

Takaful as an Islamic Alternative to Conventional Insurance: A Thematic and Bibliometric Review

Mohd Yahya Mohd Hussin¹, Asmak Ab Rahman², Wan Marhaini Wan Ahmad³, Ririn Tri Ratnasari⁴ and Zuriadah Ismail⁵

Abstract

Islamic insurance, or Takaful, offers a Sharia-compliant alternative to conventional insurance, circumventing the prohibitions on uncertainty, interest, and speculation. This study presents a bibliometric review of 228 Takaful research articles from the Scopus database, using RStudio® for visualization from 1989 - mid 2023. The analysis encompasses science mapping techniques such as co-citation analysis, bibliometric coupling, word analysis, and trending topics on alternative investments. The findings reveal Malaysia as the leading nation in Takaful research, with significant contributions from International Islamic University Malaysia and Universiti Kebangsaan Malaysia. Prominent journals in this domain include the Journal of Islamic Accounting and Business Research, Journal of Islamic Marketing, and International Journal of Islamic and Middle Eastern Finance and Management. This study found the article entitled; "Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in takaful (Islamic insurance)" written by Dikko (2016), as the most global cited document with 61 citations. Notably, the research focus has evolved from operational, shariah principles, and risk management to awareness, family Takaful innovations, micro-Takaful and relationship commitment. This study serves as a valuable resource for researchers, offering quantitative bibliometric insights and thematic analysis, and highlighting areas for future investigation.

Keywords: Insurance, Takaful, Bibliometric Analysis, Scopus Database.

INTRODUCTION

The global takaful insurance market was valued at \$24.85 billion in 2020 and is projected to reach \$97.17 billion by 2030 with a compound annual growth rate (CAGR) of 14.6% from 2021 to 2030. There were 336 Takaful and re-Takaful companies in 2019, thus showing a significant growth of the industry since the establishment of Takaful companies in the early 1980s. The growth of the Takaful industry prompted increased research on Takaful from various perspectives: Shariah, market penetration, product offering, regulatory framework, governance structure, and marketing strategy.

Takaful as an alternative to insurance has become accepted by Muslim consumers who are aware of the prohibited elements in conventional insurance (Abu-Hussin et al, 2014) such as uncertainty (*gharar*) interest (*riba*), and speculation (*maysir*). Simultaneously, conventional insurance companies have started to offer Islamic insurance to attract Muslim individuals looking for a permissible way to insure against disability, death, fire, and theft and as a retirement plan and Muslim businesses looking for Islamic keyman insurance policies.

Global Islamic banks providing financing tools for their Muslim customers also increased the demand for Islamic insurance to mitigate the risk of not be able to pay the mortgage in case of permanent disability or premature death. The new mortgage, hire purchase and personal financing Takaful products were added to the available Islamic financing tools, as approved by the Shariah committee.

However, to advance the existing research on Takaful, it is essential to identify the current research gaps for future studies. Despite the presence of previous bibliometric analyses on Takaful research, there remains a research gap in conducting a comprehensive thematic and bibliometric review that specifically focuses on

¹ Universiti Pendidikan Sultan Idris. E-mail: yahya@fpe.upsi.edu.my. (Corresponding author)

² Universiti Malaya

³ Universiti Malaya

⁴ Airlangga University

⁵ Universiti Pendidikan Sultan Idris

Takaful as an Islamic alternative to conventional insurance. While prior studies have examined various aspects of Takaful literature, there is a need to explore the specific themes and trends related to Takaful's unique position within the Islamic finance industry. Moreover, the existing analyses have predominantly covered limited time spans, such as Khan et al. (2020) analyzing bibliometrics on Takaful research from 2010 to 2018, Nasir et al. (2021) from 2000 to 2019, and Qadri et al. (2024) from 2002 to 2022. This limitation leaves a significant gap in understanding the historical development and evolution of Takaful research.

