

Exploration of Private Higher Education Research in Saudi Arabia: A Bibliometric Analysis

Mohammed M. Bsiso¹, Majid Ghasemy^{2*}

¹ ²National Higher Education Research Institute, Universiti Sains Malaysia,
Jalan Universiti, 11700 Gelugor, Pulau Pinang, Malaysia
m.bsiso@student.usm.my
majid.ghasemy@usm.my
*Corresponding Author

<https://doi.org/10.24191/ajue.v20i2.27001>

Received: 12 January 2024

Accepted: 20 May 2024

Date Published Online: 30 June 2024

Published: 30 June 2024

Abstract: Private higher education has expanded significantly in Saudi Arabia over the past two decades. This was driven by the desire to achieve world-class higher education and the need to address an increasingly expanding student population seeking to obtain the qualifications needed to enter the quickly modernizing Saudi job market. Naturally, research on higher education in Saudi Arabia has also become more common, with thousands of publications added over the past few years. However, it is not clear what portion of this research has focused on private higher education. Additionally, it is not clear what knowledge gaps exist in private higher education research in Saudi Arabia. This study implemented a bibliometric analysis to explore the status of private higher education in the body of literature. After conducting a performance analysis, our results showed that from 2002 to 2023, only 103 Scopus-indexed documents were published about private higher education in Saudi Arabia. These results are presented to highlight the main authors, institutions, and subject areas in the field. Afterwards, we comprehensively discuss and analyze the significance of these findings and their implications for Saudi private higher education research. Finally, the study concludes by providing recommendations for advancing research in this critical sector.

Keywords: Private, higher education, Saudi Arabia, bibliometric analysis, SCOPUS

1. Introduction

The 21st century has seen an enormous growth of private higher education institutions around the world. This is partly driven by many governments' inability or unwillingness to fund the expansion of public universities to keep up with the increasing demand for access to higher education within the context of an expanding and modernizing global economy (Altbach et al., 2019). It is also in line with the overarching trend of internationalization of university education (de Wit & Altbach, 2021; de Wit & Deca, 2020; Mok & Montgomery, 2021; Yan, 2024). With this immense progression, the private sector now accounts for about a third of the world's total higher education student enrollment, the majority being in Asia and South America (Levy, 2018). Private higher education is a relatively new phenomenon in Saudi Arabia, which has come about due to increasingly changing socio-economic realities in the country. Globalization and, more recently, the transition towards non-oil-based revenues and privatization of large portions of the economy have created substantial demand in both the private and public job market for skilled and specialized professional labor (Tight, 2021) (Ryan, 2023). Among the seven stated purposes and general goals of education by the Saudi Ministry of Education is improving equal access to education in the Kingdom of Saudi Arabia (KSA) (Ministry of Education, 2023).

Despite these critical developments in higher education, it is not clear how the state of research exploring the history and development of private higher education in the Kingdom currently stands. This has created a real need for a systematic review exploring the presence of studies in this field. However, there has not been any effort to gauge the productivity of research in this novel field through the lenses of a bibliometric review. As a result, the current spectrum of research on private higher education in Saudi Arabia is scattered and unorganized, limiting the ability to identify knowledge gaps and areas needed for future research. To address these problems, this study set out to fulfill two research objectives. The first was to examine the output of private higher education research publications within the overall literature of Saudi higher education and its growth over time, while identifying the key trends and topics in the field over the past two decades. The second objective was to identify the most productive authors and institutions contributing to the body of literature on the topic of private higher education in the country.

To achieve these objectives, a bibliometric analysis (Aria & Cuccurullo, 2017; Zupic & Čater, 2015) was chosen to review the current research literature. Bibliometric analysis is a great method for gauging the current state of research in a specific field. This method has been adopted by scholars for several reasons, such as its ability to uncover emerging trends in publications, identify collaboration patterns, and provide an intellectual framework of specific domains in the wider literature (Donthu et al., 2021). The method is effective in organizing the existing literature by summarizing the research output into key domains such as authorship, affiliation, funding, keywords, and cluster mapping. It also allows for advanced searches into narrower subject fields within a wide range of literature. By mapping the existing body of literature through bibliometric analysis techniques, researchers can then identify the current research gaps and thus determine targets for future research. Cluster mapping, for example, is a feasible approach within bibliometric analysis that could help provide a broad overview of the topic, identify important knowledge gaps, and point to new areas for investigation to better position future research in the field (Donthu et al., 2021).

This study aims to provide critical and wide-ranging insights into the current academic landscape of private higher education research in Saudi Arabia. By exploring the existing body of literature on this topic, the goal is to identify the key themes, trends, and research gaps that can inform the construction of a comprehensive framework for understanding the state of the literature on Saudi private higher education. To our knowledge, this is the first study to undertake such a focused examination of the research in this specific domain.

