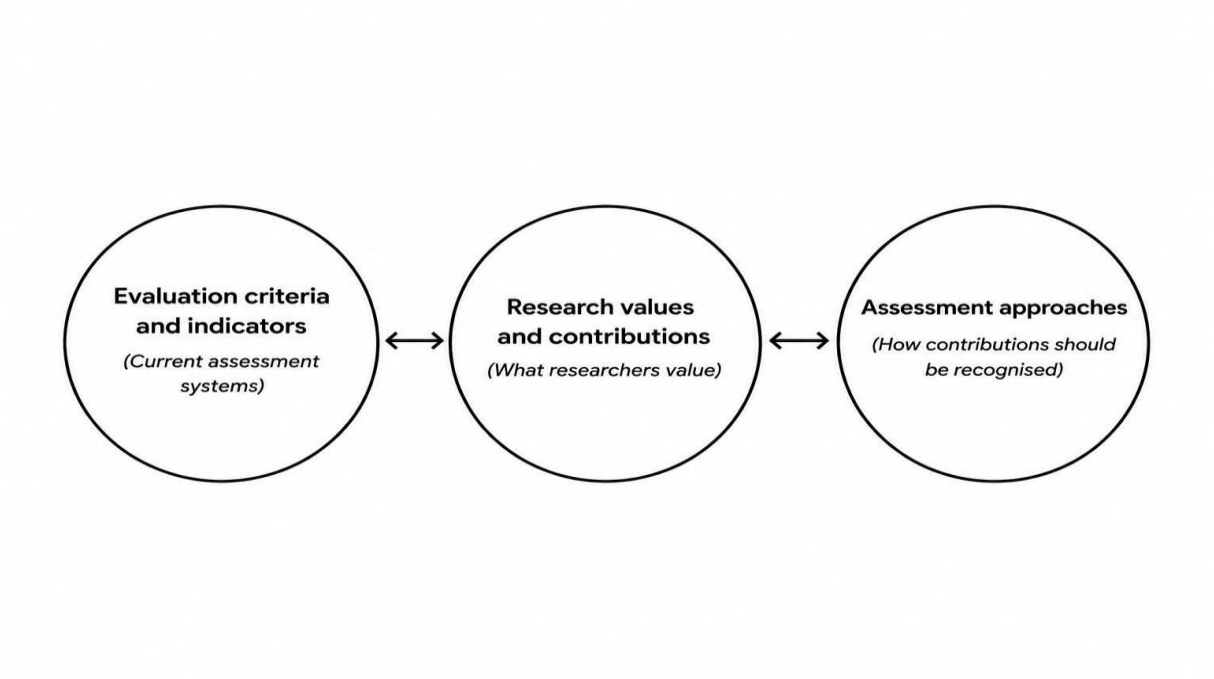
In response, initiatives such as DORA and CoARA advocate more balanced approaches that combine quantitative indicators with qualitative judgement and recognise a wider range of research contributions. Such perspectives are consistent with broader conceptualisations of research performance that recognise multiple dimensions of academic contribution beyond publication outputs, including activities related to dissemination, collaboration, and engagement within the research community (Bazeley, 2010).

Qualitative assessment is already an integral component of research evaluation through expert judgement, particularly peer review processes used in publication, funding, and promotion decisions (Smith, 2006). Previous research suggests that such evaluations involve contextual interpretation and deliberative judgement rather than purely rule-based assessment procedures (Lee et al., 2013; Pickering, 2010).

Although previous studies have examined research evaluation systems and researchers' perceptions in a variety of national contexts, empirical evidence from Central and Eastern European research systems remains relatively limited (Good et al., 2015). This highlights the need for empirical evidence on how researchers perceive existing assessment practices in these contexts, particularly in Serbia.

Building on the literature reviewed above, this study focuses on three interconnected dimensions of research assessment: current evaluation criteria and indicators, research values and contributions, and assessment approaches through which these contributions may be recognised. Figure 1 presents the conceptual framework guiding the study.

