



Evaluation of Publication Indexing Bias in NIRF Research Performance Metrics

Prof. Dr. S. Balasubramanian

Chief Editor and Managing Director, IAEME Publication Pvt Limited, Chennai, India.

Citation: S. Balasubramanian. (2026). *Evaluation of Publication Indexing Bias in NIRF Research Performance Metrics*. International Journal of Engineering and Technology Research and Development (IJETRD), 7(1), pp. 13–29.

Abstract

The National Institutional Ranking Framework (NIRF), established by the Ministry of Education in 2015, has become the dominant instrument for evaluating higher education institutions in India. With research and professional practice carrying 30% weightage in the overall ranking, the framework relies heavily on bibliometric indicators derived exclusively from two commercial databases: Scopus and Web of Science. This paper critically examines the publication indexing bias inherent in NIRF's research performance metrics. Through a comprehensive analysis of database coverage disparities, institutional responses, and systemic consequences, the study demonstrates that the exclusive reliance on Scopus and Web of Science creates a structural bias that systematically disadvantages Indian journals, regionally relevant research, and institutions without resources to publish in internationally indexed outlets. The paper documents how this bias has incentivized questionable publishing practices, including citation manipulation, predatory publishing, and the production of "casual papers" that prioritize quantity over quality. Drawing on the principles of responsible research assessment, the study proposes a reformed framework that incorporates Indian journals, recognizes diverse research outputs, and emphasizes qualitative evaluation alongside quantitative metrics.

Keywords: NIRF, publication indexing bias, research assessment, Scopus, Web of Science, Indian higher education, bibliometric indicators, responsible research assessment

1. Introduction

The National Institutional Ranking Framework (NIRF) was approved by the Ministry of Human Resource Development (now Ministry of Education) and launched in 2015, with the first rankings published in 2016. The framework was conceived as an Indian alternative to global ranking systems such as QS and Times Higher Education, which were often criticized as Western-centric and heavily reliant on reputation surveys. International rankings give substantial weightage to reputation—33% in the case of THE and 45% for QS—which placed Indian institutions at a significant disadvantage. The Government of India determined that a national ranking system reflecting Indian socio-economic realities was necessary to give Indian institutions a fair chance while considering factors like inclusivity and outreach.

The NIRF evaluates institutions across five broad parameters: Teaching, Learning and Resources (30% weightage); Research and Professional Practice (30% weightage);

Graduation Outcomes (20% weightage); Outreach and Inclusivity (10% weightage); and Perception (10% weightage). Within the Research and Professional Practice parameter, institutions are assessed on combined metrics for publications, quality of publications, IPR and patents, footprint of projects and professional practice, and publications and citations in Sustainable Development Goals.

1.2 Problem Statement

A critical feature of the NIRF methodology is that publications and citations data are sourced exclusively from Scopus (Elsevier) and Web of Science (Clarivate Analytics). This exclusive reliance on two commercial databases raises fundamental questions about the fairness, comprehensiveness, and validity of the resulting rankings. Research from Indian journals, publications in regional languages, and scholarship addressing locally relevant issues—all of which may not be indexed in these international databases—are rendered invisible within the NIRF framework.

The consequences of this indexing bias extend beyond ranking outcomes. It shapes institutional strategies, faculty incentives, and the very nature of research production in India. Institutions seeking to improve their NIRF rankings are compelled to direct their research efforts toward journals indexed in Scopus and Web of Science, often at the expense of locally relevant scholarship and Indian publication venues.

1.3 Research Objectives

This paper aims to:

1. Examine the methodological foundations of NIRF's research performance metrics
2. Analyze the extent and nature of publication indexing bias in Scopus and Web of Science
3. Assess the consequences of exclusive database reliance on Indian higher education institutions
4. Document the gaming behaviors and unintended consequences incentivized by the current framework
5. Propose a reformed approach to research assessment aligned with responsible research principles

1.4 Significance of the Study

Understanding publication indexing bias in NIRF is crucial for multiple stakeholders. For policymakers, it provides evidence to reform assessment frameworks. For institutions, it illuminates the strategic implications of current metrics. For researchers, it reveals the systemic pressures shaping academic publishing. For the broader academic community, it contributes to the global discourse on responsible research assessment and the decolonization of knowledge production.

