
Mapping Research Productivity of Bharathiar University and Bharathidasan University: A Scientometric Comparative Study

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Abstract

This scientometric study compares research productivity between BU and BDU from 2015 to 2024, using data from the Scopus database. It analyzes publication trends, country-wise contributions, institutional collaborations, subject-wise research distribution, and funding sources. The findings reveal differences in research output, subject focus, and institutional partnerships. The study also examines international collaborations and their impact on research visibility. The findings can guide academic improvements, enhance research policies, strengthen collaborations, and improve funding opportunities.

Keywords

Mapping; Scientometric Analysis; Research Productivity

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Introduction

Scientometric analysis is an essential tool for evaluating research output, publication trends, and the impact of scholarly work across various disciplines. It provides insights into the growth of research, collaboration networks, and the influence of funding agencies. By analyzing scientific publications, scientometric studies help assess the performance of institutions, identify emerging research trends, and support strategic decision-making for academic and research development. Research productivity plays a crucial role in determining the academic reputation of universities. It reflects the quality and quantity of research contributions, influencing institutional rankings and scholarly recognition. A comparative analysis of research productivity helps understand different institutions' strengths and research focus, enabling better resource allocation and policy planning. Bharathiar University and Bharathidasan University are prominent higher education institutions known for their contributions to research and academic excellence.

About Bharathiar University

Bharathiar University, established in 1982 in Coimbatore, Tamil Nadu, was recognized by UGC in 1985. It has 39 departments offering 54 PG programs, M.Phil., and Ph.D. courses, with 143 affiliated colleges. Accredited with an 'A++' Grade by NAAC, it ranks 26th among universities in NIRF 2024. The university fosters research through industry collaboration, the DRDO-BU Life Sciences Centre, and an Intellectual Property Rights Cell. It is part of the MHRD National Knowledge Network and supports global academic partnerships via BU-CIA. With advanced facilities and expert faculty, Bharathiar University is striving to become a world-class institution.

About Bharathidasan University

Bharathidasan University, established in 1982, is named after Tamil poet Bharathidasan. Its motto, "We will create a brave new world", reflects its commitment to academic excellence and social progress. The university has 4 faculties, 16 schools, 39 departments, and 29 research centres, offering 151 programs, including PG, M.Phil., and Ph.D. courses. Spread across 432 acres in Palkalaiperur and a downtown campus in Khajamalai, it promotes

research and innovation. Accredited with an ‘A+’ Grade by NAAC, the university excels in teaching, research, and distance education, playing a vital role in higher education in Tamil Nadu.

Review of literature

Several studies have been conducted to evaluate the literature review on institutional research productivity and publication trends.

The United States has the highest scientific productivity on child maltreatment from 2012 to 2021, according to Munnu, D., & Palanisamy, G. (2025). This indicates a growing scholarly focus on this issue, as children represent the future generation. Further research is needed to develop strategies to prevent child maltreatment and influence policies and interventions. Nidhisha P. K. & Sarangapani R. (2021) conducted a scientometric analysis of the Indian Agricultural Research Institute (IARI)'s research productivity over 32 years from 1989 to 2020. The study found that journal articles were the dominant publication type, with the United States as the leading international collaborator. Indian journals were the majority of top publishing sources, highlighting IARI's national research relevance. Keyword analysis revealed wheat and rice as the most frequently studied crops, aligning with IARI's focus on staple crop improvement. Both studies underscore the institute's pivotal role in advancing agricultural science through consistent scholarly output.

Objectives of the study

- To analyse and compare the year-wise distribution of research publications in Bharathiar University and Bharathidasan University.
- To compare the country-wise distribution of research publications in Bharathiar University and Bharathidasan University.
- Examine and compare institutional collaborations in research at Bharathiar University and Bharathidasan University.
- To analyse and compare subject-wise research contributions in Bharathiar University and Bharathidasan University.
- To identify and compare the major funding sources supporting research in Bharathiar University and Bharathidasan University.

Methodology

The methodology for this study involved collecting and analyzing research publications affiliated with Bharathiar University and Bharathidasan University from 2015 to 2024 using the Scopus database. A total of 8,664 records for Bharathiar University and 7,715 records for Bharathidasan University were retrieved based on an affiliation search. The data was processed using MS Excel for statistical analysis and visualization. VOSviewer was employed to map research trends. The study examined year-wise publication trends, subject-wise research distribution, institutional collaborations, and funding sources. This comparative scientometric analysis provides insights into research productivity, helping policymakers and researchers enhance institutional strategies and foster collaborations.