Figure 1. Conceptual framework



Source: Authors' elaboration based on the literature reviewed above

3. Data and Methodology

This study adopts a mixed-method research design combining survey data and focus group discussions. The empirical evidence was collected within the ARISE project (Advancing Research Assessment in Serbia: A Pilot Project for the Institute of Economic Sciences).

The survey was conducted among employees of the Institute of Economic Sciences, yielding 42 valid responses, representing approximately 80% of the Institute's staff. Respondents included researchers from all departments and career stages, as well as administrative staff. The questionnaire explored perceptions of current research evaluation practices and attitudes towards alternative approaches aligned with responsible research assessment principles. Survey data were analysed using frequency and percentage distributions, while several items employed five-point Likert scales.

In addition, two focus group discussions were conducted with researchers from different departments of the Institute (n=17). The discussions explored researchers' experiences with evaluation systems and their views on research values and assessment approaches. Qualitative data were analysed thematically by coding and grouping statements into broader categories related to research values, research contributions, and evaluation practices.

Since the survey addressed different components of the national research assessment system, Table 1 provides an overview of the main quantitative assessment criteria applied at each assessment level.

Table 1. Main quantitative assessment criteria across different levels of the Serbian research assessment system

Assessment level	**Main quantitative criteria**
Research organisations	Citation impact, research funding
Academic promotion	Publication categories and minimum quantitative thresholds
Research excellence	Publication output, citation indicators, top 10% field ranking

Source: Authors' compilation based on national research assessment regulations.

4. Empirical Findings

The findings reveal four broad patterns. First, researchers generally perceive assessment procedures as transparent but question the ability of quantitative indicators to fully capture research quality. Second, respondents support broader recognition of research contributions beyond publication outputs. Third, scientific quality, originality, and research integrity remain the most highly valued dimensions of research assessment. Finally, researchers support greater use of qualitative assessment approaches, if evaluation procedures remain transparent and balanced. The following subsections present these findings in greater detail.

4.1. Researchers' views on the national evaluation system for research institutions

While respondents generally perceive the national evaluation framework as transparent and understandable, they are considerably less convinced that the indicators used within the system adequately reflect institutional research performance. More than half of respondents (52.38%) agreed that the evaluation criteria are clear and transparent. In contrast, negative assessments of the adequacy of citation- and funding-based indicators (40.48%) substantially outnumbered positive ones (16.67%), while a large proportion of respondents (42.86%) adopted a neutral position. These findings suggest that researchers are less concerned with the procedural transparency of the evaluation system than with the ability of its indicators to capture the multifaceted nature of institutional research performance.

Respondents also expressed mixed but generally sceptical views regarding the extent to which the current evaluation framework reflects disciplinary specificities. Although a substantial proportion of respondents adopted a neutral position (40.48%), negative responses (42.85%) considerably outweighed positive ones. This suggests that many researchers question whether standardised evaluation criteria can adequately accommodate the diversity of disciplinary research practices.

Among all surveyed issues, the inclusion of qualitative elements in research assessment received one of the strongest levels of support. A total of 42.86% of respondents agreed and 40.48% strongly agreed that research evaluation should incorporate qualitative dimensions such

as research impact, relevance, and contributions to institutional or strategic development. The results point to a broad consensus that meaningful research assessment requires consideration of contributions that are not fully captured by quantitative indicators alone.

4.2. Researchers' views on promotion procedures and evaluation criteria

Respondents generally expressed positive views regarding the transparency and clarity of promotion procedures. Nearly nine out of ten respondents (89%) agreed or strongly agreed that the national criteria and procedures for academic promotion are clear and understandable. However, as discussed below, this positive assessment of procedural clarity was not always accompanied by similar confidence in the indicators used to evaluate individual scientific contributions.

Respondents expressed divided views regarding the ability of bibliometric indicators to capture individual scientific contributions and impact. Although nearly half of respondents (46%) agreed that such indicators provide an adequate basis for evaluation, a substantial proportion (36%) disagreed, indicating the absence of a clear consensus. A similar pattern emerged with respect to specific citation-based measures, such as citation counts and the H-index, where opinions were almost evenly split between agreement (38%) and disagreement (36%), while more than one-quarter of respondents remained neutral. These findings suggest that researchers recognise the value of bibliometric indicators but question their ability to provide a sufficiently comprehensive assessment of scientific contribution.