2. Literature Review

2.1 The Evolution of Research Assessment and Bibliometrics

The use of citation data for research evaluation traces back to Eugene Garfield's launch of the Science Citation Index in 1965. Garfield's index was designed to track citation patterns across scientific literature, but from its inception, critics questioned its geographical coverage and representativeness. Despite these early criticisms, citation-based metrics—including the impact factor, h-index, and citation counts—have become deeply embedded in academic evaluation systems worldwide.

The proliferation of bibliometric indicators has transformed how research quality is perceived and measured. As Mills and Asubiaro (2024) demonstrate, citation indexes have reinforced an already unequal, anglophone-dominated global science system. Their analysis of regional disparities in Web of Science and Scopus coverage reveals that journals from Europe are 30-40% more likely to be indexed, whereas journals from Central and South Asia, East and South-East Asia, and Sub-Saharan Africa are 50-60% less likely to be included.

2.2 The NIRF Framework: Structure and Methodology

The NIRF methodology has evolved since its inception, with the India Rankings 2024 continuing the process of consolidation and improvement based on experience gained since 2015. For research institutions, the framework comprises five parameters: Metric for Quantitative Research (QNR, 30% weightage), Metric for Qualitative Research (QLR, 30% weightage), Metric for Students and Faculty Contribution (SFC, 20% weightage), Outreach and Inclusivity (OI, 10% weightage), and Perception (PR, 10% weightage).

Within the Quantitative Research metric, the Combined metric for Publications (PU) carries 50 marks and is calculated based on publications normalized by faculty numbers. The Combined metric for Citations Index (CI) carries 25 marks and is based on total citation counts over the previous three years. Both metrics rely exclusively on data from third-party sources—specifically Scopus and Web of Science.

The Qualitative Research metric includes publications in the first quartile of Journal Citation Reports (JCR Q1, 30 marks), publications in the top 25% of cited papers (TOP25, 30 marks), IPR and patents (20 marks), and the h-index (20 marks).

2.3 Database Coverage Bias: Scopus and Web of Science

A substantial body of literature documents the geographical and linguistic biases inherent in major citation databases. Research by Mills and Asubiaro (2024) demonstrates that Scopus and Web of Science systematically under-represent journals from certain regions. The coverage disparity is particularly pronounced for developing countries, where a significant proportion of research output remains outside these databases.

The implications of this coverage bias for research evaluation are profound. As noted in the DORA (Declaration on Research Assessment) panel discussion on responsible research assessment in India, the exclusive reliance on Scopus and Web of Science overlooks valuable contributions from Indian journals and leads to "strange" and often misleading institutional rankings. This dependence on proprietary platforms conditions access to scientific

information and introduces biases in document coverage and derived indicators, compromising the representativeness and international comparability of evaluations.

Studies examining Indian journal coverage reveal that approximately 60% of Indian journals are indexed in Scopus, while a significantly smaller proportion are included in Web of Science. Among open access journals in India, about 44% are indexed in Scopus and 35% in Web of Science. This means that a substantial portion of Indian scholarly output—particularly from journals not meeting the stringent inclusion criteria of these commercial databases—is excluded from consideration in NIRF rankings.

2.4 Consequences of Metrics-Driven Assessment

The dominance of bibliometric indicators in research assessment has generated widespread concern about unintended consequences. The current NIRF methodology, which grants scores based on quantitative metrics such as the number of research papers and citations, has been criticized for fostering what leading scientists describe as "corruption and unethical practices".

The flaws of current assessment systems extend beyond India. As documented in the responsible research assessment literature, pervasive reliance on quantitative metrics like Journal Impact Factor, h-index, and journal quartiles has led to a "compulsion to do research" rather than a "pleasure," often resulting in "shoddy science" and high retraction rates. This metric obsession distorts research quality and creates systems prone to manipulation.

A particularly concerning consequence is the gaming of metrics through questionable publishing practices. Scientists have documented cases where institutions appear to have instructed students or faculty to cite the work of their own colleagues—whether relevant or not—to inflate citation counts. Such practices have made scientific research "a number game... detrimental to the overall ecosystem and reputation of Indian science".

2.5 Publication Indexing Bias in Developing Country Contexts

The challenges of publication indexing bias are particularly acute in developing countries. Research from low- and middle-income countries is under-represented in high-impact journals and global indexing systems. Journals published in the Global South face significant barriers to indexing, prestige, and funding.