Results

Table 1 - Shows year-wise distribution of Bharathiar and Bharathidasan Universities

Year	Bharathiar University	% of 8664	Bharathidasan University	% of 7715
2015	728	8.40	521	6.75
2016	789	9.11	474	6.14
2017	954	11.01	450	5.83
2018	1009	11.65	531	6.88
2019	1099	12.68	665	8.62
2020	836	9.65	787	10.20
2021	841	9.71	894	11.59
2022	818	9.44	1019	13.21
2023	777	8.97	1096	14.21
2024	813	9.38	1278	16.57
Total	8664	100.00	7715	100.00

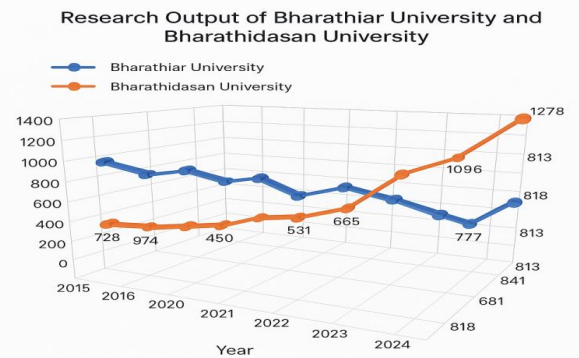


Figure 1- Shows year-wise distribution of Bharathiar and Bharathidasan Universities

The table provides an analysis of the research contributions made by Bharathiar University and Bharathidasan University from 2015 to 2024, covering a total of 16,379 articles indexed in the Scopus database. The year 2016 recorded 1,263 publications, while 2024 marked the highest output with 2,091 articles. The data reflects a steady growth in the research productivity of both universities over the studied period. Bharathiar University emerged as the leading contributor, publishing 8,664 articles, accounting for 52.90% of the total output.

Bharathidasan University followed with 7,715 publications, representing 47.10% of the research output. The findings highlight Bharathiar University’s substantial contribution to academia, while Bharathidasan University has also shown commendable progress. Overall, the upward trend in research output demonstrates the universities’ commitment to advancing knowledge through consistent scholarly contributions.

Table 2 - Country-Wise Distribution of Research Publications from Bharathiar University and Bharathidasan University

Rank	Bharathiar University			Bharathidasan University		
	Country	No of Publications	% of 8664	Country	No of Publications	% of 7715
1	India	8654	99.88	India	7705	99.87
2	South Korea	790	9.12	Saudi Arabia	670	8.68
3	China	506	5.84	South Korea	440	5.70
4	Saudi Arabia	475	5.48	United States	340	4.41
5	Taiwan	442	5.10	China	317	4.11
6	United States	362	4.18	Taiwan	160	2.07
7	Italy	196	2.26	Malaysia	124	1.61
8	Malaysia	151	1.74	Chile	100	1.30
9	Australia	108	1.25	United Kingdom	90	1.17
10	United Arab Emirates	102	1.18	Mexico	89	1.15
11	Japan	101	1.17	Japan	86	1.11
12	United Kingdom	83	0.96	Thailand	80	1.04
13	Brazil	80	0.92	Viet Nam	77	1.00
14	Turkey	80	0.92	South Africa	75	0.97
15	Canada	70	0.81	United Arab Emirates	73	0.95
16	Viet Nam	67	0.77	Ethiopia	68	0.88
17	France	63	0.73	France	66	0.86
18	South Africa	62	0.72	Germany	58	0.75
19	Germany	56	0.65	Australia	54	0.70
20	Russian Federation	53	0.61	Brazil	45	0.58

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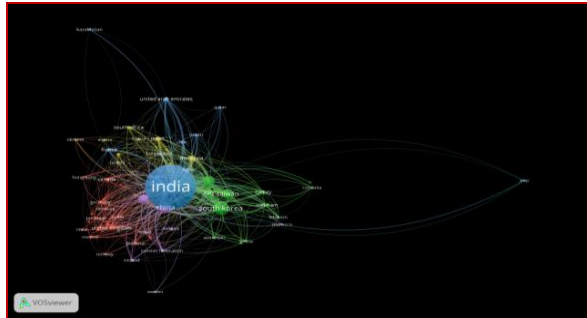


