

Growth of Journal Publishing in Pakistan: An Analysis of HEC recognized Journals

Sajid Mahboob

Department of Library & Information Management, The Superior University, Lahore.

Email: sajidmahboob222@gmail.com

Dr. Ahsan Ullah

Department of Library & Information Management, The Superior University, Lahore.

Email: ahsanullah_libr@yahoo.com

Dr. Iqbal Hussain Asad

Department of Library & Information Management, The Superior University, Lahore.

Email: iqbalhussainasad@gmail.com

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Abstract

One of the most important pillars in the publication of knowledge in the world has been thought to be academic journals publication. The scholarly journals provide channel through which researchers present their findings of research, and formulate theoretical points of view. The current research aims to explore the evolution and progress made in journal publishing in Pakistani higher education with a focus on HEC-recognized journals. Quantitative research approach was applied. Through the use of descriptive and exploratory research design, the research utilizes secondary sources of data. Analysis of journal publishing data given on the HEC website was conducted to examine growth. The findings indicate that the university-based journals continue to dominate numerically, the proportion of university-based journals dropped to 52%, as opposed to 81%, signifying a slow decline in the strength of university-based journals. The share of private or commercial publishers increased from 4% in 2020-21 to 38% in 2024-25. The share of accredited journals of government sector universities was 83% in 2020-21 but this decreased to 66% in 2024-25. The performance of private sector universities was good during the four years with percentage increased from 17% to 34%. The thesis concludes that the HEC policies have been very important for the development of journal publication activities within the country. The current research provides guidelines to the HEC for improving the growth of journal publishing to attain global recognition.

Keywords: Academic Journals, HEC Recognized Journals, Journal Publishing in Pakistan, Higher Education Commission (HEC), HJRS, Research Quality, Indexing, Open Access, Scopus, Web of Science.

1. Background of the study

One of the most important pillars in the publication of knowledge in the world has been

thought to be academic journals publication. The role that scholarly journals play in research activities is the provision of the channel through which researchers present their findings of research, formulate theoretical points of view and also present the research findings of other fields of study. Journal publishing has undergone extreme change marked by the digitization of journals publication was mandated on open access, high quality standards in terms of impact factor and citation indexing. These alterations are the elements of the transition to knowledge economy and the digital society of academia (Tenopir et al., 2016). In developing economies like Pakistan, the academic publishing has been gaining momentum but with institutional reforms and interventional measures of Higher Education Commission (HEC). Since its inception, in 2002, HEC has been critical in regulating, funding, and upgrading the quality of higher education and research output in Pakistan (Zaidi, 2019). The classification and recognition of national academic journals is one of them, many of which are now pursuing international ranking by indexing in international databases such as Scopus and Web of Science (WoS).

The terrain of journal publishing in Pakistan has traditionally been limited due to issues associated with a dearth of funding, a lack of editorial expertise, poor online space, and scant world presence. Nonetheless, over the past twenty years, there has been the growth of quantity and quality of journals, which is largely due to the HEC policies and strategic vision that focus on the research excellence and promotion (Saeed & Asghar, 2021). More importantly, as the open-access publishing platform is introduced and the scholarly processes become digitalized, the Pakistani journals can also be taught to follow the international standards of publishing, not to mention that they can also help to carry out global research databases (Khan et al., 2020).

In Pakistan, Higher Education Commission (HEC) has played a critical role in what journal publishing is to take. Since its formation in 2002, HEC has put in place measures to standardize, regulate and also enhance quality of scholarly journals. Some of the initiatives that the HEC has developed through which it has classified journals into quality categories (W, X, Y) and rewarded indexation in global databases, such as the Scopus and the Web of Science (WoS), include the Higher Education Journal Recognition System (HJRS) (HEC, 2021). By these policy instruments, HEC has been able to make the publication of journals in the country a government-regulated process closely linked to faculty performance appraisal/advancement criteria and research grants awarding criteria. Thus, recognition of journals has now become an influential tool in determining behavior in academics in Pakistani universities.