The findings also point to some uncertainty regarding the recognition of qualitative contributions in promotion procedures. While half of the respondents considered activities such as project leadership, international cooperation, editorial work, and mentoring to be sufficiently valued, more than one-quarter disagreed. This suggests that the visibility of such contributions within the promotion framework remains contested among researchers.

A more critical assessment emerged regarding the broader objectives of the promotion system. Nearly two-thirds of respondents (62%) disagreed that the current framework adequately recognises diverse career paths and forms of academic contribution, suggesting that many researchers perceive the system as insufficiently responsive to the diversity of research careers. Similar concerns were expressed regarding the incentives created by the promotion system. Half of the respondents (50%) disagreed that current evaluation procedures prioritise high-quality and ethically responsible research over quantitative outputs. This indicates that concerns extend beyond specific evaluation criteria to the broader principles and incentives embedded in the promotion system.

Respondents expressed mixed views regarding the introduction of additional qualitative approaches in promotion procedures. Support for mechanisms such as peer review of selected publications and narrative CVs (40%) slightly exceeded opposition (34%), while more than one-quarter of respondents remained neutral. This pattern suggests cautious openness towards qualitative assessment approaches rather than a clear consensus on their adoption.

4.3. Researchers' views on the national excellent framework

Awareness of the national framework for identifying excellent researchers was very high, with 93% of respondents reporting that they were familiar with the system. However, familiarity with the framework was not accompanied by equally positive views of its evaluation criteria. Only 31% of respondents considered the criteria based on field rankings and citation indicators to be clear and transparent, while 36% disagreed. This finding is particularly noteworthy given

that the Institute of Economic Sciences ranks among the two leading research institutes in Serbia in terms of the number of researchers recognised as "excellent researchers" within the national evaluation system.

Respondents expressed limited confidence not only in the indicators used to assess excellence, but also in the excellence model itself. Only 10% believed that the current system of identifying the top 10% of researchers adequately captures research excellence, while nearly half disagreed. Likewise, fewer than one-fifth of respondents considered publication categories and citation counts sufficient to reflect researchers' actual scientific contributions.

Most respondents (57.14%) believe that the current excellence framework places excessive emphasis on quantitative indicators such as publication output and citation performance. This perceived overreliance on metrics is accompanied by concerns that the framework insufficiently recognises diverse career paths, researcher profiles, and forms of scientific contribution.

Respondents also expressed support for incorporating qualitative elements into excellence assessment. Half of the respondents (50%) agreed that mechanisms such as peer review of selected publications and narrative descriptions of research contributions should complement existing evaluation procedures. At the same time, the findings suggest limited confidence in the ability of the current excellence ranking system to encourage higher-quality and more impactful research.

4.4. Values and priorities in research assessment

The survey results reveal a broad consensus regarding the values that should underpin research assessment. Originality and substantive scientific contribution received the highest ratings (average score 4.81), closely followed by research integrity and ethical conduct (4.79). At the same time, respondents also attached considerable importance to broader dimensions of research performance, including societal and policy impact (4.48) as well as collaboration and teamwork (4.31). These findings suggest that researchers do not view scientific excellence and broader research contributions as competing priorities. Rather, they support a multidimensional understanding of research performance that combines scientific quality with societal relevance, collaboration, and responsible research conduct.

Several dimensions nevertheless received somewhat lower ratings than the highest-ranked assessment values. Public engagement (average score 3.33) and mentoring (3.48) were considered less important than originality, scientific contribution, and research integrity, while the organisation of research activities (3.86) and open science practices (3.90) occupied an intermediate position. Although these dimensions were not among the highest priorities, the results suggest that respondents still regard them as relevant components of research performance.