The preference among Global South researchers to publish in Global North journals is thus unsurprising, as it is driven by evaluation systems that reward visibility in internationally indexed outlets. However, this creates a self-reinforcing cycle: the pursuit of publication in Western journals diverts attention from locally relevant research, further marginalizing regional scholarship and Indian publication venues.

Metric-driven publishing norms reinforce structural barriers linked to limited infrastructure, linguistic challenges, and editorial biases, leaving regionally significant research undervalued and often invisible in global discourse. As one analysis notes, equating research excellence with English language publications indexed in academic databases primarily based in Western countries creates biases in regionally engaged fields with societal relevance.

2.6 Critiques of NIRF Research Metrics

The NIRF has attracted substantial criticism from academics and scientists. An analysis of NIRF 2023 rankings revealed that two of the most important parameters—quality of publications and number of publications—are very strongly correlated, meaning that "just the number of publications is effectively being counted twice". This redundancy incentivizes volume over quality.

Leading scientists have warned that the flawed NIRF methodology fuels low-quality publications, fake citations, and academic manipulation, threatening India's research credibility. Their concerns center on quantitative metrics that grant scores even to students, faculty, and institutions engaging in manipulative practices, such as publishing "casual" papers that do not contribute meaningfully to knowledge. Examples include surveys on eating habits or awareness among students—papers that do little to advance knowledge but receive as much credit as serious research.

The NIRF's reliance on self-reported data poses additional risks. While metrics like publications and citations are sourced from third-party databases, many aspects depend heavily on institutions' own reporting, leading to allegations of data manipulation. The perception parameter, which carries 10% weightage, has been criticized as opaque, with no details of the survey methodology made publicly available.

2.7 Responsible Research Assessment and Alternative Approaches

The movement toward responsible research assessment (RRA) offers a constructive alternative to metrics-driven evaluation. The DORA initiative advocates for moving away from journal-based metrics as a surrogate for quality, recognizing the value of broader range of research outputs.

Practical suggestions for reform include focusing on quality over quantity by asking for a limited number of "key papers" and evaluating their quality through expert review, rather than relying on total publication counts or citations. Institutional autonomy in developing assessment criteria tailored to specific missions is another important principle.

Some Indian states have begun experimenting with alternatives. Kerala's KIRF (Kerala Institutional Ranking Framework) model has emerged as an alternative to NIRF, emphasizing the state's policy values. Such initiatives demonstrate that alternative assessment frameworks are feasible and can reflect regional priorities.

3. Methodology

3.1 Research Design

This study employs a mixed-methods approach combining quantitative analysis of database coverage, institutional rankings data, and qualitative analysis of policy documents, scholarly critiques, and stakeholder responses. The research design is structured to address the multiple dimensions of publication indexing bias in NIRF research metrics.

3.2 Data Sources

The study draws on multiple data sources:

Primary Data:

- NIRF official methodology documents (2016-2024)
- NIRF ranking publications and reports
- Scopus and Web of Science coverage statistics

Secondary Data:

- Scholarly literature on bibliometric bias and research assessment
- Media reports and analyses of NIRF rankings
- Policy documents from the Ministry of Education
- DORA and responsible research assessment publications

Database Analysis:

- Comparative analysis of journal coverage across databases
- Examination of Indian journal representation in Scopus and Web of Science

3.3 Analytical Framework

The analysis is guided by a framework that examines:

1. **Structural Bias:** The inherent characteristics of Scopus and Web of Science that create systematic exclusion of certain types of publications
2. **Institutional Response:** How Indian higher education institutions adapt their strategies to NIRF metrics
3. **Consequential Outcomes:** The effects of indexing bias on research quality, diversity, and integrity
4. **Reform Pathways:** Alternative approaches to research assessment

4. Analysis of Publication Indexing Bias in NIRF Metrics

4.1 The Exclusive Reliance on Scopus and Web of Science

The NIRF framework explicitly states that publications and citations data pertaining to research output of applicant institutions are taken from Scopus and Web of Science. This exclusive reliance means that publications in journals not indexed in these databases—regardless of their quality, relevance, or scholarly contribution—are not counted in NIRF calculations.

The rationale provided for this approach includes global recognition and credibility, citation validation capabilities, and prevention of predatory publishing. Scopus and Web of Science apply rigorous quality checks before indexing journals, ensuring robust peer-review processes, sound editorial practices, and trackable citation metrics.