The Higher Education Commission (HEC) of Pakistan has established a tiered quality evaluation system called HEC Journal Recognition System (HJRS) to classify academic journals. The classification is determined by a number of quality measures including peer review criteria, editorial procedures, publication frequency, global exposure and database indexing in databases like Scopus, Web of Science and the Master Journal List (MJL). There are four main types of journals in the HEC, namely W, X, Y, and Z, which indicate four different degrees of research impact and academic validity. The categories of journals offered by HEC (W, X, Y) offer an official structural reference point on which the quality of journals (in terms of indexing, peer review systems, editorial standards, and publication practices) can be evaluated. This context of policy is critical when the quality measures of the HEC-recognized

journals are concerned. The criteria of categorization used by HEC focuses on high standards in peer review, global indexation, and strong editorial systems, which are the main features of journal quality standards (HEC Journal Recognition System criteria). The current study has examined the growth in Pakistani journals over a period of four years.

2. Research Questions

The research question below has been formulated to meet the main aims of the research study:

1. What are the periodic effects on the development of the HEC-recognized academic journals in Pakistan?
2. What role discipline has played in the development of Pakistani journals?
4. How is the frequency distribution of publishers of academic journals changed over time?

3. Literature review

The development of scholarly journals is usually regarded as a reflector of intellectual and institutional progress in a society. Journals cannot be considered simply repositories of knowledge but they also play an essential role as a site of critical evaluation in which peer groups can determine what will be plausible science. In this aspect, the academic journals play the purpose of institutional gatekeepers to influence the definition of disciplines boundaries, the definition of trends in scholarship, as well as the legitimization of knowledge production. Feeling the impact of the Open Access (OA) movement and digital technologies, the field of journal publication has been altered radically throughout the entire world (Suber, 2012). The literature review examines global and regional trends in journal publishing.

3.1 Growth of journals in different countries

In the past, the academic publishing market has been covered by large commercial publishing companies including Elsevier, Springer Nature, Wiley and Taylor & Francis. These publishing companies own thousands of high-impact journals and have large academic databases such as Scopus and Web of Science that are used as an indicator of the quality of the journal and the productivity of the research (Lariviere et al., 2015). These platforms have also become a source of a metrics-based research culture, whereby journal impact factor (JIF), h-index, and the count of citations are used to measure scholarly impact of journals along with researchers themselves. Another notable change over the last 10 years has been the shift to open access publishing that is the movement in support of the unlimited access to scholarly works. Advocacy efforts on the topic have been catalyzed by the Budapest Open Access Initiative (2002) and Plan S (launched by coalition, S in 2018), which both aim to make research publicly available without subscription fees. By 2024, more than half of all new literature works in the world are published in open-access, and many developing nations are moving towards hybrid approaches as a way to strike a balance between increased visibility and financial sustainability (Suber, 2012; Piwowar et al., 2018). In reaction to these developments, the national research policies of several countries have been modified, to the effect of encouraging open-access publication, and aligning the national editions of journals with the international standards. The University Grants Commission (UGC) in India has a list of Consortium for Academic and Research Ethics (CARE) that guarantees the quality of

journals, or in Malaysia, indexing in Scopus is facilitated by giving journals a grant in the Ministry of Higher Education (Raza and Ahmed, 2021). The journal indexing policies of HEC and quality evaluation on compulsory bases of an evaluation framework are also the international trend that Pakistan has been reflecting.

Countries such as India, Bangladesh, Sri Lanka, and Pakistan have taken divergent but increasingly structured approaches to journal publishing. Among these, India stands as the regional leader, with thousands of Scopus and Web of Science indexed journals, supported by agencies such as the University Grants Commission (UGC) and the Indian Council of Medical Research (ICMR) (Sharma, 2019).

In India the move towards the UGC-CARE list is a policy reaction to the explosion of predatory journals and the wish to ensure quality of journals (Kumar, 2020). Analogous efforts have appeared in Bangladesh (through its Bangladesh Academy of Sciences) and in Iran (through state support of Persian and English-language journals that are indexed by international services) (Moradi & Barlas, 2018).