The ranking of specific research activities reveals a similar pattern. Scientific publications emerged as the most highly valued dimension of research performance, followed by policy impact and project engagement. Citation impact and interdisciplinarity also received relatively high ratings. By contrast, mentoring, public engagement, database development, and international cooperation were assigned lower priority, indicating that respondents place greater emphasis on activities directly linked to scientific production and research impact.

4.5.Insights from focus group discussions

Focus group discussions contextualised the survey findings by showing how researchers understand research quality and scientific contribution in practice. While the survey captured general views on research assessment practices, the discussions enabled a deeper exploration of how researchers understand research quality and scientific contribution in practice.

Across both focus groups, participants consistently challenged the assumption that research quality can be adequately assessed through publication metrics alone. Although scientific publications were recognised as an important indicator of research performance, participants emphasised that they represent only one outcome of a broader research process. Importance was attached to activities such as project development, teamwork, mentoring, development of research methods, and engagement with policy makers and other societal stakeholders. The discussions therefore highlighted a distinction between research outputs, such as publications, and the wider range of contributions that support the production, dissemination, and societal use of scientific knowledge.

The discussions also reinforced the view that research assessment should extend beyond publications and citations. Participants emphasised the importance of mentoring, research team development, organisational contributions, and capacity building within research institutions, arguing that these activities are essential for sustaining research environments but remain insufficiently recognised within indicator-based evaluation systems.

A related theme concerned the societal dimension of research performance. Participants highlighted contributions to policy development, public debate, and collaboration with external stakeholders as important pathways through which research creates value beyond academia. These contributions were perceived as particularly difficult to capture through evaluation frameworks that continue to rely predominantly on publication- and citation-based indicators.

The need for greater sensitivity to disciplinary and organisational diversity also emerged as a recurring theme. Participants emphasised that research units pursue different research agendas, operate under different conditions, and contribute to scientific and societal goals in different ways. As a result, they argued that evaluation systems should place greater emphasis on contextual interpretation rather than relying exclusively on standardised indicators.

Finally, participants broadly supported the integration of qualitative elements into research assessment, particularly through peer review and narrative descriptions of research contributions. Quantitative indicators were generally seen as useful sources of information, but insufficient on their own for assessing research quality and contribution. Participants therefore favoured a balanced approach that combines metrics with contextual interpretation and expert judgement.

5. Discussion and implications for responsible research assessment

The findings contribute to the literature on researchers' perceptions of research evaluation systems by providing evidence from a system strongly oriented towards quantitative indicators. Consistent with previous studies highlighting the limited visibility of certain forms of academic work within research assessment systems (Cotton et al., 2018), respondents expressed concerns about whether existing indicators capture the diversity of research contributions. At the same time, the findings suggest that researchers do not necessarily reject quantitative indicators altogether. Instead, they emphasise the need for a more balanced evaluation approach in which quantitative metrics are complemented by qualitative interpretation and peer review. This

finding is consistent with previous research advocating balanced and responsible approaches to the use of bibliometric indicators in research evaluation (Butler, 2008; Torres-Salinas et al., 2024).

The results further suggest that researchers do not view scientific excellence and broader research contributions as competing priorities. Originality, scientific contribution, and research integrity received the highest ratings among all assessment values, indicating continued support for core scientific standards. At the same time, respondents attached considerable importance to broader dimensions of research performance beyond traditional publication- and citation-based indicators, such as mentoring, interdisciplinary collaboration, project leadership, organisational development, and societal engagement. This is consistent with previous conceptualisations of research performance that emphasise not only research outputs but also activities related to dissemination, collaboration, and engagement within the research community (Bazeley, 2010). These findings may help explain why respondents expressed support for qualitative assessment approaches, including peer review of selected publications and narrative descriptions of research contributions.

A particularly important finding is that respondents distinguish between the procedural transparency and the substantive adequacy of evaluation systems. While formal rules and procedures were generally perceived as clear, considerably greater concerns were expressed regarding the ability of existing indicators to reflect research quality, disciplinary diversity, and broader forms of contribution.