By extending the time span from 1989 to mid-2023, this research aims to fill this critical research gap and provide a comprehensive analysis of the Takaful literature over a more extended period. This temporal expansion will enable a holistic examination of the growth, challenges, and advancements in Takaful as an Islamic alternative to conventional insurance. Furthermore, the proposed thematic review will delve into specific areas such as the conceptual underpinnings of Takaful, governance mechanisms, product/service offerings, customer perception, and the comparative analysis with conventional insurance models. By conducting this research, valuable insights can be gained to inform policymakers, researchers, and industry practitioners about the unique characteristics, potential opportunities, and untapped areas within the Takaful industry. Moreover, the findings will contribute to the existing body of knowledge by highlighting research gaps, suggesting future research directions, and providing a comprehensive analysis of the scholarly landscape surrounding Takaful as an Islamic alternative to conventional insurance.

In summary, this research seeks to bridge the gap in existing bibliometric analyses by conducting a thorough thematic and bibliometric review of Takaful literature, specifically focusing on its position as an Islamic alternative to conventional insurance. The extended time span and comprehensive analysis will provide novel insights and contribute to a deeper understanding of Takaful's development, challenges, and future potential. Therefore, the research questions of this study are as follows:

Who are the leading scholars in studies on Takaful?

What is the status of the current research in terms of volume, citations, geographic distribution, international collaboration based on author analysis and science mapping?

What are the research gaps and implications to indicate future research perspectives?

The remaining sections are organized as follows: Section 2 outlines the methodology; Section 3 presents the results of the bibliometric analysis; Section 4 discusses the main Takaful research themes; Section 5 outlines the research gaps and provides research directions; Section 6 describes the limitations and offers the concluding remarks.

METHODOLOGY

The purpose of the bibliometric analysis is to identify the emerging research trends and the intellectual structure of the literature (Donthu et al., 2021) through mathematical and statistical methods to analyze the scientific literature in the specific topic (Büyükkıdık, 2022). The bibliometric analysis applies statistical tools to keyword, author, and journal statistics (Pinto et al., 2020). The analysis is divided into two parts as suggested by Donthu et al. (2021) in their bibliometric analysis toolkit; the first part focuses on performance analysis and the second part on science mapping. In this paper a bibliometric analysis is carried out to analyze the existing research on Takaful.

The results of the bibliometric analysis on Takaful are presented in the following section. A total of 479 documents were retrieved from the Scopus database using the keywords “Takaful” OR “Islamic Insurance” on 26 May 2023. The Scopus database, has a wider coverage of journals as compared to Web of Science (Singh *et al.*, 2021), was used because of its low likelihood of article omissions compared to other databases (Uluyol *et al.*, 2021). After removing four duplicate documents, the remaining 475 unique documents were considered. To ensure the relevance of the selected articles to the research topic, only peer-reviewed articles published in English were included. These articles covered various fields of study listed under the Scopus database, resulting in a final selection of 326 articles. In the last stage, two independent researchers manually analyze each article to check its suitability with our research objectives. After a careful examination, it was found that several articles

did not meet the research objectives, and some of them were missing abstracts and keywords, totaling 98 articles. Therefore, these articles were excluded, and 228 published journal articles were selected for the final analysis. A comprehensive overview of the researchers' selection process and criteria can be found in Figure 1: PRISMA workflow (Mundi & Kumar, 2023), which provides detailed steps undertaken to identify the final 228 studies included in this research from a pool of 479 documents spanning from 1989 to mid-2023.

The data visualization in this study utilized the Bibliometrix package of R-tool (Aria and Cuccurullo, 2017), which facilitates effective analysis of co-citations, co-word relationships, scientific collaboration, and coupling analysis (Biancone et al., 2020). The statistical analysis enabled an examination of existing research on Takaful. The results were interpreted through performance analysis and science mapping, with a focus on key authors, journals, keywords, citations, articles, co-occurrences, bibliographic coupling, and co-citations. These findings presented were obtained after performing data cleaning and harmonization processes.