The global academic publications market has had a phenomenal growth. Presently there are more than 40,000 active peer-reviewed journals globally with the volume of scholarly articles published in them topping two million annually (Johnson et al., 2018). Such growth is indicative of the growing centrality of research productivity within academic assessment systems and the international focus on knowledge-based economies. Research institutions and universities are increasingly pressured to publish and this has led to publication of journals in various fields. To a great extent, this growth has been propelled by the digital revolution that has given the method of broadcast to reach multitudes, was in a position to reduce the cost of print and production and could even traverse the world (Willinsky, 2006). Comparisons on a regional basis also can prove helpful. This is what happened in India, where the OA publishing sector is rapidly developing, and the state-industry cooperation resulted in the indexation of many of its journals at Scopus (Kumar, 2020). Similarly, Iran has assembled a remarkable system of internationally indexed medical science journals, which is promoted by the centralized government policy (Morabi and Barlas, 2018). The examples of India and Iran show how an active national policy, supported by certain investment in research infrastructure, could be used to contribute to a fast pace of journal development, elevate the international presence, and increase the international presence of locally-produced research. The possibilities of centralization, capacity-building, and strategic cooperation are also indicated in these case studies. There have been several attempts to fund and publish standards properly using the governmental control which has enabled the Iranian and Indian journals to receive more international recognition.

India has a high number of journals indexed in Scopus and WoS, which is facilitated by proactive government policies and liaison with international publishers (Kumar, 2020). On the same vein, Iran has done a lot in medical and pharmaceutical sciences where by the highly centralized publication policies and the high state investments, a lot of the Iranian journals have managed to gain worldwide recognition (Moradi & Barlas, 2018). Both nations show the effectiveness of aligning local publication priorities with the requirements for international publication in enhanced journal standards.

3.2 Growth of Journal Publishing in Pakistan

Before the creation of the HEC in 2002, journal publishing in Pakistan was fragmented and underdeveloped. Most academic journals functioned as departmental bulletins, characterized by irregular publication cycles, limited circulation, and weak peer-review mechanisms (Zaidi, 2019). In that era, journal publishing was often the result of the enthusiasm of academics rather than institutions, with little editorial governance and no financial security. With no guiding body at a national level, quality checking ranged between institutions and disciplines. Editorial boards were often ad hoc, with little attention to international standards of transparency, plagiarism control, or indexing. Consequently, Pakistani journals had negligible global visibility (Mahmood, 2022).

To promote the spread of knowledge and faculty evaluation, HEC has launched the Journal Recognition System and categorized the journals as W, X, and Y, based on the aspects that comprise quality of peer checks, composition of editorial board, and indexing (HEC, 2021). Journals within the W category were globally recognised and indexed and journals within the X and Y categories were nationally recognised but they were also encouraged to improve. HEC made faculty promotions, PhD supervision rights, and eligibility to receive research funding dependent on publication in HEC-recognized journals, and this imposed demand-side pressure on journals to raise their standards (Saeed & Asghar, 2021). This policy intervention triggered a tremendous increase in the number of journals that were acknowledged.

The count of journals acknowledged by HEC has grown by 200 to over 350 between 2002 and 2023 (HEC, 2023). These journals cut across the fields of natural sciences, engineering, medical sciences, social sciences, and humanities. Nevertheless, the distribution is skewed, with STEM subjects containing a larger number of known journals than social sciences and humanities (Ali and Ahmad, 2023). With this quantitative development, journals in Pakistan are still underrepresented in international indexing systems. According to HEC (2022), the estimated rate of indexing in Scopus and WoS is only 11% and less than 5%, respectively. This disjuncture indicates the conflict between nationalism and internationality.

The HJRS was intended to be a regulatory system and used to offer quality assurance, ensuring that journals which were accepted were of basic minimum academic and ethical quality before becoming a part of the national publishing structure. The purpose of this tiered system was twofold; to motivate quality improvement, as well as to offer some clarity to the faculty and students on the choice of legitimate outlets. Critics, however, note that the indexing measure is prone to dis-incentivize journals that concentrate on local or regional concerns and do not generate global attention in terms of citation (Siddiqui and Mahmood, 2022).

The initiatives initiated in HEC are some finance of journal digitization, registration of DOI and implementation of Open Journal Systems (OJS). They also established training opportunities with the editors, plagiarism-checking software (Turnitin), and editorial-transparency (HEC, 2020). These are the efforts to comply with the requirements of New Zealand to professionalise the editorial practices according to the international standards (Sharma, 2019).