Figure 2 - Bharathiar University

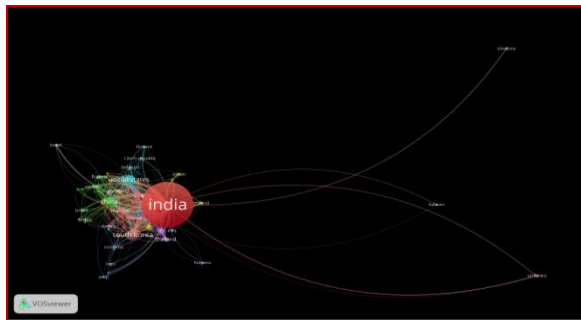


Figure 3 - Bharathidasan University

The table highlights the top 20 countries contributing to research publications from Bharathiar and Bharathidasan Universities. India leads with 99.88% and 99.87% of total publications, respectively. For Bharathiar University, South Korea (9.12%), China (5.84%), Saudi Arabia (5.48%), and the United States (4.18%) follow. Bharathidasan University shows significant contributions from Saudi Arabia (8.68%), South Korea (5.70%), China (4.11%), and the United States (4.41%). Other notable contributors include Taiwan, Italy, Malaysia, and Japan. The data reveals strong national research output supported by diverse international collaborations.

Table 3 - Institution-Wise Distribution of Research Publications from Bharathiar University and Bharathidasan University

Rank	Bharathiar University			Bharathidasan University		
	Institution	No of Publications	%	Institution	No of Publications	%
1	Bharathiar University	8663	99.99	Bharathidasan University	7305	94.69
2	China Medical University	226	2.61	King Saud University	474	6.14
3	Asia University	225	2.60	Anna University of Technology, Tiruchirappalli	469	6.08
4	Anna University	217	2.50	College of Sciences	401	5.20
5	King Saud University	205	2.37	Bishop Heber College, Tiruchirappalli	312	4.04
6	Vellore Institute of Technology	195	2.25	Jamal Mohamed College, Tiruchirappalli	291	3.77
7	Periyar University	195	2.25	St. Joseph's College, Tiruchirappalli	290	3.76
8	Bharathidasan University	179	2.07	A.V.V.M Sri Pushpam College	290	3.76
9	PSG College of Arts & Science	163	1.88	SRM Institute of Science and Technology	254	3.29
10	China Medical University Hospital	157	1.81	Bharathiar University	198	2.57

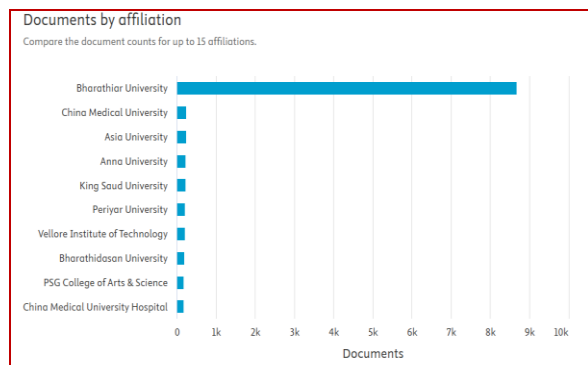


Figure 4 - Bharathiar University

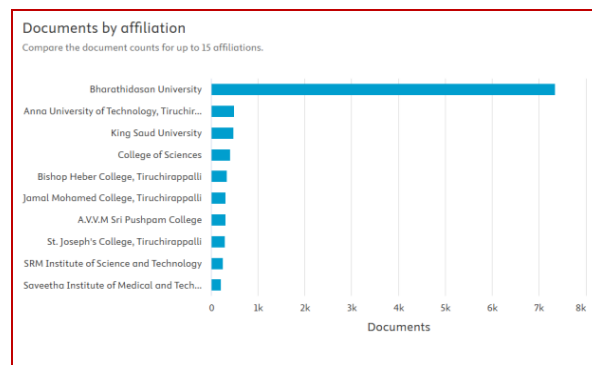


Figure 5 - Bharathidasan University

The table highlights the top institutions contributing to research publications from Bharathiar and Bharathidasan Universities. Bharathiar University leads with 99.99% of the publications, followed by China Medical University (2.61%) and Asia University (2.60%). Bharathidasan University contributes 94.69%, with King Saud University (6.14%) and Anna University of Technology, Tiruchirappalli (6.08%) taking the second and third

positions. Other significant institutions include Anna University, VIT, Periyar University, and PSG College of Arts & Science for Bharathiar University, and College of Sciences, Bishop Heber College, and Jamal Mohamed College for Bharathidasan University. This data demonstrates substantial contributions from both national and international institutions.