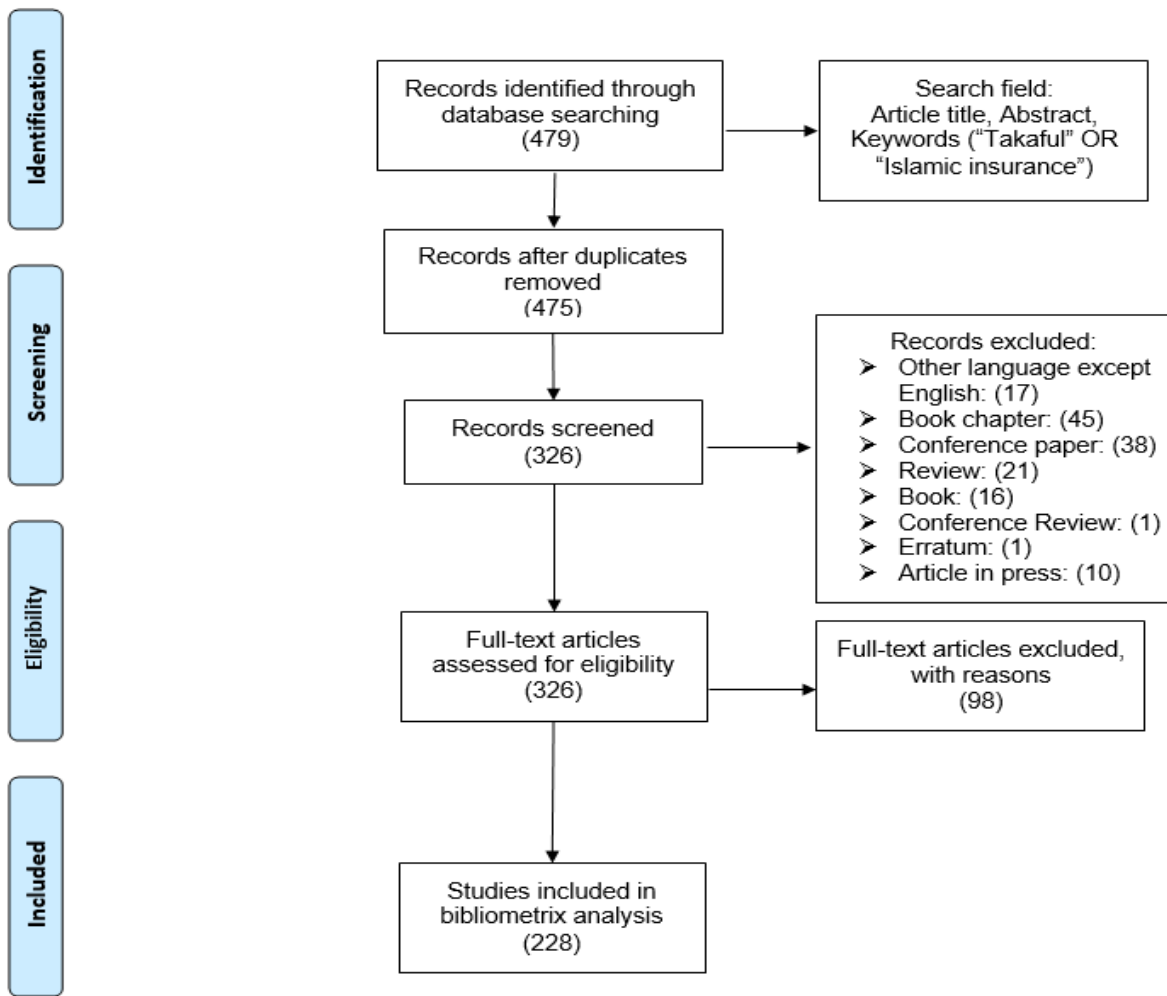


Figure 1: PRISMA workflow

Findings

Main Information

Table 1 shows the general information regarding the collection of selected articles from the 'bibliometrics' tool in the r package (biblioshiny) is presented. The research on Takaful is relatively old topic, as indicated by the first study on this topic in 1989, according to the SCOPUS database. The research analyzed a total of 228 journal articles, all published between 1989 and mid-2023. The documents included 650 author keywords and

were written by 486 authors. Among the documents, 34 were single-authored, suggesting high collaboration among authors, with a document per author ratio $n = 0.469$, and approximately 20.18 percent of international co-authorships.