One of the key policies of HEC is a connection between the faculty promotion, eligibility to supervise PhD students, and research awards and publications in the well-known journals

(Saeed & Asghar, 2021). Although this has contributed to the pressure to publish, it has given rise to the quality-over-quantity issues, as certain scholars are more interested in publishing quickly rather than conducting a thorough study (Raza and Asad, 2022).

The dominance achieved by the STEM journals can be linked to a number of reasons. Firstly, these journals receive focused government as well as HEC funding. They manage to align well with the development priorities of the country. There may also be or have been prior global collaborations on the part of the STEM journals to ensure the process of indexing comes to completion within the global databases. In contrast, social sciences and humanities remain underrepresented, partly due to lower institutional support and the global undervaluation of regionally focused research. Journals in areas like education, linguistics, anthropology, and indigenous studies are hampered by certain disadvantages. The lack of funding, circulation, and possibilities of being included in international indexing services limits their advancement and adoption, even though they are extremely important for comprehension of social contexts. Engineering and computer science journals have also grown steadily, partly because these fields align with national development goals and attract international collaboration (Ali & Ahmad, 2023).

The social sciences and humanities journals are less developed in regard to international recognition. Scholarly journals in education, linguistics and indigenous studies have the tendency to fall short of strict expectations of HEC and other international indexing organizations (Saeed & Asghar, 2021). Even when social sciences journals do exist, most often, they could barely meet international thresholds for citation and indexing; hence, the global visibility of these local journals becomes very limited. This trend threatens to relegate important, locally relevant research work to the doldrums and diminish its potential contribution to policy, culture, and regional knowledge development. This lack of balance is further aggravated by the fact that the research in the areas mentioned may have fewer readers or citations across the entire globe than in applied sciences (Kumar, 2020). Further, the existing research funding and institutional support of humanities research inhibit the development of quality journals in these spheres (Siddiqui & Mahmood, 2022). As a result, social science and humanities journals often dependent on smaller academic communities, editorial teams on voluntary appointments, and platforms with low running costs, thereby hindering their professionalization.

The number of HEC-recognized journals has steadily increased since 2005. This rise reflects both the growing number of academic institutions and the increased emphasis on research-based promotions, particularly for university faculty. Yet, despite quantitative growth, a considerable portion of these journals remain un-indexed by international databases such as Scopus or WoS, limiting their global reach and impact. Moreover, language barriers, poor digital management, and lack of editorial training further constrain the international competitiveness of many South Asian journals (Raza & Asad, 2022).

4. Research methodology

The research design of the current study is quantitative. The descriptive and comparative approach is employed in the thesis by presenting the data in an orderly manner in discovering the trends in journal publishing. This methodology helps to quantify trends (e.g., number of journals, indexing rates, disciplinary distribution). It is based on the analysis of secondary

data and structured document analysis, which is available on the website of HEC.

The population for this study includes all academic journals recognized by the Higher Education Commission of Pakistan as of 2020-21 and 2024-25, across all disciplines and categories (W, X, Y). The total number of HEC-recognized journals stood at approximately 326+ journals in 2020-21 and 650 in 2024-25. All these journals are listed on the official HEC Journal Recognition System (HJRS) portal. These two time periods were selected for the current study to make a comparison in growth of journals in five years. A census approach was used, meaning the study aimed to include all the journals listed for these two periods without drawing a smaller sample. This was feasible due to the accessibility of data through HEC.

The data was available in PDF and Microsoft Excel Files. Simple descriptive statistics, including frequencies, percentages, were calculated using Microsoft Excel. The analysis was based on longitudinal growth data, where the growth of the number of journals recognized by HEC was measured during two periods. Analysis employed comparisons to measure inequalities in terms of discipline, and universities (public-privates).

5. Results

5.1. Overall Journal Expansion

This table quantifies the growth in the number of accredited journals between the two periods. It shows a jump from 326 journals in 2020-2021 to 690 in the 2024-2025 with an increase of 2.1 times. Journals were almost doubled during five years period. Numbers of publishers have also become almost double during five years period. Average number of journals published by per publisher has decreased.

