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Open Access Realities and Regional Developments in India: A Policy Editor's Perspective on India's Leap into the Open Science Ecosystem

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ABSTRACT

India's commitment to Open Science represents a pivotal and obvious shift, moving scholarly communication from a cost-prohibitive, centralized model towards an inclusive, public-pocket-friendly framework. This perspective is characterized by a strong, decentralized, community-driven foundation that has culminated in ambitious, centralized mandates, most notably the One Nation, One Subscription model and the revised governmental quality control criteria. This strategic orientation aligns Open Access directly with macro-national goals, including the creation of knowledge workforce, for the explicit pursuit of demonstrable societal impact across political, health, cultural, and environmental arenas. However, the rapid policy adoption has revealed systemic friction points that threaten to undermine the equity goals of the initiative. Analysis indicates resistance stemming from three critical areas: Institutional Resistance from elite Higher Education Institutions due to the lack of an embargo option; Financial Inequality, where the rise of Article Processing Charges severely restricts open access publishing for researchers from lower-middle-income institutions; and Regional Capacity Gaps, involving the persistent digital divide, inadequate internet connectivity, and the technical challenges faced by state universities in maintaining sustainable Institutional Repositories. To ensure the successful realization of its Open Science vision, the immediate policy focus must shift strategically from merely *mandating access* to actively *ensuring equitable utilization* by addressing infrastructural deficits, standardizing publishing safeguards (like embargo periods), and integrating robust support for non-APC publishing models.

KEYWORDS

Open science, open access, One Nation, One Subscription (ONOS), Article Processing Charges (APCs), research equity, institutional repositories, India

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INTRODUCTION

The global academic landscape is currently navigating a profound epistemic transition, moving from a legacy system of proprietary, gatekeeper-controlled knowledge dissemination toward a paradigm of Open Science (OS)[1]. This shift is not merely a technical evolution in publishing standards; it represents a fundamental restructuring of the geopolitical economy of information. For emerging global powers, the

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capacity to access, synthesize, and build upon the corpus of global scientific output is no longer a luxury but a strategic necessity[2,3]. In this context, India's aggressive pivot toward a comprehensive Open Science framework constitutes one of the most significant national policy experiments in the 21st century. This report provides an exhaustive analysis of this transition, evaluating the interplay between India's ambitious "One Nation, One Subscription" (ONOS) mandate and the socio-economic realities of its diverse research ecosystem[4,5]. The analysis is grounded in the Self-Reliant India) framework, positing that true knowledge sovereignty requires not just the consumption of global science, but the equitable capacity to contribute to it. By examining the friction points of institutional resistance, financial stratification, and infrastructural deficits, this document argues that the current trajectory, while directionally correct, requires urgent recalibration to prevent the solidification of a two-tiered academic system[1,6-8].

The architecture of India's Open Science policy, coupled with the broader vision of Self-Reliant India, was designed, launched, and solidified during the socio-economic upheavals of the COVID-19 pandemic. This policy framework serves as the guiding philosophy for India's developmental trajectory through 2047, the centenary of its independence. While often misinterpreted by external observers as a retreat into protectionism or autarky, the Indian interpretation of self-reliance is far more nuanced. It emphasizes "strategic autonomy"—the ability to engage with the global economy from a position of strength rather than dependence on the wealth of knowledge available in the open domain[1,9,10]. In the domain of scholarly communication, this vision translates into a clear imperative: reducing the "import dependence" on foreign knowledge products while simultaneously enhancing the "export competitiveness" of Indian intellectual output. Just as the *Atmanirbhar Bharat* initiative seeks to bolster domestic manufacturing to reduce reliance on external supply chains for critical goods like semiconductors and jet engines, the Open Science policy seeks to reduce the reliance on prohibitively expensive, foreign-controlled subscription models that historically walled off Indian researchers from the global frontier of knowledge[11].