However, this rationale overlooks several critical issues. First, the inclusion criteria of these databases are not neutral; they reflect particular epistemological and geographical biases. Second, the exclusion of Indian journals and regionally relevant research creates a structural disadvantage for institutions whose research missions prioritize local engagement. Third, the approach conflates indexing status with quality, ignoring the possibility of high-quality scholarship published outside these databases.

4.2 Geographical and Linguistic Coverage Disparities

The geographical disparities in Scopus and Web of Science coverage are well documented. Research by Mills and Asubiaro (2024) shows that journals from Europe are significantly over-represented, while journals from Asia, Africa, and Latin America are under-represented. This pattern is particularly pronounced for Web of Science, which has historically maintained more stringent inclusion criteria.

For India specifically, the coverage gap is substantial. While India ranks among the top producers of research globally, Indian journals constitute only a small fraction of indexed publications. Seven out of every ten Indian journals in Web of Science are in the Emerging Sources Citation Index (ESCI)—the lowest tier of indexing—rather than the core Science Citation Index. This means that even when Indian journals achieve indexing, they often occupy marginal positions within the database hierarchy.

The linguistic dimension of coverage bias is equally significant. Scopus and Web of Science predominantly index English-language journals. This creates a systematic disadvantage for research published in Indian languages, which constitutes a substantial portion of scholarship addressing locally relevant questions in fields such as social sciences, humanities, and indigenous knowledge systems.

4.3 The Indexing Penalty: How Exclusion Affects Rankings

The exclusion of non-indexed publications from NIRF calculations creates what can be termed an "indexing penalty" for institutions. Institutions that publish in Indian journals, regional language publications, or journals not meeting the inclusion criteria of Scopus and Web of Science receive no credit for these publications in their NIRF research scores.

This penalty is particularly consequential given the weightage assigned to research metrics. With Research and Professional Practice carrying 30% of the total ranking score, the indexing penalty can significantly affect institutional rankings. Institutions without the resources, infrastructure, or strategic orientation to publish extensively in internationally indexed journals are systematically disadvantaged.

The penalty extends beyond publications to citations as well. Citations from Google Scholar, UGC-CARE listed journals, or ResearchGate may appear impressive but are not considered in NIRF calculations. This means that even when research published in non-indexed venues generates scholarly impact, that impact is invisible within the NIRF framework.

4.4 Institutional Responses to Indexing Bias

The indexing bias in NIRF metrics has generated predictable institutional responses. Institutions seeking to improve their rankings have redirected their research strategies toward Scopus and Web of Science indexed journals. This shift has implications for the diversity of research output, the languages of publication, and the topics investigated.

The pressure to publish in indexed journals has also incentivized questionable practices. As documented by scientists who wrote to the government, the pursuit of high NIRF ranks has fostered "corruption and unethical practices," including the publication of "casual" papers that do not contribute meaningfully to knowledge. Institutions have been observed instructing students or faculty to cite colleagues' work to inflate citation counts.

The indexing bias has also contributed to the growth of predatory publishing. With pressure to publish in Scopus and Web of Science indexed journals, some researchers and institutions have turned to questionable journals that claim indexing status but lack rigorous peer review. The recent delisting of Cureus from Web of Science—a journal that had published over 17,000 papers from India alone—illustrates the risks of this approach.

5. Consequences of Publication Indexing Bias

5.1 Impact on Research Quality and Integrity

The most serious consequence of publication indexing bias in NIRF metrics is its impact on research quality and integrity. When evaluation systems reward quantity of publications in indexed journals over quality and relevance, they create perverse incentives that undermine the scientific enterprise.

The current methodology grants scores even to "casual" papers that do not contribute meaningfully to knowledge. As scientists have noted, papers on surveys of eating habits or awareness among students receive as much credit as serious research. This has made scientific research "a number game" that is "detrimental to the overall ecosystem and reputation of Indian science".

The consequences are reflected in retraction statistics. Retractions of articles from India increased 2.5 fold in the period 2020-2022 compared to 2017-2019. India now ranks second globally in research retractions. Alarming, some institutions with high retraction counts have seen their NIRF research scores improve, demonstrating that misconduct is not meaningfully penalized.

5.2 Marginalization of Indian Journals and Regional Scholarship

The exclusive reliance on Scopus and Web of Science systematically marginalizes Indian journals and regional scholarship. By granting exclusive validation to journals indexed in these databases, NIRF effectively discourages academics from contributing to Indian scholarly venues.

