

Adapt to Remain Adept? Evolving Perspective on Interdisciplinary Research

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Abstract

In recent periods, a number of challenges have emerged in the traditional journal article publication system. The pressure to publish and the surge in submissions have led to a reviewer shortfall, which in turn has led to rising desk rejections on the one hand and a longer review process on the other. One possible approach for the journals is to expand the scope of publications for the researchers by providing due importance to interdisciplinary research (IDR). Instances of IDR are quite prominent, for example, trade gravity models, econophysics and neural networks, in the domain of economics. While IDR is gaining momentum, there exist several systemic and structural challenges in publishing such research in renowned journals. The current analysis discusses the evolving perspectives on these aspects.

Keywords

Interdisciplinary research, peer review, trade gravity models, econophysics, neural networks

Rules of the Game and Emerging Challenges

In academic journals, a paper is accepted and published when an equilibrium is reached, that is, the demand and supply conditions are met. The supply-side factors involve the contributors to the journal, who are guided by various drivers, for example, institutional requirements to publish for earning promotion and other incentives, an urge to gain reputation among peers by creating new additions to the knowledge pool and so on. The demand-side factors are set by the journals,

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which are managed by entities such as non-profit societies, academic departments from reputed universities or professional bodies and produced either in-house by them or by designated publishing houses. The aspects considered by the editorial boards of such journals may cover diverse perspectives, for example, compliance with the pre-defined 'Aims and Scope' and size restrictions (e.g., word limit); evaluation of a submission's relevance in terms of contemporary interests and, accordingly, future citation potential that will influence its impact factor, potential rise in H-index, better ranks in the next round of accreditation process (e.g., in crucial forums like the Australian Business Deans Council (ABDC), Association of Business Schools [ABS], Scopus); showcasing the global status by securing a wider geographical spread in author list and so on. Given the higher stakes and annual submission statistics, renowned journals usually devise more stringent benchmarks for acceptance, and consequently, the review process.

In recent periods, a number of challenges have emerged in the traditional journal article publication system. Adding pressure on the academicians, the universities (both from the public and private spheres) and institutes over the period have erected stringent publication requirements, keeping in mind both internal (e.g., to be used as a screening mechanism at the time of deciding promotions) and external (e.g., for participation in rankings like the National Institutional Ranking Framework in India or for gaining global accreditation like the Association to Advance Collegiate Schools of Business) purposes. The stringency has often been introduced in terms of quantity (e.g., more converted publication instances) as well as quality (e.g., publication in ABDC 'A*' rather than in 'C' category). This competitive pressure is witnessed in varying degrees across all countries. As a result, a surge in collaborative research, both in terms of within-country (e.g., by focusing on complementarity in technical aspects of research) and across countries (e.g., by considering multi-country primary survey data), has been witnessed.

However, a major headache for the journal editorial boards is that the growing volume of submissions has not been matched by a corresponding rise in enthusiasm for reviewing articles among scholars (Ellaway, 2024). The extent of the reviewer interest deficit varies from journal to journal. Some estimates note that the editorial boards of journals are sometimes forced to request 10–12 scholars from their networks and bibliography of the submitted manuscript before finally ensuring 2 peer-review comments on the article (Hazen et al., 2016). A Publons report notes that the average number of invitations for every accepted review is likely to go up from 2.7 to 3.6 over 2017–2025 (Clarivate, 2018). However, rather than considering this as a pure behavioural transformation, the structural challenges coming from the thinning of academic workforce, particularly in tenure-track appointments, need to be borne in mind (Flaherty, 2022).

One line of argument suggests extension of more prominent recognition for the review services (e.g., linkage with Publons, auto-generation of an authenticated reviewer certificate), allowing academics to draw appropriate credits during career progression (Horta & Jung, 2024). However, it needs to be remembered that 'authors are also peer reviewers, and their time is a finite resource' (Clark & Solomon, 2025). Keeping this perspective in mind, the other branch of recommendation focuses on payments to reviewers as a viable solution (de Oliveira Neto, 2024). However, that strategy

might not be viable for a major section of social science and interdisciplinary journals, which usually do not charge any submission fee.