The nation's clarion call of "Hail Research," added to the need for freely available, open research. It signals that Research and Development (R&D) is now viewed as a foundational pillar of national security and economic vitality. The National Education Policy (NEP) 2020 explicitly identifies research innovation as a corequisite for development, necessitating a robust infrastructure for knowledge dissemination. Consequently, policies like One Nation, One Subscription (ONOS) are not merely administrative reforms in library sciences; they are strategic interventions designed to create a "knowledge work-force" capable of driving the charter of Developed India agenda[11]. However, the operationalization of this vision is complex. The "Self-Reliant" framework relies on five pillars: Economy, Infrastructure, System, Vibrant Demography, and Demand[12,13]. The Open Science (OS) initiative intersects with all five. It seeks to digitize the System of knowledge distribution, upgrade the infrastructure of universities, empower the Demography of young researchers, and meet the demand for innovation in sectors ranging from pharmaceuticals to clean energy. Yet, as the subsequent sections of this report will demonstrate, the alignment between these pillars is currently stressed by systemic frictions—specifically the inability of the *infrastructure* pillar (internet connectivity, repositories) to support the Demography pillar (researchers in non-metro cities), and the conflict between the Economic pillar (cost of publishing) and the System pillar (mandates for open access)[14]. Hence, the paradigm shift to OS may provide a solution to universal access to scientific knowledge, and India's march towards achieving such self-reliance may provide a boost to worldwide adoption of this approach.

POLICY LANDSCAPE: CONTEXTUALIZING INDIA'S LEAP INTO OPEN SCIENCE

The Indian OA movement has been sustained by grassroots efforts since the early 2000s, driven by the recognition that unrestricted access offers far greater advantage to India than to Western nations burdened by rising article processing/publication and journal subscription costs. This community advocacy quickly translated into policy precedents set by premier publicly funded Research and Development (R&D) organizations. Between 2011 and 2014, the Council of Scientific and Industrial Research (CSIR), the Department of Biotechnology (DBT), and the Department of Science & Technology (DST) adopted Green OA policies, mandating the deposit of publicly funded papers in institutional repositories[2-14].

The advocacy group OA India further mastered this cause, submitting a draft National Open Access Policy in 2017. They concurrently developed critical, non-commercial infrastructure, including the preprint repositories agri-Xiv and IndiaRxiv, and in 2024 launched IndiaJOL to specifically support the non-fee-charging Diamond Open Access model. The 2018 Delhi Declaration of OA gave solidarity to the Global South, positioning India as a regional leader advocating for open science practices. This sustained, community-led push, formalized through policies and declarations, positions India not merely as a consumer of global knowledge but as a significant producer and *leader* setting precedents for good practice in developing nations coping with ill effects of rising subscription fees on standard research.

The emphasizing rationale for a National Open Access Policy, as articulated in the 2017 draft, is to unify all publicly funded scholarship, encompassing research articles and data. This push has been aiming to support the broader national agenda of transforming India into a "truly digital India". Policy directives aim for interoperability and flow of data between existing and nascent national digital platforms, such as the electronic theses and dissertations repository *Shodhganga*, the Massive Open Online Course (MOOC) platform *Swayam*, and the National Digital Library.

This ambitious framework necessitates a holistic evaluation of policy success that extends far beyond traditional academic metrics like citation counts. The policy framework recognizes that the impact of Open Science extends to societal welfare, contributing to community welfare (social impact), values and beliefs (cultural impact), policy construction and governance (political impact), resource management (environmental impact), and public health outcomes. This holistic approach demands that policymakers measure the success of OA mandates by demonstrating tangible public welfare gains, such as the utilization of OA research for public health policy formulation or climate adaptation strategies.