2. Literature Review

In order to better understand the current shape of research on private higher education in Saudi Arabia, it is vital to examine the historical development of the sector itself. The rationale for establishing private universities in Saudi Arabia stemmed from domestic discussions around the competency outcomes of Saudi graduates and their abilities to take on the future job market envisioned by the government to transform the Kingdom's economy (Hamdan, 2015; Smith & Abouammoh, 2015). Studies have shown that the existing traditional public universities were seen as ill-equipped and insufficient in their structures and outputs to produce the type of graduates needed (Mohiudin, 2023). Therefore, supporting the private higher education sector became a centerpiece of the government's broader "education reform" agenda (Ryan, 2023).

Additionally, empirical analyses have demonstrated the role of capacity constraints in public universities, with overcrowded classrooms, limited admission slots, and increasing numbers of secondary school graduates competing for limited spots, especially in popular specializations (Shah & Nair, 2016; Smith & Abouammoh, 2015). This created circumstances ripe for the expansion of the private higher education sector to serve segments of the population, such as foreign expatriates comprising nearly one-third of the Saudi population, as well as Saudi students unable to gain admission to public institutions (Yussra, 2012).

According to the latest published statistics report in 2018, the total number of students registered in higher education institutions numbered 1,620,491 with 78,579 of those students being enrolled in private higher education institutions (Ministry of Education, 2018). These numbers have nearly doubled from about a decade ago, however, it is important to note that the percentage of private sector enrollment totaled to 4.85% as compared to 3.49% in 2009, resulting in an increase of only

about 1.36% over the past decade (Ministry of Education, 2018). Subsequently, the number of universities would rapidly expand across the Kingdom. Currently, there are a total of 29 public universities and 38 private universities scattered amongst the regions (Ministry of Education, 2023) (see Figure 1).

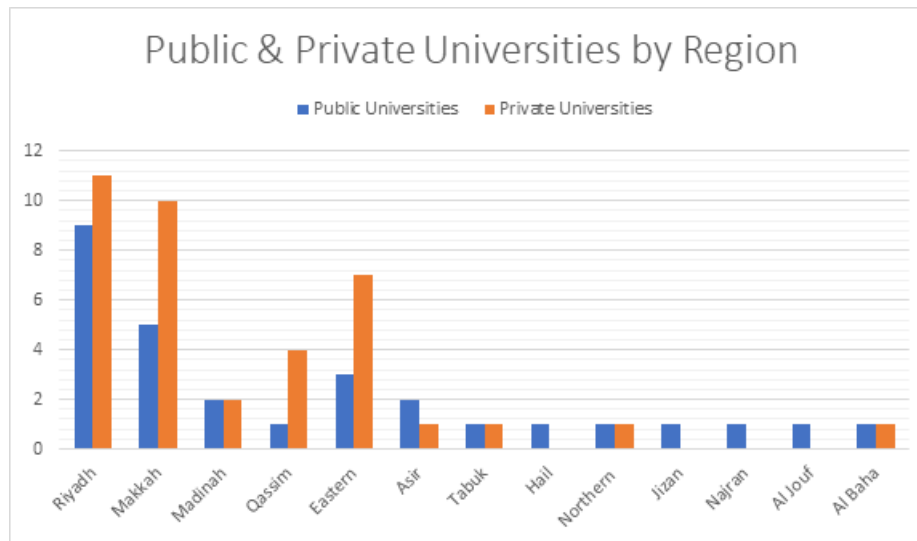


Fig. 1 Public and Private Higher Education Institutions in Saudi Arabia in 2023.

3. Methodology

Bibliometric studies in educational research in Saudi Arabia are not new. There are studies that have been conducted exploring Saudi institutional research output (Mohsen & Ho, 2022), e-learning research trends (Brika et al., 2022), and quality in higher education research (Brika et al., 2021). However, bibliometric studies focusing on the educational output specifically dedicated to private higher education in the country have yet to be conducted. The level of research output along with the main trends and focuses in this field have not been clearly defined nor identified, making it difficult for researchers to understand the knowledge and research gaps in the topic.

Researchers have increasingly utilized systematic literature reviews in recent years to assess the impact of research publications and better understand specific fields of research, given the availability of advanced online databases and analysis tools. The Scopus database, in particular, has earned a notable reputation as a reliable and comprehensive bibliographic data source, making it a preferred choice for this research approach (Melati, 2023; Pranckutė, 2021).

The current study adopted the Scopus database for its reliability, reputation, and wider content coverage, as well as the availability of individual profiles for authors and institutions, and its inclusion of several sources across all disciplines (Pranckutė, 2021). The research approach involved conducting a search in the Scopus database for both higher education and private higher education to examine the research volume and author keywords. This was followed by a performance analysis and a comparison of the two datasets.