This marginalization has epistemic consequences. Research addressing locally relevant questions, published in Indian languages or in journals focused on regional issues, is

rendered invisible within the dominant assessment framework. This creates a disconnect between the research that is valued and the research that is needed to address India's developmental challenges.

The monopoly of international commercial publishers and the presence of article processing charges (APCs) further compound this epistemic injustice. Researchers and institutions without resources to pay APCs for open access publication in international journals face additional barriers to participation in the indexed scholarly ecosystem.

5.3 Reinforcement of Global Knowledge Inequalities

The indexing bias in NIRF metrics reinforces broader patterns of global knowledge inequality. When evaluation systems privilege publication in Western databases and journals, they perpetuate a hierarchical global knowledge system in which scholarship from the Global South is systematically devalued.

This hierarchy is not merely symbolic; it has material consequences for research funding, career advancement, and institutional prestige. Researchers and institutions in India must navigate a system that rewards participation in global scholarly networks while often failing to recognize the value of locally engaged scholarship.

The situation is particularly acute in fields such as social sciences and humanities, where regionally relevant research is often published in local languages and journals. As noted in critiques of metric-based evaluation, equating research excellence with English language publications creates biases in regionally engaged fields with societal relevance.

5.4 Gaming Behaviors and Strategic Manipulation

The indexing bias in NIRF metrics has incentivized various forms of gaming and strategic manipulation. These behaviors undermine the integrity of the ranking system and distort research priorities.

Citation manipulation: Institutions have been observed instructing students and faculty to cite colleagues' work to inflate citation counts. This practice, which may involve irrelevant citations, artificially boosts institutional citation metrics.

Strategic publishing: Institutions strategically target journals indexed in Scopus and Web of Science, often regardless of the appropriateness of the venue for the research. This can lead to the publication of research in journals that are poor fits for the subject matter.

Publishing "casual" papers: The emphasis on publication quantity has led to an explosion of low-quality papers that do not contribute meaningfully to knowledge. These papers consume scholarly resources and contribute to the proliferation of mediocre research.

Predatory publishing: The pressure to publish in indexed journals has driven some researchers to predatory journals that claim indexing status but lack proper peer review.

5.5 Distortion of Institutional Priorities

The indexing bias in NIRF metrics distorts institutional priorities by directing attention and resources toward activities that improve rankings rather than activities that advance educational and research missions.

Universities allocate resources to support publication in indexed journals, often at the expense of teaching quality, community engagement, and locally relevant research. Faculty evaluation and promotion criteria are increasingly aligned with NIRF metrics, creating pressure on individual researchers to prioritize indexed publications.

This distortion is particularly problematic for institutions with missions that emphasize regional development, indigenous knowledge, or community engagement. These institutions face a choice between pursuing their stated missions and improving their NIRF rankings—a choice that many cannot afford to make in favor of their missions.

6. Case Studies and Empirical Evidence

6.1 Analysis of Top 100 Institutions: Research Output Patterns

An analysis of NIRF 2023 data reveals significant patterns in research output among top-ranked institutions. The top 100 institutions account for a substantial proportion of India's research publications in Scopus and Web of Science. However, the share of highly cited publications from top institutions has been declining. In 2023, only 64.4% of total highly cited publications were from the top 100 institutes, with 35.61% coming from remaining institutions.

This pattern suggests that research excellence is not concentrated solely in top-ranked institutions, yet the NIRF framework may not adequately capture contributions from institutions outside the top tier.

6.2 Comparative Analysis: Institutions with High Indian Journal Output

Institutions that publish extensively in Indian journals face a systematic disadvantage in NIRF rankings. Their research output—which may be of high quality and high relevance to Indian contexts—is not counted in NIRF calculations. This creates a situation where institutions serving regional needs and contributing to Indian scholarly infrastructure are penalized relative to institutions that prioritize international publication.

6.3 The Case of Retractions and Research Misconduct

The relationship between NIRF metrics and research misconduct is illustrated by the case of retractions. India's position as second globally in research retractions, combined with the observation that some institutions with high retraction counts have improved their NIRF research scores, suggests that the current framework does not adequately penalize misconduct.

The introduction of negative marking for retracted papers, announced in 2025, represents an attempt to address this issue. However, as scientists have noted, negative marks for retracted papers are not sufficient to address the large numbers of "casual" papers being produced only to increase scores and that do not get retracted.