GRAND STRATEGY FOR ACCESS: ANALYZING "ONE NATION ONE SUBSCRIPTION"

The One Nation, One Subscription (*ONOS*) initiative, approved by the Usnion Cabinet in November 2024, represents India's most ambitious centralized procurement scheme aimed at universal access to scholarly content. Managed by the *INFLIBNET* Centre, *ONOS* provides country-wide access to high-impact scholarly research from 30 prominent publishers, including the top four publication houses (Table 1). This initiative has benefitted nearly 1.8 Crore (18 million) students, faculty, and researchers across approximately 6,400 institutions, including central and state universities, colleges, and R&D institutions, since its inception.

The *ONOS* operates with a critical dual function. Firstly, it provides universal "Read" access, ensuring that Tier 2 and Tier 3 HEIs (that earlier lacked adequate journal subscriptions), are immediately incorporated into the class research ecosystem. Secondly, *ONOS* includes plans for a consolidated central funding mechanism designed to support Indian authors by paying Article Processing Charges (APCs) for publication in good-quality OA journals[2,7,14]. This centralized resource is vital because transformative agreements (TAs), which shift institutional funds from subscriptions to publishing, remain nascent, non-sumptuous, institution-centric, and fragmented in India (Table 1).

ONOS functions as a national substitute for individual institutional TAs. By centralizing both 'Read' negotiation and 'Publish' APC payments, the government seeks to mitigate the fragmentation and high administrative overhead that limit the effectiveness of individual institutional agreements in a highly diverse academic landscape[15]. The long-term fiscal viability of sustaining national licenses for 30 global publishers, however, poses a significant strategic challenge. An over-reliance on this cost-intensive model risks delaying necessary investment in the sustainable development of domestic, self-reliant Green and Diamond OA publishing infrastructure. Policy must suggest a clear, phased exit strategy from high-cost vendor dependence, potentially requiring publishers to contribute towards Indian OA infrastructure or accepting pricing caps linked to national research output metrics in future license renewals.

Table 1: Open science friction matrix

Dimension	Policy mandate	Friction point	Equity risk
Institutional	Mandatory thesis deposit (Shodhganga)	Lack of standardized Embargo options[15]	**IP risk:** Researchers lose patent rights or "first authorship" claims; Elite institutions opt out or resist compliance
Financial	Shift to gold open access	High article processing Charges (APCs) ($2000+)[19]	**Exclusion:** Researchers from low-funding institutions cannot afford to publish; "Pay to Publish" divide
Regional	Digital access (ONOS)	Weak internet/Server infrastructure in State Univs.[16]	**Digital divide:** "One Nation" benefits are restricted to urban/central elites; Rural capacity lags due to "technical challenges"

APCs: Article Processing Charges; HEIs: Higher Education Institutions; IP: Intellectual Property; ONOS: One Nation, One Subscription; Shodhganga: Indian national digital repository of electronic theses and dissertations; Digital Divide: Inequality in access to digital infrastructure and internet connectivity

MANDATORY DEPOSIT AND STAKEHOLDER FRICTION: A DEEP DIVE INTO *SHODHGANGA*

***Shodhganga's* mandate and achievements:** *Shodhganga*, the digital repository of electronic theses and dissertations (ETDs) maintained by the *INFLIBNET* Centre, is a milestone of India's Green OA strategy[4,15,16]. Established to provide open access to doctoral work, it hosts over 359,000 full-text theses from more than 750 universities. The platform increases visibility and citability by assigning Digital Object Identifiers (DOIs) and supporting ORCID iD integration, aligning with international scholarly standards. Crucially, *Shodhganga* promotes research integrity by integrating plagiarism-detection software and supports a wide range of Indian languages, addressing the nation's broad linguistic diversity.

Coercive push vs. gentle nudge policy dilemma: Despite its critical function, the policy requiring compulsory deposit of theses and dissertations in *Shodhganga* has been met with resistance, encapsulated by the policy dilemma of a "gentle nudge or coercive push"[17]. The Human Resource Ministry has implemented "increasingly coercive steps" to enforce timely and compulsory uploading, exemplified by the January 2023 UGC directive[18]. This approach has been met with a "rather lukewarm response" and repeated failures to secure compliance from top research institutions; critically, almost every Indian Institute of Technology (IIT) and Indian Institute of Management (IIM) is absent from the list of participating institutes.