To enhance the structure and reliability of the study, the researchers followed the procedural steps outlined by Donthu et al. (2021). These consist of four steps: 1) defining the aim and scope of the bibliometric study, 2) choosing its techniques, 3) collecting the data, and 4) running the bibliometric analysis and reporting the findings (see Figure 2).

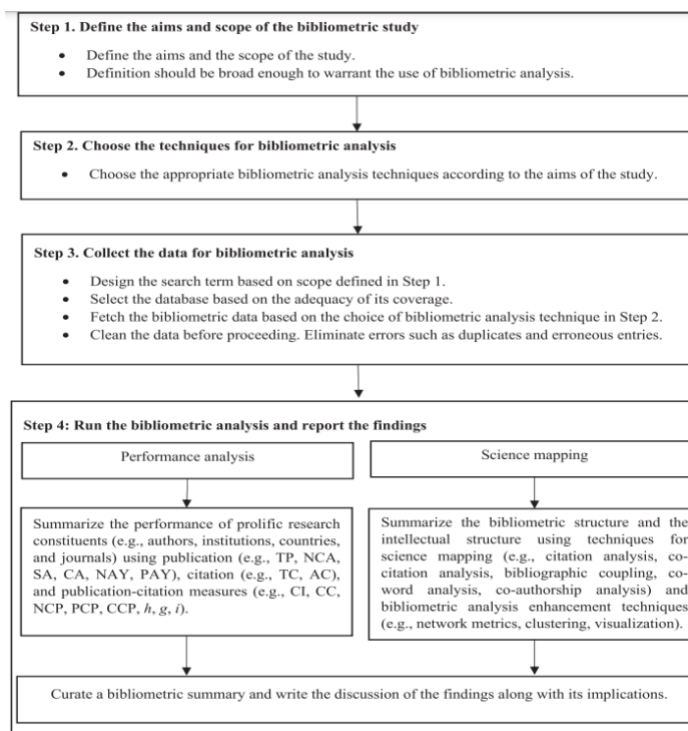


Fig. 2 Steps for conducting a bibliometric analysis, adapted from Donthu et al. (Donthu et al., 2021).

Data was collected on July 23, 2023. To obtain an understanding of the level of research on higher education in general in Saudi Arabia, the search began with defining and using the query of the main keywords shown below.

TITLE-ABS-KEY ("HIGHER EDUCATION" OR "UNIVERSITIES" OR "UNIVERSITY" OR "COLLEGE" OR "COLLEGES" OR "HIGHER EDUCATION INSTITUTIONS" OR "UNDERGRADUATE PROGRAMS" OR "MEDICAL EDUCATION" OR "HEALTH PROFESSIONS EDUCATION" OR "GRADUATE PROGRAMS" OR "TERTIARY" OR "TERTIARY EDUCATION" AND "SAUDI ARABIA" OR "KSA" OR "SAUDI" OR "SAUDI ARABIAN" OR "KINGDOM SAUDI ARABIA") AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "bk"))

After conducting the bibliography on higher education in Saudi Arabia in general, we began to explore the main objective of our study by specifically running the same search for private higher education in Saudi Arabia to explore its prevalence in the literature. We did this by adding “PRIVATE” to all the keywords as shown below.

TITLE-ABS-KEY ("PRIVATE HIGHER EDUCATION" OR "PRIVATE UNIVERSITIES" OR "PRIVATE UNIVERSITY" OR "PRIVATE COLLEGE" OR "PRIVATE COLLEGES" OR "PRIVATE HIGHER EDUCATION INSTITUTIONS" OR "PRIVATE UNDERGRADUATE PROGRAMS" OR "PRIVATE MEDICAL EDUCATION" OR "PRIVATE HEALTH PROFESSIONS EDUCATION" OR "PRIVATE GRADUATE PROGRAMS" OR "PRIVATE TERTIARY" OR "PRIVATE TERTIARY EDUCATION" AND "SAUDI ARABIA" OR "KSA" OR "SAUDI" OR "SAUDI ARABIAN" OR "KINGDOM SAUDI ARABIA") AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "re") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "bk")) AND (LIMIT-TO (LANGUAGE , "English"))

Strict inclusion and exclusion criteria were decided. The search was limited to original articles, review articles, conference papers, books, and book chapters. All other publication categories were excluded. Only publications in the English language were included. To track the history of research in this underdeveloped field, publications for all dates were accepted.