As an outcome of the resulting reviewer shortfall in renowned journals, the desk rejection rates have increased considerably on one hand, and the length of the review process has become painfully stretched on the other. Due to the growing inward traffic, perceived lack of novelty, non-alignment with the journal's focus area and several other reasons, the editorial board of renowned journals often desk-reject articles without sending them out for peer review (Arora et al., 2026). The phenomenon of rising desk rejection is witnessed in both high-impact as well as less impactful journals (da Silva & Nazarovets, 2025). The desk rejection rates varied widely for the renowned journals, depending on submission traffic; for example, 15% for *PLoS One* and 90% for the *New England Journal of Medicine* (Manusights, 2026). Analysis of the communicated language for rejected papers reveals that they often rely upon generic pre-set reasons like lack of conformity with journal criteria (40.60%) as well as strict evaluation process and low acceptance rate (18.8%), rather than specific factors; while non-availability of suitable reviewers has seldom been admitted (2.63%) (Nguyen & Vuong, 2025). This phenomenon might lead to 'increasing the "rejection cascade" of repeated submissions and peer review cycles' (Künzli et al., 2026). Moreover, even when scholars agree to review the original article as well as its resubmitted version(s) for a journal, the publication process often gets delayed due to the 'peer review fatigue' phenomenon (Beecher & Wang, 2025; Björk & Solomon, 2013; Ellison, 2002).

As an undesirable response to reviewer shortage and the resulting disequilibrium in the market, several predatory journals and cloned journals have evolved, which lure contributors with faster decision and execution timelines, albeit at a cost. Conversely, the unintended flip side of mounting pressure to publish has led to certain malpractices resulting in retraction of papers, sometimes even from universities and institutes of repute. Rising instances of incorporating texts generated by using artificial intelligence (AI) tools in academic papers have emerged as another major concern. It is acknowledged that prudent application of AI tools can help in the process of inception of research ideas, content structuring and sequencing, timely completion of structured literature review, data management and manuscript editing (Khalifa & Albadawy, 2024). However, apart from concerns over academic integrity, stagnation in mind application through over-reliance on generative AI tools is alarming (Cheng et al., 2025). Therefore, growing over-dependence on AI as a labour-displacing instrument rather than a quality-enhancing one calls for compulsory disclosure of AI tool intensity in manuscript preparation on one hand and maintaining a rigorous editorial review process on the other (Gulumbé, 2024).

Growing Need for Embracing an Interdisciplinary Approach

The aforesaid problems are not seasonal and hence difficult to solve by mere goodwill gesture interventions. One solution is to expand the scope of publications for the researchers by providing due importance to interdisciplinary research

(IDR). It is understood that a university would always prefer the faculty on its payroll to publish in renowned journal forums in general and contribute significantly to the literature in particular. However, the departmentally defined territories (i.e., academic domains) may often constrain a faculty member from effectively branching out in a perceived non-field journal to explore publication opportunities. For instance, there is a possibility that a publication by a faculty formally employed in the Department of Economics in a public policy journal might be considered as a technically inferior contribution vis-à-vis a corresponding publication in a core economics journal at the time of promotion. As a result, a significant proportion of research collaborations in the recent past are often witnessed within the same or interrelated fields in a particular subject.

However, it is increasingly acknowledged that solutions obtained through the prism of IDR ideas can offer a much more robust explanation to emerging considerations. A few examples would be helpful in understanding the perspective. First, the critical analysis of the recent reciprocal tariff moves by the USA should be conducted not only through international economics theories but also keeping in view the global political-economic dimensions like hegemony. Second, mapping the diverging influence of subsidy policies across countries on agricultural performance, without considering the environmental degradation and climate change angle therein, is unlikely to offer the complete picture. Third, comparing the differential impacts of public-private partnerships in the healthcare sector across Indian states, without considering the disparities in sociological and cultural factors, can offer misleading conclusions. Fourth, the differing levels of electoral success of celebrity politicians across Indian states, who are coming from the glamour world, requires consideration of political, psychological and culture-related angles. While more examples of this sort can be offered, the moot point is obvious. Novel research contributing to the literature in today's context needs to be multidisciplinary in nature, which will augment its technical rigour on one hand and policy relevance on the other.