Root of conflict: International competition and lack of embargo—"Theft of theme": The friction stems primarily from the perceived conflict between immediate open availability and the career aspirations of young academics. Scholars fear that compulsory, immediate open access risks "theft of ideas" by unscrupulous researchers globally, and jeopardizes their ability to publish in high-impact international journals. Many top-tier journals adhere to business models that reject material already available freely in the public domain. This issue is severely exacerbated by the lack of a standard embargo provision in the *Shodhganga* policy. In developed markets, mandatory ETD uploads are typically accompanied by an embargo option, allowing students to delay public availability for two to five years, thus securing their competitive advantage for subsequent journal publication.

The self-censorship risk associated with this policy deficit presents a serious negative externality, hindering the timely dispersal of valuable information. By forcing compulsory upload without protection, the mandate risks compelling students to select research topics deemed "acceptable to the broader public" rather than pursuing potentially sensitive or cutting-edge work. A policy intended to enhance transparency paradoxically may risk academic freedom. The continuous resistance from elite research institutions emphasizes the ineffectiveness of a rigid "one-policy-fits-all" approach, demonstrating that policy flexibility, such as accommodating an embargo option, is necessary to align national OA mandates with the institutional requirement to maximize global research impact, without compromising the quality of research[19].

FINANCIAL BARRIERS TO OPEN ACCESS: ADDRESSING THE APC EQUITY CRISIS

Cost spectrum and limitations of relief mechanisms: The global shift toward Gold OA publishing, financed by Article Processing Charges/Article Publication Charges (APCs), poses a significant equity challenge for Indian researchers. As a lower-middle-income country, the high costs of APCs, which range from $8 to $5,000 across disciplines and publishers, restrict access to prestigious publishing journals. This inequality is detrimental to participation in global knowledge exchange in all streams of knowledge.

While fee waivers and discounts are available invariably from publishers, their effectiveness is severely limited by burdensome application processes, cumbersome administration, and a general lack of awareness among eligible researchers, particularly those affiliated with remote or less-resourced institutions. Further, the waivers may be biased or on the discrimination of the editors or boards of journal.

Strategic financial policy: Supporting sustainable models: Financial pressure remains a key driver for researchers engaging with fake or predatory journals, which exploit the demand for rapid, low-cost publication by hiding high publication fees and failing to disclose the lack of peer review. Though there is no single index or criteria is available to mark a specific journal, yet a few "Impact Factors" claim to be genuinely classifying the publication venues. Interestingly, these big houses endorse judging criteria of each other (the link to move to another platform for endorsing the evaluation done by one big-wiz can be easily seen while visiting their site).

The centralized APC funding planned under ONOS is therefore not merely a financial subsidy; it functions as a critical research-promoting integrity measure. By providing resources that fund publication in valuable, vetted, high-quality journals, the government directly mitigates the economic temptation for researchers to resort to unethical publishing journals. However, this centralized subsidy must be coupled with a strong support for non-APC models. Continued investment in community-driven infrastructure, such as IndiaJOL, which promotes the Diamond OA model, is essential for creating sustainable, institutionally supported publishing pathways that eliminate individual researcher payment barriers and ensure access remains unrestricted and equitable. At institutional level, some historic HEIs are sponsoring such publications by offering "seed-money" for institutional research and publication. Author's parent institute is a pioneer institute and the only one in North India to provide such assistance to institutional researchers of arts, commerce, science and applied science backgrounds.