Table 2: Overall Journals expansion

Category	2020-2021	2024-2025	Status
Total Journals	326	690	2.1 times increase
Unique Publishers	185	423	1.28 time increase
Average Journals per Publisher	2.04	1.63	Average journals per publisher decreased

5.2 Growth in publisher types

Table 2 has reorganized its data, which demonstrates the essential changes in the journal publishing ecosystem in Pakistan during the considered period. Though the university-based journals are still numerically dominant, the proportional share dropped to 56 percent, as compared with the 81 percent, which means a slow narrowing of university domination. Conversely, private and commercial publishers were the most significantly growing, with an aggregate growth of 4% to 38% percent in 2020-21 to 2024-25 respectively, indicating the fast commercialization of scholarly journal publishing. The share of associations also decreased. This shift exemplifies a paradigm shift of institution-focused scholarly publishing to a more market-focused model of publication, with serious questions about the quality

assurance, integrity of peer review, and viability of this model in the face of competitive commercial demands.

Table 0.3: Growth in publisher types

Publisher Type	2020-21	% Share 2020-21	2024-25	% Share 2024-25
Universities (Institutes, colleges, centers, academies)	265	81.28%	385	55.80%
Government Departments	10	03.06%	03	0.17%
Societies (Associations, councils, Trusts, forums, foundations)	39	11.96%	38	04.34%
Private/Commercial publisher	12	03.68%	264	38.26%
Total	326	100%	690	100%

5.3 Top Universities and journal growth

This table 4.4 ranks universities based on their number of accredited journals. The University of the Punjab, Lahore, remained the most productive but number of journals decreased during five years. Islamic university of Bahawalpur made remarkable progress and got second position with 19 journals. The second most notable change was in the University of Management and Technology, which dramatically increased its output from 4 to 19 journals and got third place. Three other universities The Superior University Lahore, Lahore Garrison University, Women University Multan have also got positions in top ten universities in respect of quantity of journals.

Table 0: Top Universities by Journal Productivity

University	2020-2021	Name of University	2024-2025
University of the Punjab, Lahore	28	University of the Punjab, Lahore	25
University of Karachi	18	Islamia University, Bahawalpur	19
University of Peshawar	13	University of Management & Technology, Lahore	19
Allama Iqbal Open University	13	University of Karachi, Karachi	12
Bahauddin Zakariya University, Multan	08	University of	09

		Sindh, Jamshoro	
International Islamic University, Islamabad	06	Riphah International University, Islamabad	08
University of Sindh, Jamshoro	08	Lahore Garrison University, Lahore	07
National University of Modern Language	06	Allama Iqbal Open University, Islamabad (AIU)	07
Government College University, Lahore	05	The Superior University, Lahore	07
Government College University, Faisalabad	04	The Women University, Multan	07
University of Management & Technology, Lahore	04	University of Sargodha, Sargodha	07
Lahore College for Women University Lahore	04	Bahria University, Islamabad	06
National Defense University	04	International Islamic University, Islamabad	06
Quaid-e-Azam University Islamabad	04	National Defense University, Islamabad (NDU)	06
Riphah International University	04	University of Lahore, Lahore	06

5.4 Private and government universities: Comparison

This table 5 ranks universities of government and private sector based on their number of accredited journals. The percentage of accredited journals of government sector universities was 83% in 2020-21 but this percentage decreased in 2024-25 to 66%. It shows good performance of private sector universities during the last five years with percentage now at 34%.

Table 5: Top government departments and Journal Productivity

University sector	2020-2021 Number	2020-2021 Percentage	2024-2025 Number	2024-2024 Percentage
Government universities	192	82.75%	253	65.71%
Private universities	040	17.25%	132	34.29%
Total	232	100%	385	100%

5.5 Growth in different subject categories

The growth of journals in different subject categories during the last five years shows variations. In some categories, journals increased and in some categories number of journals increased. Some new categories were added. One category of natural science was finished. Number of journals decreased in dentistry, engineering and multidisciplinary categories. In all other categories, numbers of journals were increased. Growth in journals was higher in social sciences as compared to arts and humanities. Growth was highest in biochemistry, genetics and molecular biology (7 times) followed by health profession (4 times).