The findings also suggest that researchers favour balanced approaches to research assessment that combine quantitative indicators with qualitative judgement. Support for mechanisms such as peer review of selected publications and narrative descriptions of research contributions indicates a preference for assessment frameworks capable of recognising dimensions of research performance that remain only partially visible through bibliometric indicators alone. This perspective is broadly aligned with recent initiatives in responsible research assessment, including DORA and CoARA, which encourage recognition of diverse research contributions alongside the complementary use of qualitative and quantitative assessment.

These findings are broadly consistent with ongoing international discussions on responsible research assessment, which increasingly advocate balanced evaluation models while continuing to debate the appropriate role of qualitative judgement and bibliometric indicators (Torres-Salinas et al., 2024; Baccini, 2025).

The focus group discussions provide further insight into how researchers conceptualise research contributions in practice. Participants highlighted mentoring, research team development, organisational contributions, policy engagement, and societal impact as important dimensions of academic work that are not always adequately recognised within existing evaluation systems.

6. Conclusion

This study examined researchers' perceptions of current research assessment practices and the principles that should guide more responsible approaches to research evaluation. The findings suggest that researchers distinguish between the procedural transparency of evaluation systems and their substantive adequacy. While existing procedures are generally perceived as clear, respondents expressed concerns regarding the ability of current indicators to capture the diversity and complexity of research contributions.

The results indicate that researchers support a multidimensional understanding of research performance that combines scientific excellence, originality, and research integrity with broader forms of contribution, including societal impact, collaboration, and mentoring. Rather than replacing quantitative indicators, respondents favoured more balanced approaches that combine bibliometric evidence with qualitative assessment and peer review.

Although based on a single institutional case study and therefore not intended to provide statistically representative evidence for the Serbian research system, the study contributes empirical evidence from a research context that has received limited attention in the international literature on research assessment. The findings may therefore inform future research and assessment reform initiatives and policy discussions in contexts where quantitative indicators continue to play a prominent role.

7. Bibliographic references

Baccini, A. (2025). CoARA will not save science from the tyranny of administrative evaluation. *Research Evaluation, 34*, rvaf024. https://doi.org/10.1093/reseval/rvaf024

Bazeley, P. (2010). Conceptualising research performance. *Studies in Higher Education, 35*(8), 889–903. https://doi.org/10.1080/03075070903348404

Butler, L. (2008). Using a balanced approach to bibliometrics: Quantitative performance measures in the Australian Research Quality Framework. *Ethics in Science and Environmental Politics, 8*, 83–92. https://doi.org/10.3354/esep00077

Caballero, K., Harland, T., Wald, N., & Mula-Falcón, J. (2025). The impact of evaluation and accountability on academic careers. *European Journal of Higher Education, 15*(2), 323–339. https://doi.org/10.1080/21568235.2024.2331116

Cotton, D. R. E., Miller, W., & Kneale, P. (2018). The Cinderella of academia: Is higher education pedagogic research undervalued in UK research assessment? *Studies in Higher Education, 43*(9), 1625–1636. https://doi.org/10.1080/03075079.2016.1276549

Feenstra, R. A., & Delgado López-Cózar, E. (2023). The footprint of a metrics-based research evaluation system on Spain's philosophical scholarship: An analysis of researchers' perceptions. *Research Evaluation, 32*(1), 32–46. https://doi.org/10.1093/reseval/rvac020

Good, B., Vermeulen, N., Tiefenthaler, B., & Arnold, E. (2015). Counting quality? The Czech performance-based research funding system. *Research Evaluation, 24*(2), 91–105. https://doi.org/10.1093/reseval/rvu035

Hicks, D., Wouters, P., Waltman, L., de Rijcke, S., & Rafols, I. (2015). Bibliometrics: The Leiden Manifesto for research metrics. *Nature, 520*, 429–431. https://doi.org/10.1038/520429a

Lee, C., Sugimoto, C. R., Freeman, G., & Cronin, B. (2013). Bias in peer review. *Journal of the American Society for Information Science and Technology, 64*(1), 2–17. https://doi.org/10.1002/asi.22784

Mertkan, S., Onurkan Aliusta, G., & Bayrakli, H. (2022). Pressured to publish: Stories of inexperienced researchers. *Journal of Organizational Change Management, 35*(3), 603–615. https://doi.org/10.1108/JOCM-08-2021-0239

Moed, H. F. (2005). *Citation analysis in research evaluation*. Springer.