RESEARCH INTEGRITY AND QUALITY CONTROL: THE EVOLUTION OF JOURNAL ASSESSMENT

From centralization to decentralized accountability: The universal and pervasive issue of predatory publishing has historically threatened scientific validity, reliability and mural and extra-mural research standards in India. In response, the UGC introduced the UGC-CARE (Consortium for Research and Academic Ethics) list in 2018 to recognize only reputable journals for faculty selections and promotions[17]. This centralized approach, however, faced severe criticism for administrative delays, inefficiency in removing known predatory titles, favor and promote specific publication houses and failure to adequately include journals published in Indian/regional languages[18].

In alignment with the National Education Policy 2020 (NEP 2020) critique of over-regulation, the UGC dissolved the central list in 2024. The responsibility for journal selection was subsequently shifted to individual HEIs, guided by a set of "Suggestive Parameters" framed by experts. These eight criteria prioritize transparent peer review, ethical publishing standards, journal visibility, editorial board expertise, and clear policies on accessibility and archival (Table 2). The review of this approach towards bringing ethical research publication of forefront is still a matter of debate and critical review.

Table 2: The comparative features of pay for publication and one nation one subscription access models

Feature	Pre-2025 model	ONOS model (2025+)
Access mechanism	Fragmented (10+ consortia like *e-ShodhSindhu*)	Centralized (One Nation)[5]
Beneficiaries	Elite/Central Institutions mostly	All 6,300+ Govt Institutes of Higher Learning[4]
Publisher scope	Individual negotiations	30 Major publishers/13,000 Journals[4]
Cost control	High (Publisher controlled pricing)	Negotiated Monopsony (Govt controlled-6,000 Cr budget)[12]
Strategic goal	Library maintenance	"Knowledge Work-force" creation[4]

ONOS: One Nation One Subscription, HEIs: Higher Education Institutions, APCs: Article Processing Charges, Govt: Government, : Indian rupee and Consortia: Collaborative groups of institutions for shared resource access (e.g., e-ShodhSindhu)

Ethical governance and transparency mandates: The move to decentralized accountability grants HEIs academic freedom but simultaneously burdens them with the responsibility of quality assurance. This decentralization carries the inherent risk of fragmented quality control, where less rigorous HEIs might establish perfunctory internal committees to validate dubious journals solely for faculty promotion. The UGC must therefore issue prescriptive guidance on the minimum composition and functioning of HEI quality committees and establish a centralized auditing power to prevent the dilution of standards[19].

Significantly, the explicit inclusion of clear policies on "open access fees" and "archival practices" as part of the suggestive parameters represents a crucial integration of OA ethics into research quality assessment. By requiring transparent disclosure of APCs and archival procedures, the UGC equips faculty with the necessary tools to identify and avoid predatory journals that often manipulate authors by hiding high fees (Table 2). This criterion transforms the quality check into a functional researcher advocacy and protection tool.

REGIONAL DISPARITIES AND THE LAST-MILE PROBLEM IN INSTITUTIONAL REPOSITORIES

Challenge of scale and infrastructure: India's higher education sector is vast, comprising nearly 1,000 universities and tens of thousands of colleges. Yet, significant systemic challenges persist across the regions, including inadequate technological infrastructure, poor libraries, and, critically, limited access to high-quality educational material. The digital divide, characterized by inadequate internet connectivity and limited digital literacy, particularly in rural and geographically challenging states like Uttarakhand, continues to hinder the widespread adoption and utilization of digital libraries and OA resources. The onset of private or self-financing universities has been a critical factor in maintaining a set standard and quality in research and related publications. The UGC has been validating the status of these universities and maintains a list of fake institutes on its website.

Capacity failure in repository maintenance: While many Indian libraries adopt *DSpace* for their Institutional Repositories (IRs) due to its open-source nature, often following the lead of national projects like *Shodhganga*, a significant proportion struggle with the continuity and long-term maintenance of these web-based systems. The maintenance of digital systems is heavily influenced by sustained funding, and resource-crunch-prone state universities often face challenges that lead to inconsistent online visibility and collection strength[4,11]. Even where high numbers of universities participate, such as in Tamil Nadu, the infrastructure constraints limit the quality of Green OA implementation nationally[7,8].