7. Tables and Figures

Table 1: NIRF Ranking Parameters and Weightages (Research Institutions)

Parameter	Marks	Weightage	Key Components
Metric for Quantitative Research (QNR)	100	0.30	Publications (50), Citations (25), Projects & Practice (25)
Metric for Qualitative Research (QLR)	100	0.30	JCR Q1 Publications (30), Top 25% (30), IPR (20), H-index (20)
Students and Faculty Contribution (SFC)	100	0.20	Faculty with PhD (40), Student Strength (30), PhD Graduates (30)
Outreach and Inclusivity (OI)	100	0.10	Region Diversity (30), Women (30), SC/ST (20), Physically Challenged (20)
Perception (PR)	100	0.10	Peer Perception: Employers & Academic Peers (100)

Source: NIRF Methodology for Ranking of Academic Institutions in India (Research Institution), 2024

Table 2: Scopus and Web of Science Coverage Comparison

Feature	Scopus	Web of Science
Publisher	Elsevier	Clarivate
Subject Coverage	Broad incl. Social Sciences	Focus on Science & Engineering
Citation Depth	Moderate (since 1996)	Deep (since early 1900s)
Journal Volume	~25,000 journals	~21,000 journals
Key Indexes	SCImago, CiteScore	JCR, Impact Factor
Indian Journal Coverage	~60% of Indian journals	Significantly lower proportion

Table 3: Regional Disparities in Journal Indexing

UNESCO World Region	Likelihood of Indexing in WoS/Scopus
Europe	30-40% more likely
Central and South Asia	50-60% less likely
East and South-East Asia	50-60% less likely
Sub-Saharan Africa	50-60% less likely

Table 4: Consequences of Publication Indexing Bias

Dimension	Consequence	Evidence
Research Quality	Proliferation of "casual" papers	Scientists' letter to government
Research Integrity	Increased retractions	2.5-fold increase 2020-2022 vs. 2017-2019
Indian Journals	Systematic marginalization	Only ~60% of Indian journals in Scopus
Regional Scholarship	Devaluation of locally relevant research	DORA panel discussion
Institutional Strategy	Gaming and manipulation	Citation manipulation documented
Global Equity	Reinforcement of knowledge inequalities	Regional disparities in indexing

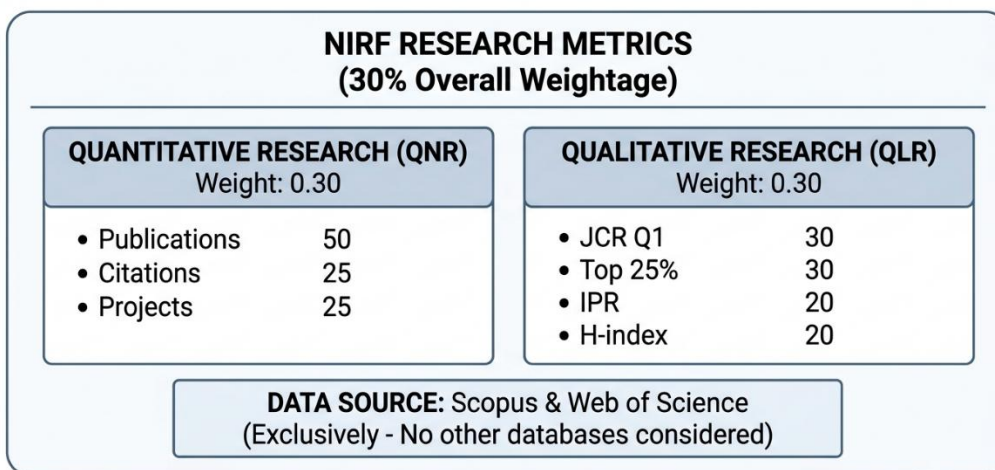


Figure 1: NIRF Research Metrics Framework
Source: Compiled from NIRF Methodology Documents (2024)

Figure 1: NIRF Research Metrics Framework

Source: Compiled from NIRF Methodology Documents (2024)