While the submission of articles embodying IDR questions and ideas has increased in the recent period, the development is still in the nascent stage. Two concerns deserve particular mention in this regard. First, it might be observed that academicians from different disciplines collaborate on writing a paper, but the final outcome remains a mixture rather than a balanced compound. In other words, the scholars may divide the task of writing the paper by defining territories, as a result of which efficient synthesis of ideas does not take place. Second, on certain occasions, the authors may oversell their research by making claims in the abstract, which may not be carried out substantially in the main body. This can be an undesirable outcome when authors from a particular discipline write the paper, but they try to add a literature survey or a mere superficial analysis by using certain tools and concepts developed within another discipline. An in-depth collaboration between scholars coming from different disciplines, working closely right from the inception of the research idea to its execution at the end, is warranted.

One interesting example of how an IDR idea might be appropriated by the mainstream literature can be obtained from the field of international trade. The application of gravity models for estimating trade and other international exchanges is a case in point. While the practicality of borrowing the Newtonian

concept of gravity from the domain of Physics was effectively established by the early works of Ravenstein (1885) and Tinbergen (1962), over the period renowned economists have enriched this branch of literature by offering theoretical undercurrents on one hand and developing more sophisticated estimation methods on the other (Anderson, 1979; Anderson et al., 2016; Anderson & van Wincoop, 2003; Bergstrand, 1985, 1989; Bergstrand et al., 2013), which immensely improved the corresponding policy relevance. The gravity framework is now an integral part of empirical international economics research, which has been significantly enriched by the influence from Physics.

Among the evolved IDRs witnessed in economics, two areas deserve particular mention, namely, the application of econophysics and neural networks. Econophysics involves the application of concepts and techniques from statistical physics for solving research questions pertaining to economics-oriented research ideas, for example, involving finance (Jovanovic & Schinckus, 2016) and trade (Ikeda et al., 2016). The articles often witnessed deep collaboration between scholars from multiple academic departments, including Advanced Integrated Studies in Human Survivability, Science and Technology and Economics (Ikeda et al., 2016). Articles on this theme were published in journals from various domains, including Economics (Schinckus, 2017), Finance (Schinckus, 2012), History (Gingras & Schinckus, 2012), Political Economy (Jovanovic & Schinckus, 2013) and Physics (Schinckus, 2013). On a similar note, the framework of neural networks, whose origin is located in graph theory from the domain of mathematics, has been applied for predicting various economic data series, including growth (Khachiyani et al., 2022), trade flows (Morland et al., 2025) and stock price movements (Bao et al., 2025). In each of these cases, synthesis of research ideas and techniques from two disciplines considerably enriched the resulting research output.

Nevertheless, it needs to be acknowledged that not all the journals embracing IDR ideas are homogeneous in terms of their coverage and approach. Several journals are still on the learning curve in recognising research gaps and questions covering multiple disciplines. The author has personal experience of conducting IDR by collaborating with scholars from other disciplines, including international law, international relations and international business. On several occasions, desk rejections in notable journals have been witnessed for not being able to acknowledge the paper properly in terms of the cited gaps in the literature, viewed through the prism of multiple disciplines. Rejections on the grounds of assigning reviewers from the wrong discipline, which is reflected in tentative review comments, have also been faced. This underlines the importance of highlighting the contributions of IDR not only to the end users (i.e., the academic departments), but also to the facilitators (i.e., the editorial boards of journals).

Way Forward

A wider recognition of the fact that IDR is a crucial driver of visibility for individual researchers on one hand and the journals creating a forum for publicising the idea on the other is the need of the hour. For instance, a positive relationship