After completing the document search, the data file was then transferred to Microsoft Excel from the Scopus database for more in-depth analysis. Additional information on the contribution from institutions, top authors, and funding bodies was also collected. VOSviewer version 16.1.19 software (van Eck & Waltman, 2014) was used to generate maps and clusters of the most co-occurrences and links of keywords, most productive authors, and institutions. When analyzing the co-occurrences of the keywords for 'higher education', the top 15 author keywords were chosen for the cluster map due to the large amount. These had 114 co-occurrences. When analyzing the data for author keywords co-occurrences for 'private' higher education, the top 14 keywords which had a minimum of 3 co-occurrences were chosen due to the limited number.

4. Results

As mentioned previously, one of the aims of the study was to measure the portion of higher education literature in Saudi Arabia specifically dedicated to the private higher education sector. Therefore, the first step was to search for the overall research production in the field. After conducting the search in the Scopus database on higher education in Saudi Arabia, a total of 13,239 documents were found. After applying the inclusion and exclusion criteria, the number was reduced to 12,303, with most documents being articles (90%) published in journals, with the top journal being the Saudi Medical Journal. The top affiliation was King Saud University with a total of 2,782 publications, and the leading researcher was Balkhy, H.H. with a total of 50 publications. The top sponsor of research publications was the Deanship of Scientific Research, King Saud University, funding a total of 729 projects. When observing the volume of publications over the past two decades, there has been a significant gradual increase. In 2002, there were only 119 publications, whereas in 2022 there were 1,457, showing nearly a ten-fold increase (see Figure 3). The year 2023 also seems to be on track to continue the upward trend as observed at the time of this search.

Fig. 3 Annual publication output in higher education research in KSA from 2002 – 2023.

When analyzing the co-occurrences of the keywords for 'higher education' in the VOSviewer software, the top 15 author keywords were chosen for the cluster map due to the large amount. These had 114 co-occurrences (see Figure 4). The top 5 keywords identified were "SAUDI ARABIA", "COVID-19", "HIGHER EDUCATION", "MEDICAL EDUCATION", and "KNOWLEDGE".

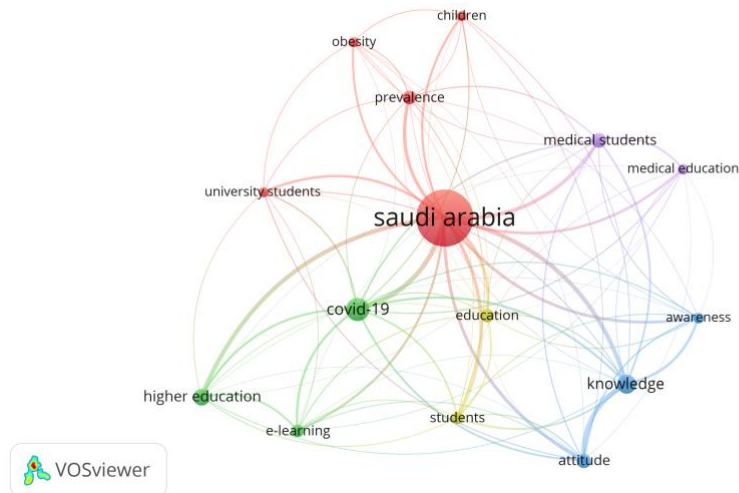


Fig. 4 Top keywords in higher education research in KSA from 2002 – 2023.

When reviewing the documents by subject area, the largest portion was dedicated to Medicine with 39.2% of the research published in higher education in Saudi Arabia. The other main subject areas were Social Sciences with 13.9%, Computer Science with 4.9%, Engineering with 4%, and Arts and Humanities with 3.8% (see Figure 5).

Documents by subject area

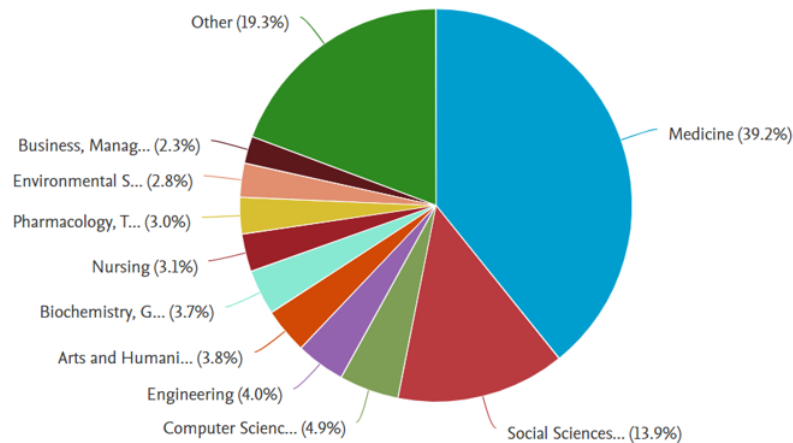


Fig. 5 Top research subject areas of higher education research in KSA from 2002 – 2023.