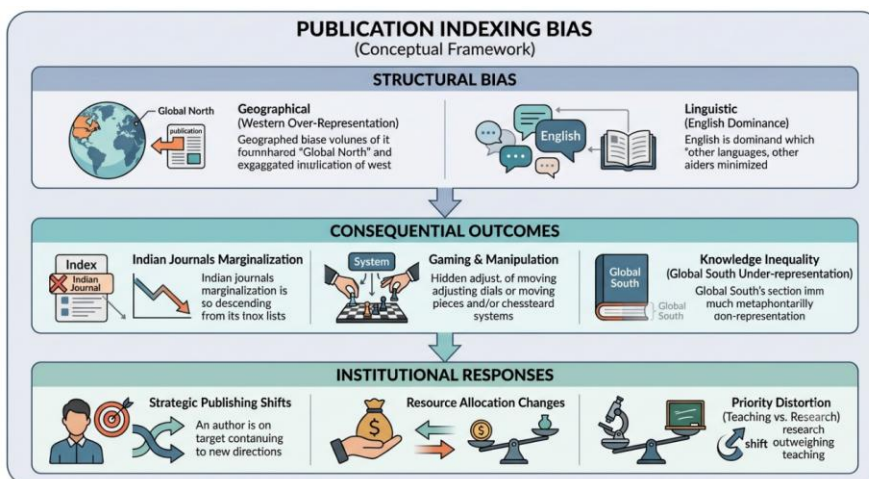


Figure 2: Publication Indexing Bias - Conceptual Framework

8. Discussion

8.1 The Paradox of NIRF's Indian Alternative

The NIRF was established as an Indian alternative to Western-centric global rankings. Yet its exclusive reliance on Scopus and Web of Science—databases developed and maintained by Western commercial publishers—reproduces many of the biases it was meant to overcome. The framework that was supposed to reflect Indian realities instead privileges participation in global scholarly networks that systematically marginalize Indian scholarship.

This paradox is particularly striking given the NIRF's emphasis on inclusivity as one of its five parameters. The framework rewards institutions for outreach to underrepresented

groups while simultaneously excluding scholarship published in Indian venues that might serve those very groups.

8.2 The Quality-Quantity Conflation

A fundamental flaw in the NIRF research metrics is the conflation of quantity with quality. The strong correlation between the number of publications and the quality of publications parameters means that volume is effectively counted twice. This redundancy incentivizes the production of large numbers of publications regardless of their quality or contribution.

The emphasis on quantity has contributed to the proliferation of "casual" papers, the growth of predatory publishing, and the gaming of citation metrics. These outcomes undermine the very purpose of research assessment: to identify and reward high-quality scholarship.

8.3 The Need for Database Diversification

Addressing publication indexing bias requires diversifying the databases and sources considered in research assessment. This could include:

1. **Inclusion of UGC-CARE listed journals:** The University Grants Commission's Consortium for Academic and Research Ethics (CARE) maintains a list of approved Indian journals. Including these journals in NIRF calculations would recognize Indian scholarship while maintaining quality standards.
2. **Recognition of regional language publications:** Scholarship published in Indian languages should be valued alongside English-language publications, particularly in fields where local languages are the medium of scholarship.
3. **Consideration of diverse research outputs:** Research assessment should recognize a broader range of outputs, including books, book chapters, policy briefs, and practice-oriented publications.
4. **Integration of alternative metrics:** Altmetrics and other indicators of societal impact could complement traditional bibliometric measures.

8.4 Toward Responsible Research Assessment

The principles of responsible research assessment offer a constructive framework for reforming NIRF metrics. Key principles include:

1. **Moving beyond journal-based metrics:** Evaluation should focus on the quality and contribution of individual research outputs rather than the journal in which they appear.
2. **Valuing diverse research outputs:** A broader range of outputs should be recognized, reflecting the diversity of scholarly communication.
3. **Implementing transparent criteria:** Assessment criteria should be explicit, transparent, and aligned with institutional missions.

4. **Emphasizing quality over quantity:** Evaluation should focus on a limited number of significant outputs rather than total publication counts.
5. **Institutional autonomy:** Institutions should have the flexibility to develop assessment criteria tailored to their specific missions.

8.5 Policy Recommendations

Based on the analysis, the following policy recommendations are proposed:

1. **Expand database sources:** Include UGC-CARE listed journals and other vetted Indian journals in NIRF calculations.
2. **Reduce weightage on quantitative metrics:** Decrease the weightage of publication and citation counts in favor of qualitative assessment.
3. **Introduce meaningful penalties for misconduct:** Strengthen negative marking for retracted papers and citations of tainted work.
4. **Enhance transparency:** Publish detailed methodology, including survey instruments for perception metrics.
5. **Conduct independent review:** Subject the NIRF framework to regular independent review.
6. **Develop alternative ranking models:** Support state-level initiatives like KIRF as laboratories for alternative approaches.