Table 4 - Subject-Wise Research Productivity from Bharathiar University and Bharathidasan University

Top Rank	Bharathiar University			Bharathidasan University		
	Subjects	No of Publications	%	Subjects	No of Publications	%
1	Engineering	2479	28.61	Chemistry	1731	22.44
2	Chemistry	1823	21.04	Physics and Astronomy	1674	21.70
3	Computer Science	1711	19.75	Materials Science	1666	21.59
4	Materials Science	1688	19.48	Engineering	1512	19.60
5	Physics and Astronomy	1528	17.64	Biochemistry, Genetics and Molecular Biology	1399	18.13
6	Biochemistry, Genetics and Molecular Biology	1438	16.60	Agricultural and Biological Sciences	1010	13.09
7	Medicine	936	10.80	Environmental Science	986	12.78
8	Chemical Engineering	934	10.78	Chemical Engineering	790	10.24
9	Mathematics	887	10.24	Mathematics	687	8.90
10	Environmental Science	824	9.51	Computer Science	674	8.74

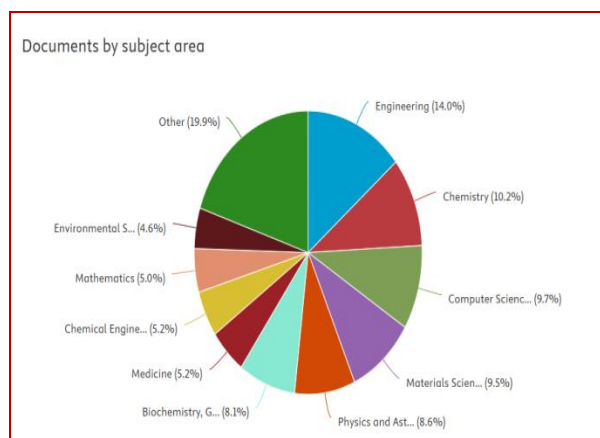


Figure 6 - Bharathiar University

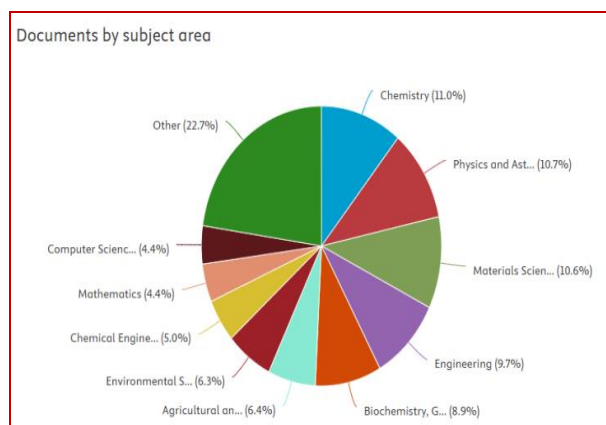


Figure 7 - Bharathidasan University

The research productivity of Bharathiar University and Bharathidasan University highlights their strong contributions to various academic disciplines. Bharathiar University leads in engineering with 2,479 publications (28.61%), followed by chemistry (21.04%) and computer science (19.75%). Materials science (19.48%) and physics (17.64%) also hold significant shares. In contrast, Bharathidasan University excels in chemistry (22.44%), physics (21.70%), and materials science (21.59%), with engineering ranking fourth (19.60%). Notably, Bharathidasan University has a higher research focus on biochemistry (18.13%) and agricultural sciences (13.09%), whereas Bharathiar University emphasises medicine (10.80%) and environmental science (9.51%). While both universities contribute substantially to chemical engineering and mathematics, Bharathiar University outperforms in computer science (19.75%) compared to Bharathidasan University (8.74%). This comparison reflects the research priorities of each institution, with Bharathiar University emphasising technological fields and Bharathidasan University excelling in fundamental sciences. Understanding these trends helps assess both universities' research strengths and academic orientations.