After completing the search on higher education, the search was then conducted using the keywords for private higher education in Saudi Arabia. Astonishingly, there were only a total of 108 documents found, with that being reduced to 103 after applying the same inclusion and exclusion criteria mentioned earlier, with the percentage of them being articles at 90%. Even more surprising, the keywords "PRIVATE HIGHER EDUCATION" and "SAUDI ARABIA" were not found in the title of any publications. However, unlike the trend in higher education research in KSA, private higher education research remained mostly stagnant from 2003 to 2018 and only saw a significant uptrend beginning in 2019 (see Figure 6).

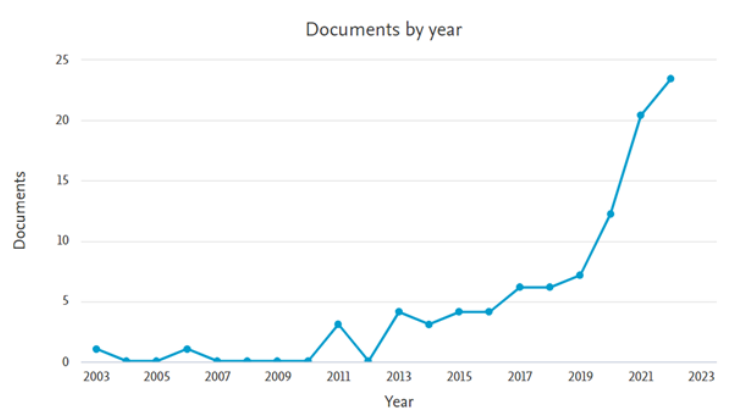


Fig. 6 Annual publication output in 'private' higher education research in KSA from 2002 – 2023.

When analyzing the data for author keywords co-occurrences for 'private' higher education, we chose the top 14 keywords which had a minimum of 3 co-occurrences due to the limited number. The main 5 keywords identified were "SAUDI ARABIA", "HIGHER EDUCATION", "COVID-19", "PERCEPTIONS", and "ELEARNING" (see Figure 7).

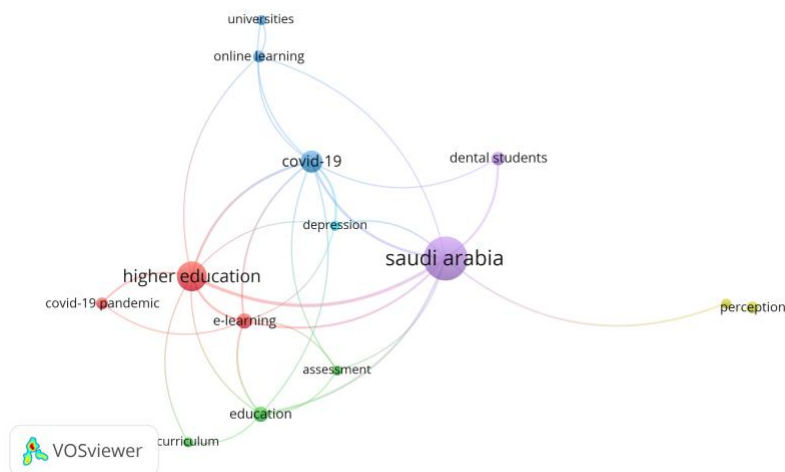


Fig. 7 Top keywords in private higher education research in KSA from 2002 – 2023.

The top authors in the field were Azmi F.M. and Saeed A. with 4 publications each in the field, while Mutair, A., Assiri, A., and Khoshaim, H.B. were the next top authors with 3 publications each. The rest of the top authors had 2 publications each (see Figure 8).

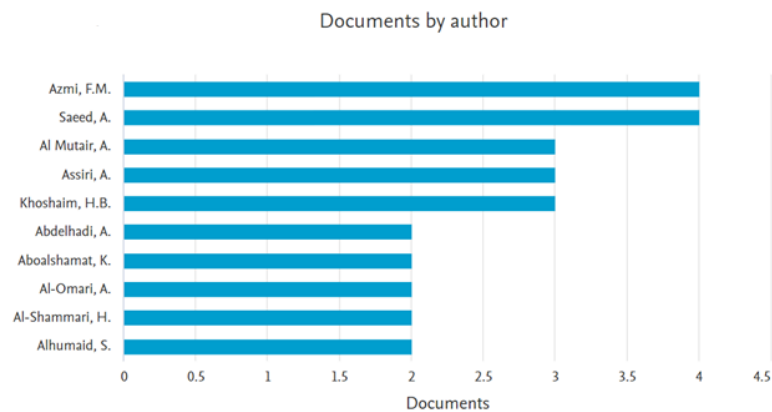


Fig. 8 Top research publication authors in ‘private’ higher education research in KSA from 2002 – 2023.