between IDR and ‘societal visibility of science’ has been well documented (D’Este & Robinson-García, 2023). In order to secure the rightful place for IDR in academic and policy forums, the following aspects are going to play a crucial role. First, a series of systemic reforms has been witnessed in India in recent years through the introduction of the New Education Policy, which sets the stage for a choice-based credit system in a 4-year graduation programme. As various courses can be opted from multiple disciplines, growing acceptance of IDR among the young researchers is expected in future. Consequently, the reforms in due course of time are likely to enhance acceptance of such publications for promotion and other academic rewards. However, of its own accord, the process can be a long one, which needs to be hastened. Second, outcome-oriented policy focus is gaining momentum in recent years, and the optimality of IDR over a corresponding traditional subject-specific study is slowly but surely being acknowledged. The patronage from policymakers can surely tilt the balance in the right direction at an early date. Third, for the sake of market clearance, the forum for publishing IDR needs to be widened, either through entry of more interdisciplinary journals or by reorientation of existing journals. However, reliance on path dependence and perceived concerns over viability might erect unwanted delays in the process, which deserves attention. Fourth, the open peer review process is gaining momentum in recent times, where the authors and reviewers can know each other either right from the early stage of the review process or after acceptance of the paper (Henriquez, 2023). The open peer review process, which brings in transparency, may ensure that the right kind of reviewers from appropriate disciplines are being selected for reviewing an article. Finally, one major problem while publishing IDR in journals is reviewer perception mismatch. A procedural reform in the review process for interdisciplinary articles is warranted, where allocation of reviewers from multiple disciplines (based on the subjects covered in the submission) would serve proper justice. However, given the prevailing shortfall in the availability of reviewers, creating a reviewer pool for this purpose is going to be a major challenge for many journals.

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References

- Anderson, J. E. (1979). A theoretical foundation for the gravity equation. *American Economic Review*, 69(1), 106–116.
- Anderson, J. E., & van Wincoop, E. (2003). Gravity with gravitas: A solution to the border puzzle. *American Economic Review*, 93(1), 170–192.
- Anderson, J. E., Vesselovsky, M., & Yotov, Y. V. (2016). Gravity with scale economies. *Journal of International Economics*, 100, 174–193.
- Arora, P., Bapuji, H., Higgins, C., Louche, C., & Panwar, R. (2026). Desk rejection: When the musical notes just don't come together. *Business & Society*, 65(3), 515–527.
- Bao, W., Cao, Y., Yang, Y., Che, H., Huang, J., & Wen, S. (2025). Data-driven stock forecasting models based on neural networks: A review. *Information Fusion*, 113, 102616. <https://doi.org/10.1016/j.inffus.2024.102616>
- Beecher, K., & Wang, J. (2025). Peer reviewer fatigue, or peer reviewer refusal? *Accountability in Research*, 32(5), 838–844.
- Bergstrand, J. H. (1985). The gravity equation in international trade: Some microeconomic foundations and empirical evidence. *Review of Economics and Statistics*, 67(3), 474–481.
- Bergstrand, J. H. (1989). The generalized gravity equation, monopolistic competition, and the factor-proportions theory in international trade. *Review of Economics and Statistics*, 71(1), 143–153.
- Bergstrand, J. H., Egger, P., & Larch, M. (2013). Gravity redux: Estimation of gravity-equation coefficients, elasticities of substitution, and general equilibrium comparative statics under asymmetric bilateral trade costs. *Journal of International Economics*, 89(1), 110–121.
- Björk, B. C., & Solomon, D. (2013). The publishing delay in scholarly peer-reviewed journals. *Journal of Informetrics*, 7(4), 914–923.
- Cheng, A., Calhoun, A., & Reedy, G. (2025). Artificial intelligence-assisted academic writing: Recommendations for ethical use. *Advances in Simulation*, 10, 22. <https://doi.org/10.1186/s41077-025-00350-6>
- Clarivate. (2018). *Publons global state of peer review 2018*. <https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf>
- Clark, D. A., & Solomon, M. (2025). Why the rise of predatory journals: View of the prey. *ANZ Journal of Surgery*, 95, 2245–2246.
- da Silva, J. A. T., & Nazarovets, M. (2025). Rejected papers in academic publishing: Turning negatives into positives to maximize paper acceptance. *Learned Publishing*, 38(1), e1649. <https://doi.org/10.1002/leap.1649>
- de Oliveira Neto, J. B. (2024). The challenge of reviewers scarcity in academic journals: Payment as a viable solution. *Einstein*, 22, eED1194. <https://doi.org/10.1007/s10459-024-10350-2>
- D'Este, P., & Robinson-García, N. (2023). Interdisciplinary research and the societal visibility of science: The advantages of spanning multiple and distant scientific fields. *Research Policy*, 52(2), 104609. <https://doi.org/10.1016/j.respol.2022.104609>
- Ellaway, R. H. (2024). Where have all the reviewers gone? *Advances in Health Sciences Education*, 29, 717–720.
- Ellison, G. (2002). The slowdown of the economics publishing process. *Journal of Political Economy*, 110(5), 947–993.
- Flaherty, C. (2022, June 13). The peer-review crisis. *Inside Higher Education*. <https://web.archive.org/web/20220613075959/>; <https://www.insidehighered.com/news/2022/06/13/peer-review-crisis-creates-problems-journals-and-scholars>