Mandating Green OA without providing sustained technical support and IT capacity risks creating "ghost repositories," platforms that fulfill a formal requirement but lack the necessary technical continuity and robust collection strength for real scholarly utility. Therefore, the policy success hinges not merely on repository creation, but on sustained usability. Furthermore, Open Science goals require robust human capacity development. Simply providing access (via *ONOS*) or resources (*OER*) is insufficient if digital literacy, awareness, and the necessary pedagogical skills among faculty and students are not simultaneously upgraded. Investment must be channeled into mandatory educator training programs focused on digital literacy and Open Science advocacy to ensure HEIs can effectively contribute to and utilize the newly accessible knowledge networks.

POLICY RECOMMENDATIONS FOR A SUSTAINABLE OPEN SCIENCE ECOSYSTEM

India's Open Science fora represent a crucial step toward achieving equitable and widespread access to knowledge, reinforcing its strategic position within the Global South. Success now relies on balancing the impetus of centralized financial intervention (*ONOS*) with the need for institutional flexibility and resources for decentralized implementation.

Based on the current friction points, the following high-impact policy recommendations are critical for ensuring equitable and sustainable implementation:

- **Introduce mandatory eprovisions for ETDs:** Policy must immediately standardize the option for a 2-3 year embargo period on electronic theses and dissertations deposited in *Shodhganga*. This measure is essential to protect the intellectual property of globally competitive scholars, secure the buy-in of elite research institutions (IITs/IIMs), and resolve the critical policy conflict that currently incentivizes non-compliance
- **Streamline centralized APC support:** The *ONOS* centralized APC fund must be operationalized swiftly and transparently, prioritizing administrative simplicity and rapid allocation. Focused grants should be specifically earmarked for researchers in Tier 2 and Tier 3 institutions, ensuring that the financial barriers to publishing in high-quality Gold OA journals are effectively eliminated
- **Invest in technical resilience and centralized hosting:** To overcome the widespread capacity failure in maintaining institutional repositories, the government should fund a dedicated, cloud-based National Repository Hosting Service (NRHS) managed by *INFLIBNET*. This centralized technical service would assume the maintenance risk for resource-poor state universities, ensuring the continuity and online visibility of Green OA content
- **Codify and audit decentralized ethics:** The UGC must issue prescriptive, mandatory guidelines detailing the composition, training requirements, and protocols for HEI internal committees (such Internal Quality Assurance Cell (IQAC) responsible for journal selection. This must be complemented by a transparent, periodic auditing process to ensure consistent adherence to the UGC Suggestive Parameters, thus preventing local regulatory capture and the re-emergence of predatory practices.

CONCLUSION

The final phase of India's Open Science leap must now focus on developing robust policies for compliance of universalization of Open Research Data in public, open or more precisely universal domain, ensuring adherence to the FAIR principles (Findable, Accessible, Interoperable, Reusable) across all publicly funded data sets. The novelty, reliability, authenticity and free flow of data to masses needed to be assured and spread successfully while navigating these policy complexities and ensuring equitable capacity development. By adopting this model, India will not only firmly cement its status as a powerful and enduring research leader in the Global South but also will contribute towards fulfilling the need of global access to standard research publications and citations. An additional assistance at the university or institutional level to boost the number of publications in open research model and provision of incentives and subsidies to publication houses for shifting to provision of free to all research materials will ensure the universalization of knowledge.

SIGNIFICANCE STATEMENT

India's transition toward Open Science represents a major policy intervention with implications for research equity, institutional autonomy, and national knowledge production. By identifying structural barriers related to embargo policies, publication costs, and regional infrastructure gaps, this study provides evidence-informed insights for policymakers and higher education administrators. The findings support the need for adaptive governance mechanisms and investment in non-APC publishing models to ensure that Open Science reforms translate into inclusive and effective research participation.