The main affiliations for publications were Prince Sultan University with 15 and King Saud University with 14. Afterwards, King Abdulaziz University had 9 affiliations, while Alfaisal University and Imam Abdulrahman Bin Faisal University had 6 affiliations each. The remaining institutions had 5 or fewer publication affiliations each (see Figure 9).

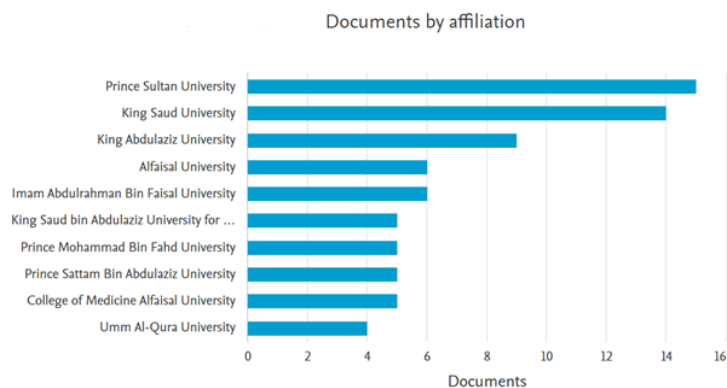


Fig. 9 Top research publication affiliations in ‘private’ higher education research in KSA from 2002 – 2023.

When reviewing the documents by subject area, the largest portion was dedicated to the Social Sciences with 28.8% of the research published in private higher education in Saudi Arabia. The other main subject areas were Medicine with 17.9%, Computer Science with 9.6%, Business Management with 7.7%, and Arts and Humanities/Dentistry with 5.1% each (see Figure 10).

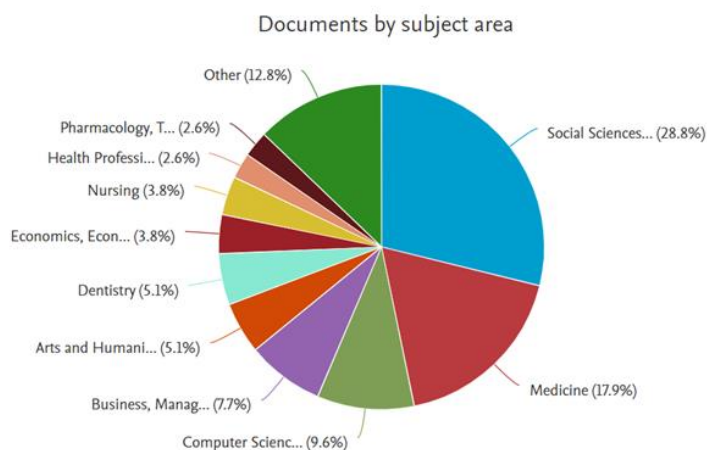


Fig. 10 Top research subject areas of ‘private’ higher education research in KSA from 2002 – 2023.

5. Discussion

As mentioned earlier, private higher education is a relatively new phenomenon in Saudi Arabia. An analysis of the available literature in the Scopus database shows a wide gap in research specifically focused on this sector in the country, totaling a meager 0.008% of the total Scopus literature on higher education in Saudi Arabia. This is problematic since there are more private colleges and universities in the Kingdom than public ones, indicating that this field is vastly underrepresented in the published literature. Although there has been an increase in published documents since 2019, the upward trend falls far short of what would be an ideal production of

publications catalogued in the Scopus database. This may partly be explained by the lack of distinction by researchers of the private higher education sector as being a unique entity or phenomenon in Saudi Arabia, thus deserving special research attention in its own right (Smith & Abouammoh, 2015). Also, the lack of a research framework encompassing this phenomenon in the country deprives researchers of the foundational parameters needed to conduct further studies in the field (Samsiah & Muhammad, 2023). The results of this can be seen in the limited range and depth of the keywords identified in the literature review, indicating a scattered and superficially researched coverage of these components in private higher education.

Noticeably, there are significant differences in the keywords between the two datasets (see Figures 3 & 6). Research in higher education in general is broader and more diverse. In comparison, private higher education research is limited and excluded top keywords such as “medical education”, “knowledge”, “obesity” and “children.” However, some top keywords for private higher education research such as “assessment”, “dental students”, and “perception” were unique and were not included in the other dataset. A deeper look at the documents by subject area shows a high concentration of studies in the fields of social sciences and medicine, indicating that other research areas are highly neglected in this sector (see Figures 4 & 9). A glaring detail missing from the top affiliations for publications in the field are private higher education institutions themselves, since many of the top publishing institutions are public universities. This indicates that private colleges and universities must play a more active role in researching topics within the context of the private sector. Therefore, given the unique structures, circumstances, and roles of private higher education institutions in KSA, more studies exploring important themes and trends impacting these organizations is critical to understanding these institutions and advancing their progress (Anis & Islam, 2019).