9. Conclusion

This paper has examined the publication indexing bias inherent in NIRF research performance metrics. The exclusive reliance on Scopus and Web of Science creates a structural bias that systematically disadvantages Indian journals, regionally relevant research, and institutions without resources to publish in internationally indexed outlets. This bias has far-reaching consequences: it incentivizes questionable publishing practices, marginalizes Indian scholarship, reinforces global knowledge inequalities, and distorts institutional priorities.

The NIRF was established to provide an Indian alternative to Western-centric global rankings. Yet its methodology reproduces many of the biases it was meant to overcome. Addressing this paradox requires fundamental reform: diversifying the sources considered in research assessment, reducing the emphasis on quantitative metrics, and embracing the principles of responsible research assessment.

The introduction of negative marking for retracted papers represents a step in the right direction, but more comprehensive reform is needed. As leading scientists have warned, without meaningful reform, the NIRF will continue to fuel low-quality publications, fake citations, and academic manipulation, threatening India's research credibility.

The stakes are high. Research assessment frameworks shape not only institutional rankings but also the very nature of knowledge production. By addressing publication

indexing bias, India can develop a research assessment system that recognizes and rewards diverse forms of scholarship, supports Indian scholarly infrastructure, and contributes to a more equitable global knowledge system.

References

- [1] Mills, D., & Asubiaro, T. (2024). Regional disparities in Web of Science and Scopus journal coverage. *Scientometrics*. <https://doi.org/10.1007/s11192-024-04948-x>
- [2] National Institutional Ranking Framework. (2024). *Methodology for Ranking of Academic Institutions in India (Research Institution)*. Ministry of Education, Government of India. <http://www.nirfindia.org>
- [3] National Institutional Ranking Framework. (2019). *India Rankings 2019 Report*. Ministry of Human Resource Development, Government of India. <http://www.nirfindia.org>
- [4] ThePrint. (2024, July 8). NIRF parameters ill-designed & lead to absurd university ratings. Govt must order a review. <https://theprint.in>
- [5] Mudur, G. S. (2025, October 13). Top scientists flag corruption in NIRF rankings, urge overhaul of research metrics. *The Telegraph India*. <https://www.telegraphindia.com>
- [6] The Hindu. (2025, September 15). Trust, transparency, and teaching: Rethinking India's NIRF rankings. <https://www.thehindu.com>
- [7] DORA. (2025, June 17). Implementing Responsible Research Assessment in India. <https://sfdora.org>
- [8] StudiumTech. (2025, July 21). Why NIRF Only Counts Scopus & Web of Science Publications — And What It Means for You. <https://www.studiumtech.in>
- [9] LSE Impact Blog. (2024, September 9). Citation indexes make research more unequal. <https://blogs.lse.ac.uk>
- [10] The Hindu Business Line. (2023, June 20). Share of highly cited publications from top institutions drop: NIRF 2023. <https://www.thehindubusinessline.com>
- [11] OUCI. (n.d.). Mapping of Dental Journal Publishing in India - A Pilot Study on Epistemological Challenges in Southern Scholarly Publishing. <https://ouci.dntb.gov.ua>
- [12] The Hindu. (2023, June 14). Is the National Institutional Ranking Framework flawed? <https://www.thehindu.com>
- [13] The Hindu. (2025, September 1). NIRF at 10: How self-reporting leads to fudging of ranking data. <https://www.thehindu.com>
- [14] IREG Observatory. (2024). National Institutional Ranking Framework (NIRF). <https://ireg-observatory.org>

- [15] Deccan Herald. (2025, October 14). NIRF risks promoting reputation over merit. <https://www.deccanherald.com>
- [16] Civilsdaily. (2025, September 9). Ranking Pitfalls: India Rankings (2025) based on NIRF. <https://www.civildaily.com>
- [17] The Hindu. (2025, September 8). Ranking pitfalls: On the India Rankings 2025. <https://www.thehindu.com>
- [18] Economic Times. (2025, October 3). NIRF to begin negative marking for dishonesty. <https://education.economictimes.indiatimes.com>
- [19] The Hindu. (2025, September 8). NIRF 2025: Retraction penalties barely dent rankings; call for stronger reforms. <https://www.thehindu.com>
- [20] Sansad. (n.d.). National Institutional Ranking Framework (NIRF) methodology. <https://sansad.in>