Table 5 - Funding Agencies of Bharathiar University and Bharathidasan University in Research Productivity

Rank	Bharathiar University			Bharathidasan University		
	Funding Agencies	No of Publications	%	Funding Agencies	No of Publications	%
1	Department of Science and Technology, Ministry of Science and Technology, India	698	8.06	Department of Science and Technology, Ministry of Science and Technology, India	1094	14.18
2	University Grants Commission	537	6.20	University Grants Commission	636	8.24
3	Bharathiar University	450	5.19	Science and Engineering Research Board	526	6.82
4	National Research Foundation of Korea	292	3.37	King Saud University	334	4.33
5	Science and Engineering Research Board	260	3.00	Council of Scientific and Industrial Research, India	270	3.50
6	University Grants Committee	165	1.90	University Grants Committee	226	2.93
7	Department of Science and Technology, Government of	148	1.71	Department of Biotechnology, Ministry of Science and Technology,	185	2.40

	Kerala			India		
8	Ministry of Science, ICT and Future Planning	137	1.58	Department of Science and Technology, Government of Kerala	171	2.22
9	National Natural Science Foundation of China	134	1.55	Indian Council of Medical Research	101	1.31
10	King Saud University	127	1.47	Bharathidasan University	99	1.28

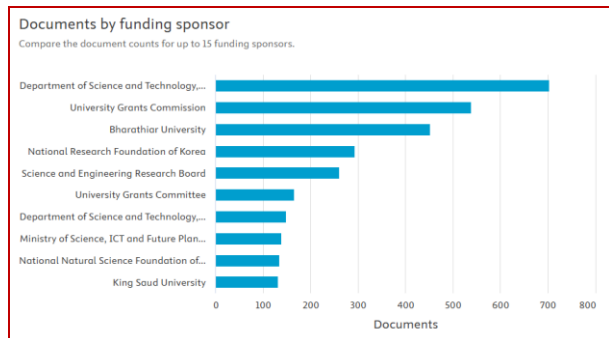


Figure 8 - Bharathiar University .

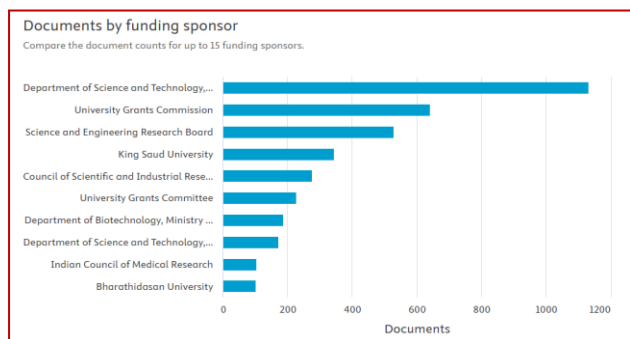


Figure 9 - Bharathidasan University

The funding support for research at Bharathiar University and Bharathidasan University reveals key contributors to their academic output. The Department of Science and Technology (DST), Ministry of Science and Technology, India, is the top funding agency for both universities, with Bharathidasan University receiving 1,094 publications (14.18%) and Bharathiar University 698 (8.06%). The University Grants Commission (UGC) also plays a significant role, supporting 6.20% of Bharathiar University's publications and 8.24% of Bharathidasan University's. Bharathiar University's internal funding contributes 5.19% of its research, while Bharathidasan University benefits more from the Science and Engineering Research Board (6.82%). International funding is evident, with the National Research Foundation of Korea supporting Bharathiar University (3.37%) and King Saud

University funding Bharathidasan University (4.33%). While both universities receive support from government bodies, Bharathidasan University secures higher funding in key areas. This analysis highlights how different funding sources influence the research output and priorities of these institutions.

Findings

The comparative analysis of research productivity from 2015 to 2024 reveals a steady growth in scholarly output from both Bharathiar University and Bharathidasan University, with a combined total of 16,379 articles indexed in Scopus. Bharathiar University led with 8,664 publications (52.90%), while Bharathidasan University contributed 7,715 (47.10%). The highest publication output was recorded in 2024 with 2,091 articles.

In terms of international collaboration, India dominated with over 99% of publications for both institutions. Bharathiar University showed notable collaborations with South Korea (9.12%), China (5.84%), and Saudi Arabia (5.48%). Bharathidasan University had stronger ties with Saudi Arabia (8.68%) and South Korea (5.70%). Institutional contributions were also significant. Bharathiar University had a near-total internal contribution (99.99%), while international institutions like China Medical University (2.61%) and Asia University (2.60%) were key partners. Bharathidasan University had 94.69% internal output, with King Saud University (6.14%) and Anna University of Technology, Tiruchirappalli (6.08%) contributing notably.