These research findings on the status of private higher education research in Saudi Arabia have substantial real-world implications, especially relating to shedding light on the state of the literature in this area. In light of these findings, there is clearly a need to develop a comprehensive theoretical framework relevant to the Saudi context through which to study the phenomenon of private higher education, its development, challenges, and recommendations for advancement, as has been done in similar studies (Anis & Islam, 2019). The framework's components can help policymakers, institutions, and researchers to better understand the critical aspects of private higher education and as a result work towards its improvement and progress (Samsiah & Muhammad, 2023). It can also be a good starting point for sharing and building upon private institutions' experiences in higher education.

6. Conclusion

In this study, the overview of private higher education research in Saudi Arabia has revealed a field that is still in its preliminary stages of development, albeit in a haphazard and spontaneous fashion. This bibliometric analysis aimed to summarize the research productivity in this field by measuring the publication output and identifying the top authors and institutions by utilizing the Scopus database as recommended by researchers (Pranckutė, 2021). By achieving these objectives, this paper will provide valuable insights on the current state of private higher education research in Saudi Arabia and its progress over time. These findings can be used to inform future research initiatives and designs in this critical sector.

This study concludes that there needs to be many more research initiatives exploring a wide range of important topics within the context of private higher education in Saudi Arabia. Private universities must be proactive in these efforts by beginning to explore their own unique settings through impactful and relevant research. The Ministry of Education and the private higher education sector should also invest in these efforts by funding research and advocating for scholarship in this novel field.

Nevertheless, our study is not without limitations. The searches were limited to the Scopus database based on its reliability and in order to simplify the process, therefore, excluding other databases which may have included other publications not indexed in Scopus. This also meant that non-indexed publications (many being in local journals), were not included in the study results. The second limitation of this study is that it does not analyze the impact factors of the publications identified. This has been left out since the focus of the study was to rather paint a comprehensive

picture of the state of research when it came to private higher education for the first time. The third limitation is that we did not selectively screen and refine the keywords, and instead used all keywords extracted from the database to study the keywords. Accordingly, our findings are based on the assumption that the keywords did not require any additional refinement. As a result, we encourage researchers to consider using software packages such as OpenRefine to screen the keywords prior to running the main bibliometric analyses of the keywords (Ahmi, 2023). Finally, we did not perform cluster mapping and, therefore, would like to recommend researchers to consider cluster mapping to, for example, identify established or emerging themes in the realm of private higher education in KSA.

7. Co-author Contribution

The authors declare no conflicts of interest. The co-author, Dr. Majid Ghasemy, provided valuable guidance and support as the PhD supervisor, contributing to the research design, data collection, and analysis. Dr. Ghasemy's insights and expertise were instrumental in shaping this study.

8. Acknowledgement

This paper is based on a PhD research by Mohammed M. Bsiso titled “Navigating Horizons: Unveiling Perspectives of Private Higher Education Leadership in the Qassim Region, Saudi Arabia – a Case Study on Evolving Developments, Challenges, and Opportunities” under the supervision of Dr. Majid Ghasemy. The authors would like to express their gratitude to the National Higher Education Research Institute (IPPTN), the Global Higher Education Forum (GHEF), and Sulaiman Al Rajhi University (SRU) for their facilitation and support of this work.

9. References

- Ahmi, A. (2023, September). OpenRefine: An approachable tool for cleaning and harmonizing bibliographical data. In AIP Conference Proceedings (Vol. 2827, No. 1). AIP Publishing. <https://doi.org/10.1063/5.0164724>
- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2019). *Trends in global higher education: Tracking an academic revolution* (22nd ed.). Brill. <http://unesdoc.unesco.org/images/0018/001832/183219e.pdf>
- Anis, A., & Islam, R. (2019). Prioritised challenges and critical success factors for delivering quality education in Malaysian private higher education institutions. *Quality Assurance in Education*, 27(4), 465–492. <https://doi.org/10.1108/QAE-11-2018-0122>
- Aria, M., & Cuccurullo, C. (2017). A brief introduction to bibliometrix. *Journal of Informetrics*, 11(4), 959–975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Brika, S. K. M., Algamdi, A., Chergui, K., Musa, A. A., & Zouaghi, R. (2021). Quality of Higher Education: A Bibliometric Review Study. *Frontiers in Education*, 6. <https://doi.org/10.3389/feduc.2021.666087>
- Brika, S. K. M., Chergui, K., Algamdi, A., Musa, A. A., & Zouaghi, R. (2022). E-Learning Research Trends in Higher Education in Light of COVID-19: A Bibliometric Analysis. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.762819>
- de Wit, H., & Altbach, P. G. (2021). Internationalization in higher education: global trends and recommendations for its future. In *Higher education in the next decade* (pp. 303–325). Brill. https://doi.org/10.1163/9789004462717_016
- de Wit, H., & Deca, L. (2020). Internationalization of higher education, challenges and opportunities for the next decade. *European higher education area: Challenges for a new decade*, 3–11. <https://doi.org/10.1007/978-3-030-56316-5>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Hamdan, A. K. (2015). Reforming higher education in Saudi Arabia. In *Higher Education Revolutions in the Gulf* (Vol. 7, pp. 153–178). Routledge. <https://doi.org/10.4324/9780203796139-7>