Öztürk, O., & Taşkın, Z. (2024). How metric-based performance evaluation systems fuel the growth of questionable publications? *Scientometrics, 129*, 2729–2748. https://doi.org/10.1007/s11192-024-04991-8

Pickering, A. (2010). Review of *How professors think: Inside the curious world of academic judgment*, by M. Lamont. *American Journal of Sociology, 115*(6), 1908–1910. https://doi.org/10.1086/654713

Rowlands, J., & Wright, S. (2021). Hunting for points: The effects of research assessment on research practice. *Studies in Higher Education, 46*(9), 1801–1815. https://doi.org/10.1080/03075079.2019.1706077

Rushforth, A., & De Rijcke, S. (2024). Practicing responsible research assessment: Qualitative study of faculty hiring, promotion, and tenure assessments in the United States. *Research Evaluation, 33*, rvae007. https://doi.org/10.1093/reseval/rvae007

Simkin, M. V., & Roychowdhury, V. P. (2006). Do you sincerely want to be cited? Or: Read before you cite. *Significance, 3*(4), 179–181. https://doi.org/10.1111/j.1740-9713.2006.00202.x

Smith, R. (2006). Peer review: A flawed process at the heart of science and journals. *Journal of the Royal Society of Medicine, 99*(4), 178–182. https://doi.org/10.1258/jrsm.99.4.178

Todd, P. A., & Ladle, R. J. (2008). Hidden dangers of a citation culture. *Ethics in Science and Environmental Politics, 8*, 13–16. https://doi.org/10.3354/esep00091

Torres-Salinas, D., Orduña-Malea, E., Delgado-Vázquez, Á., Gorraiz, J., & Arroyo-Machado, W. (2024). Foundations of narrative bibliometrics. *Journal of Informetrics, 18*(3), Article 101546. https://doi.org/10.1016/j.joi.2024.101546

Weingart, P. (2005). Impact of bibliometrics upon the science system: Inadvertent consequences? *Scientometrics, 62*(1), 117–131. https://doi.org/10.1007/s11192-005-0007-7

Wilsdon, J., Allen, L., Belfiore, E., Campbell, P., Curry, S., Hill, S., Jones, R., Kain, R., Kerridge, S., Thelwall, M., Tinkler, J., Viney, I., Wouters, P., Hill, J., & Johnson, B. (2015). *The Metric Tide: Report of the Independent Review of the Role of Metrics in Research Assessment and Management***.** Higher Education Funding Council for England.https://www.ukri.org/wp-content/uploads/2021/12/RE-151221-TheMetricTideFullReport2015.pdf

Open science practices

This study follows selected open science practices aimed at enhancing transparency and accessibility of research outputs. Empirical materials generated within the study have been made openly available through the Zenodo platform to support transparency and potential reuse of research findings. The processed survey results are available in the document "CoARA Boost CF2 - ARISE - Survey on Perspectives on Research Assessment Practices" (https://doi.org/10.5281/zenodo.18829389). Findings from the two focus group discussions are shared in the documents "CoARA Boost CF2 - ARISE - Insights from A Focus Group on Core

Research Values" (https://doi.org/10.5281/zenodo.18848188) and "CoARA Boost CF2 - ARISE - Insights from A Focus Group on Exploring Assessment Approaches" (https://doi.org/10.5281/zenodo.18849120). Due to the qualitative nature of focus group discussions and the need to ensure participants' anonymity, only aggregated findings and interpretative summaries are shared.

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Author contributions
Isidora Beraha: Conceptualization, Methodology, Writing.
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Sonja Đuričin: Formal Analysis.

Competing interests
The authors declare that they have no competing interests.

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