Table 3: Growth in different subject categories

Subject categories	2020-21	2024-25	Status
Agricultural and Biological Sciences	18	61	Increased
Arts and Humanities	102	137	Increased
Biochemistry, Genetics and Molecular Biology	03	22	Increased
Business, Management and Accounting	26	51	Increased
Chemistry		05	New
Computer Science	08	20	Increased
Dentistry	03	02	Decreased
Earth and Planetary Sciences	01	02	Increased
Economics, Econometrics and Finance	08	11	Increased
Energy		01	New
Engineering	16	11	Decreased
Health Professions	08	59	Increased
Immunology and Microbiology		03	New
Material Science		03	New
Mathematics		03	New
Medicine	41	65	Increased
Multidisciplinary	38	25	Decreased
Nursing		03	New
Natural Sciences	19		Finished
Pharmacology, Toxicology and Pharmaceutics	03	04	Increased
Physics and Astronomy	01	01	Same
Psychology		07	New
Social Sciences	82	181	Increased
Veterinary		02	New
Physical Sciences		11	New
Total	377	690	

5. Findings

The number of recognized journals displays a 2.1 times rise from 326 journals in 2020–2021 to 690 journals in 2024–2025. Journals were almost doubled during four years period. The publishers have also almost doubled in the past four years. The cumulative number of journals playlist reflects an enormous growth in the research output potential of Pakistan and at questionable the attempt to provide more avenues of publication to the researchers. The results indicate that there is a pronounced change in the journal publishing ecosystem of Pakistan during the reviewed period. Even though the university-based journals continue to dominate numerically, the proportion of university-based journals dropped to 52%, as opposed to 81%, signifying a slow decline in the strength of university-based journals. By contrast, the largest growth was in private and commercial publishers, which grew, both together, by 4% in 2020-21 to 38% in 2024-25, as the commercialization of scholarly journal publishing has been rapid. This change exemplifies a paradigm shift in the system of academic publication that was institution-based to a more market-based publication paradigm, creating serious questions about quality assurance, integrity of peer-review, and sustainability in the long term in the context of competitive commercialization. This indicates a dynamic change in a model which used to be dominated by university presses and professionals to a more privatized publishing ecosystem and market-oriented system. This form of dynamics enhances competition and professionalization, and protects against any predatory published practice that influences such an academic system.

The University of the Punjab, Lahore, maintains the top position, though its journal count dropped over five years. The Islamic University of Bahawalpur improved significantly to reach second place with 19 journals. The University of Management and Technology rose to third, increasing its output from 4 to 18 journals. Additionally, The Superior University Lahore, Lahore Garrison University, and Women University Multan secured positions in the top ten for journal quantity. The share of private universities has increased from 17% to 34% in a period of four years.

The last five years have seen varied growth in academic journals across different subject categories. While some categories experienced an increase in journal numbers, others, such as dentistry, engineering, and multidisciplinary fields, saw a decline. New categories emerged, and one natural science category was discontinued. The growth was higher in social sciences as compared to Arts and Humanities. Biochemistry, genetics, and molecular biology experienced the highest increase (sevenfold), followed by health professions (fourfold). The results imply that there has been a tremendous growth in the number of identified journals since the establishment of HEC in 2002, and that the coverage has grown in fields like Agricultural Sciences, Social Sciences, Health Sciences, Engineering, and Natural Sciences.

6. Conclusion

The journal publishing in Pakistan has been enjoying a significant quantitative development, but the qualitative development and integration with the rest of the world is still unequal. HJRS has offered a very necessary classification and recognition framework, which, in its turn, has encouraged institutions to initiate and maintain journals. Nevertheless, the prevalence of Y-category journals indicates the constant fight to get national journals to W- and X-category, which is more in-touch with the international standards. The study is applicable at different

levels national, institutional and disciplinary. On the national level, it critically examines how HEC has played the role of transforming the journal publishing landscape of Pakistan. The paper, with the assistance of researching the growth trends in subject, and publishers points to the accomplishments of HEC system. The research is useful at an institutional scale as it provides data-informed information to academic administrators, journal editors and research scholars about the growth of journals. It also highlights the need to align its policies with the international standards to prevent academic marginalization in the global knowledge economy. On a scholarly level, this study is relevant to the fields of library science, information management and science policy as it charts how national-level journal policies influence the visibility, accessibility and credibility of knowledge generated in Pakistan. Besides, the addition of solutions to challenges encountered such as indexing status, education-wise trends and transitions into digital world give a quantitative and qualitative presentation of the evolving nature of journal publication in Pakistan.

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