- Gingras, Y., & Schinckus, C. (2012). The institutionalization of econophysics in the shadow of physics. *Journal of the History of Economic Thought*, 34(1), 109–130.
- Gulumbe, B. H. (2024). Obvious artificial intelligence-generated anomalies in published journal articles: A call for enhanced editorial diligence. *Learned Publishing*, 37(4), e1626. <https://doi.org/10.1002/leap.1626>
- Hazen, B. T., Fawcett, S. E., Ogden, J. A., Autry, C. W., Richey, R. G., & Ellinger, A. E. (2016). Addressing a broken peer review process. *The International Journal of Logistics Management*, 27, 622–628.
- Henriquez, T. (2023). Open peer review, pros and cons from the perspective of an early career researcher. *mBio*, 14(5), e01948-23. <https://doi.org/10.1128/mbio.01948-23>
- Horta, H., & Jung, J. (2024). The crisis of peer review: Part of the evolution of science. *Higher Education Quarterly*. <https://doi.org/10.1111/hequ.12511>
- Ikeda, Y., Aoyama, H., Iyetomi, H., Mizuno, T., Ohnishi, T., Sakamoto, Y., & Watanabe, T. (2016). *Econophysics point of view of trade liberalization: Community dynamics, synchronization, and controllability as example of collective motions* (RIETI Discussion Paper Series 16-E-026). Research Institute of Economy, Trade and Industry.
- Jovanovic, F., & Schinckus, C. (2013). The emergence of econophysics: A new approach in modern financial theory. *History of Political Economy*, 45(3), 443–474.
- Jovanovic, F., & Schinckus, C. (2016). Breaking down the barriers between econophysics and financial economics. *International Review of Financial Analysis*, 47, 256–266.
- Khachian, A., Thomas, A., Zhou, H., Hanson, G., Cloninger, A., Rosing, T., & Khandelwal, A. K. (2022). Using neural networks to predict microspatial economic growth. *AER: Insights*, 4(4), 491–506.
- Khalifa, M., & Albadowy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update*, 5, 100145. <https://doi.org/10.1016/j.cmpbup.2024.100145>
- Künzli, N., von dem Knesebeck, O., Geckova, A. M., Park, S., & Woodrow, C. (2026). Desk rejection decisions—do co-editors-in-chief of this journal agree? *International Journal of Public Health*, 71. <https://doi.org/10.3389/ijph.2026.1608909>
- Manusights. (2026). *Desk rejection rates by journal: What the data shows*. <https://manusights.com/blog/desk-rejection-rate-by-journal>
- Morland, C., Tandetzki, J., & Schier, F. (2025). An evaluation of gravity models and artificial neuronal networks on bilateral trade flows in wood markets. *Forest Policy and Economics*, 172, 103457. <https://doi.org/10.1016/j.forpol.2025.103457>
- Nguyen, M., & Vuong, Q. (2025). The unfair burden of rejection on researchers: Transitioning from editors as gatekeepers to facilitators of knowledge production. *Learned Publishing*, 38(4), e2027. <https://doi.org/10.1002/leap.2027>
- Ravenstein, E. G. (1885). The laws of migration: Part 2. *Journal of the Royal Statistical Society*, 52(2), 241–305.
- Schinckus, C. (2012). Methodological comment on Econophysics review I and II: Statistical econophysics and agent-based econophysics. *Quantitative Finance*, 12(8), 1189–1192.
- Schinckus, C. (2013). Introduction to econophysics: Towards a new step in the evolution of physical sciences. *Contemporary Physics*, 54(1), 17–32.
- Schinckus, C. (2017). Hayek and the use of physics in economics: Towards a progressive synthesis? *Journal of Interdisciplinary Economics*, 29(2), 132–152.
- Tinbergen, J. (1962). *Shaping the world economy: Suggestions for an international economic policy*. The Twentieth Century Fund.