REFERENCES

1. Koley, M., 2022. Analysis of open science policy recommendations proposed in India's 5th science, technology & innovation policy draft. J. Sci. Policy Governance, Vol. 21. 10.38126/JSPG210208.
2. Jain, V.K., K.P. Iyengar and R. Vaishya, 2021. Article processing charge may be a barrier to publishing. J. Clin. Orthop. Trauma, 14: 14-16.
3. Shamseer, L., D. Moher, O. Maduekwe, L. Turner and V. Barbour *et al*., 2017. Potential predatory and legitimate biomedical journals: Can you tell the difference? A cross-sectional comparison. BMC Med., Vol. 15. 10.1186/s12916-017-0785-9.
4. Pinfield, S., J. Salter and P.A. Bath, 2017. A "Gold-centric" implementation of open access: Hybrid journals, the "Total cost of publication," and policy development in the UK and beyond. J. Assoc. Inf. Sci. Technol., 68: 2248-2263.
5. Sinha, A., 2020. Research publishing: Is 'One Nation, One Subscription' pragmatic reform for India? Sci. Wire.
6. UNESCO, 2021. UNESCO Recommendation on Open Science. UNESCO Publishing, Paris, France, Pages: 34.
7. OAI, A. Rao, A. Gray, B. Gunjal and C. Singh *et al*., 2017. National Open Access Policy of India (Draft, 2017) Ver. 3. Open Access India, 10.5281/zenodo.1002618.
8. PSA, 2025. One Nation One Subscription (ONOS). Gov. India.
9. Gasparyan, A.Y., B. Nurmashev, E.E. Udovik, A.M. Koroleva and G.D. Kitas, 2017. Predatory publishing is a threat to non-mainstream science. J. Korean Med. Sci., 32: 713-717.
10. Tao, T., 2020. India's fight against predatory journals: An interview with Professor Bhushan Patwardhan. Scholarly Kitchen.
11. Björk, B.C. and D. Solomon, 2012. Open access versus subscription journals: A comparison of scientific impact. BMC Med. Educ., Vol. 10. 10.1186/1741-7015-10-73.
12. Piwowar, H., J. Priem, V. Larivière, J.P. Alperin and L. Matthias *et al*., 2018. The state of OA: A large-scale analysis of the prevalence and impact of open access articles. PeerJ, Vol. 6. 10.7717/peerj.4375.
13. Roy, A., A. Shukla and A. Tripathi, 2025. Trends in open access academic outputs of state agricultural universities in India: Patterns from openalex. arXiv, 10.48550/arXiv.2503.18506.
14. Nurul Alam, M. and A.K. Das, 2025. Open access and article processing charges with special reference to Indian institutions: Analyzing fee waivers, discounts, and transformative agreements. J. Data Sci. Informetrics Citation Stud., 4: 174-181.
15. Balakumar, K. and A. Narayanan, 2024. Shodhganga-Gentle nudge or coercive push? Econ. Polit. Wkly (Engage), Vol. 59.
16. The Hindu, 2025. UGC CARE dissolution: Suggestive parameters for choosing journals released. https://www.thehindu.com/education/ugc-care-dissolution-suggestive-parameters-for-choosing-journals-released/article69206510.ece.
17. Jigeesh, A.M., 2025. Why has the UGC-CARE list of journals been discontinued? https://www.thehindu.com/news/national/why-has-the-ugc-care-list-of-journals-been-discontinued-explained/article69255837.ece.
18. Mahesh, G. and R. Mittal, 2008. Digital libraries in India: A review. Libri, 58: 15-24.
19. Shen, C. and B.C. Björk, 2015. 'Predatory' open access: A longitudinal study of article volumes and market characteristics. BMC Med., Vol. 13. 10.1186/s12916-015-0469-2.