Disciplinary analysis showed Bharathiar University's strength in engineering (28.61%), computer science (19.75%), and medicine (10.80%). Bharathidasan University emphasized chemistry (22.44%), physics (21.70%), and biochemistry (18.13%). In funding, Bharathidasan University received greater support from DST (14.18%) and SERB (6.82%), while Bharathiar University was supported by DST (8.06%) and UGC (6.20%). Internationally, the National

Research Foundation of Korea (3.37%) aided Bharathiar University, whereas King Saud University supported Bharathidasan University (4.33%).

Both universities demonstrated strong research capabilities, with Bharathiar excelling in technological fields and Bharathidasan in fundamental sciences.

Conclusion

The scientometric comparative study of Bharathiar University and Bharathidasan University from 2015 to 2024 reveals a dynamic and evolving research landscape marked by consistent growth, diverse subject coverage, and strong institutional collaborations. Bharathiar University leads in total publications, with a clear focus on engineering, computer science, and medicine, reflecting a technological orientation. Bharathidasan University, on the other hand, demonstrates excellence in core sciences such as chemistry, physics, and biochemistry, along with notable contributions to agriculture. Both institutions predominantly publish in collaboration with Indian authors while maintaining active international partnerships, particularly with countries like South Korea, Saudi Arabia, and China. Funding support varies, with Bharathidasan University receiving greater national and international backing, contributing to its scientific depth. The findings underscore that while both universities significantly contribute to the Indian research ecosystem, they differ in disciplinary strengths, collaboration networks, and funding patterns, offering valuable insights into their respective academic trajectories and strategic research priorities.

References

- 1) Munnu, D., & Palanisamy, G. (2025). A scientometric assessment of research productivity on Child Maltreatment from Web of Science database. *Encontros Bibli: revista eletrônica de biblioteconomia e ciência da informação*, 30, 1-22.
- 2) Ravi, S., & Palaniappan, M. (2024). Research Publication by the Faculty Members of Periyar University, 1998 to 2021: A Scientometric Assessment. *Scientific Hub of Applied Research in Engineering & Information Technology*, 4(4), 19-28.
- 3) Osuizugbo, I. C., Fauzi, M. A., Omer, M. M., Njogo, B. O., & Orekan, A. A. (2024). Research trends on early contractor involvement in construction projects: A bibliometric analysis. *Construction Economics and Building*, 24(4/5), 160-178.
- 4) Skute, I., Zalewska-Kurek, K., Hatak, I., & de Weerd-Nederhof, P. (2019). Mapping the field: a bibliometric analysis of the literature on university–industry collaborations. *The journal of technology transfer*, 44, 916-947.
- 5) Suban, S. A., & Sakkthivel, A. M. (2024, December). Mapping the Intellectual and Social Structure of Brand Advocacy Research: A Bibliometric Analysis. In *2024 International Conference on Decision Aid Sciences and Applications (DASA)* (pp. 1-6). IEEE.
- 6) Dissanayake, H., Iddagoda, A., & Popescu, C. (2022). Entrepreneurial education at universities: a bibliometric analysis. *Administrative Sciences*, 12(4), 185.
- 7) Gomis, M. K. S., Oladinrin, O. T., Saini, M., Pathirage, C., & Arif, M. (2023). A scientometric analysis of global scientific literature on learning resources in higher education. *Heliyon*, 9(4).
- 8) Muruli, N., & Harinarayana, N. S. (2023). Scientometric analysis of faculty publications of central universities in the Western Himalayan region of India. *Journal of Indian Library Association Now Available at <https://journal.ilaindia.net/>*, 59(2).
- 9) Damaševičius, R., & Zailskaitė-Jakštė, L. (2023). The impact of a national crisis on research collaborations: a scientometric analysis of Ukrainian authors 2019–2022. *Publications*, 11(3), 42.
- 10) Daimary, N. (2024). Research output of Tezpur University, during 1995-2023: A bibliometric analysis using Web of Science. *Annals of Library and Information Studies*, 71(2), 172-179.
- 11) Ascandari, A., Aminu, S., Safdi, N. E. H., El Allali, A., & Daoud, R. (2023). A bibliometric

analysis of the global impact of metaproteomics research. *Frontiers in Microbiology*, 14, 1217727.

12) Nidhisha, P. K., & Sarangapani, R. (2021). Research Trends of ICAR-IARI Scientists: A Scientometric Analysis. *Library Philosophy and Practice*, 0_1-11.

13) <https://www.bdu.ac.in/>

14) <https://b-u.ac.in/>