- Levy, D. C. (2018). Global private higher education: an empirical profile of its size and geographical shape. *Higher Education*, 76(4), 701–715. <https://doi.org/10.1007/s10734-018-0233-6>
- Melati, I. S., Wahjoedi, W., Mukhlis, I., & Wahyono, H. (2023). The Development of Circular Economy Teaching in Business: A Bibliometric Analysis (1994-2022). *Asian Journal of University Education*, 19(2), 404-422. <https://doi.org/10.24191/ajue.v19i2.22230>
- Ministry of Education. (n.d.-a). *General Statistics for Higher Education*. <https://moe.gov.sa/ar/knowledgecenter/dataandstats/edustatdata/Pages/HigherEduStat.aspx>
- Ministry of Education. (n.d.-b). *The Purpose and General Goals of Education*. <https://www.moe.gov.sa/en/education/educationinksa/Pages/EducationObjectives.aspx>
- Ministry of Education. (2023). *Private Universities and Colleges*. <https://www.moe.gov.sa/en/education/highereducation/Pages/PrivateUniversity.aspx>
- Mohiuddin, K., Nasr, O. A., Nadhmi Miladi, M., Fatima, H., Shahwar, S., & Noorulhasan Naveed, Q. (2023). Potentialities and priorities for higher educational development in Saudi Arabia for the next decade: Critical reflections of the vision 2030 framework. *Heliyon*, 9(5), e16368. <https://doi.org/10.1016/j.heliyon.2023.e16368>
- Mohsen, M. A., & Ho, Y.-S. (2022). Thirty years of educational research in Saudi Arabia: a bibliometric study. *Interactive Learning Environments*, 1–16. <https://doi.org/10.1080/10494820.2022.2127780>
- Mok, K. H., & Montgomery, C. (2021). Remaking higher education for the post-COVID-19 era: Critical reflections on marketization, internationalization and graduate employment. *Higher Education Quarterly*, 75(3), 373-380. <https://doi.org/10.1111/hequ.12330>
- Pranckutė, R. (2021). Web of Science (WoS) and Scopus: The Titans of Bibliographic Information in Today's Academic World. *Publications*, 9(1), 12. <https://doi.org/10.3390/publications9010012>
- Ryan, M. (2023). Higher Education in Saudi Arabia: Challenges, Opportunities, and Future Directions. *Research in Higher Education Journal*, 43.
- Samsiah, S., & Muhammad, N. M. B. N. (2023). *The Influence of Entrepreneurial Leadership on Financial Performance of Private Higher Education in Pekanbaru, Indonesia: A Conceptual Framework* (pp. 377–387). https://doi.org/10.1007/978-3-031-27296-7_34
- Shah, M., & Nair, S. (2016). (2016). *A Global Perspective on Private Higher Education* (Vol. 1). Chandos publishing.
- Smith, L., & Abouammoh, A. (2015). *Higher Education in Saudi Arabia: Achievements, Challenges and Opportunities* (L. Smith, Ed.; 2013th ed.). Springer.
- Tight, M. (2021). Globalization and internationalization as frameworks for higher education research. <https://doi.org/https://doi.org/10.1080/02671522.2019.1633560>
- Van Eck, N. J., & Waltman, L. (2014). Visualizing bibliometric networks. In *Measuring scholarly impact: Methods and practice* (pp. 285-320). Cham: Springer International Publishing.
- Yan, L., Singh, C. K. S., Junjie, L., Lun, W. W., & Daoyuan, S. (2024). A Systematic Literature Review of University Student Enrolment From 2020 To 2023. *Asian Journal of University Education*, 20(1), 75-99. <https://doi.org/10.24191/ajue.v20i1.25699>
- Yussra, J. (2012). *Understanding private higher education in Saudi Arabia-emergence, development and perceptions*. University of London.
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational research methods*, 18(3), 429-472. <https://doi.org/10.1177/1094428114562629>