Table 1: Basic information

Description	Results	Description	Results
Main Information About Data		Document Contents And Types	
Timespan	1989:2023	Keywords Plus (ID)	97
Documents	228	Author's Keywords (DE)	650
Annual Growth Rate %	4.16	article	228
Authors		Authors Collaboration	
Authors	486	Single-authored docs	41
Authors of single-authored docs	34	Co-Authors per Doc	2.92
Authors of multi-authored docs	452	International co-authorships %	20.18

Performance Analysis

Figure 2 provides the annual number of documents published and shows that the research on takaful has witnessed distinct phases of development. In the early years (1989-2006), there was limited publication activity, with sporadic articles. However, from 2007 to 2016, the field experienced significant growth and expansion, with a consistent rise in the number of articles. This period marked the establishment of takaful research as a prominent field. From 2017 to 2023, the research continued to mature, with sustained publication output, peaking in 2017-2020. The recent years show a slight decline, but overall, the data indicates a consistent interest and development in the study of takaful as an Islamic alternative to conventional insurance. The first studies on Takaful were published in 1989, and the maximum number of articles were produced in 2020. Mankahady (1989) and Anwar (1994) are among the early researchers on Takaful. This initial body of research was then extended by M.M. Billah (1998, 1999, 2000), Maysami and Williams (2006), and Bekkin (2007).

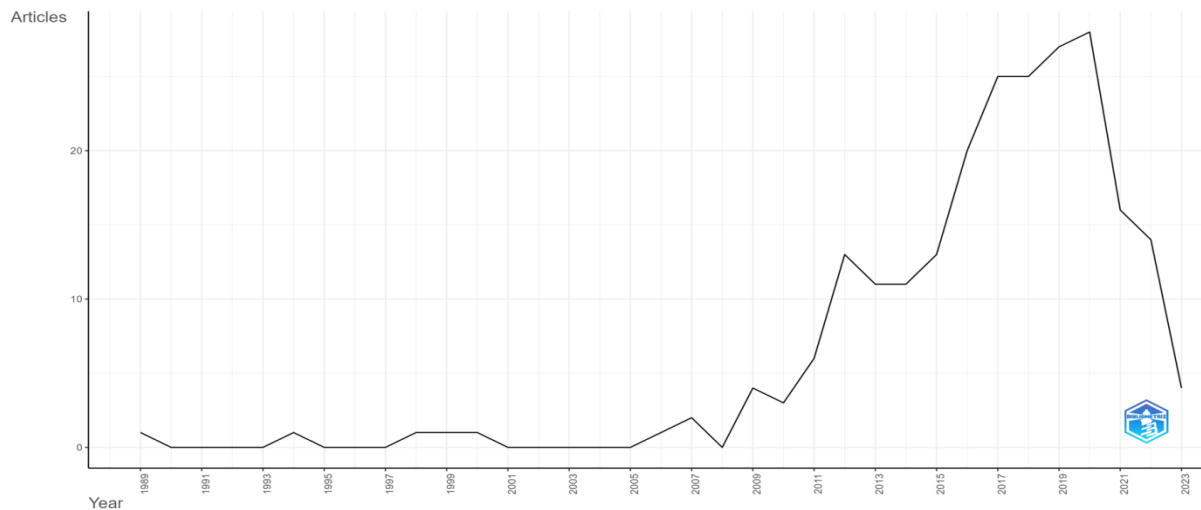


Figure 2: Annual scientific production on Takaful

The average citation per year varies across the three identified phases based on figure 3. During the early development phase (1989-2006), the citation impact was relatively low, with average citations per year ranging from 0.14 to 1.67. In the growth and expansion phase (2007-2016), the citation impact showed a moderate increase, with average citations per year ranging from 1.37 to 1.79. In the continued development and maturation phase (2017-2023), the citation impact fluctuated, with average citations per year ranging from 0.28 to 1.47. These findings indicate a progression in the citation impact of research on takaful as an Islamic alternative to conventional insurance, from low impact in the early phase to a moderate increase in the growth phase, followed by some fluctuations in the later phase. The high number of average citations in 2010 is largely due to the work of Kader et al., (2010), followed by Dikko (2016) and Md Hussin et al., (2016). The average citation per year for whole period is 0.88.

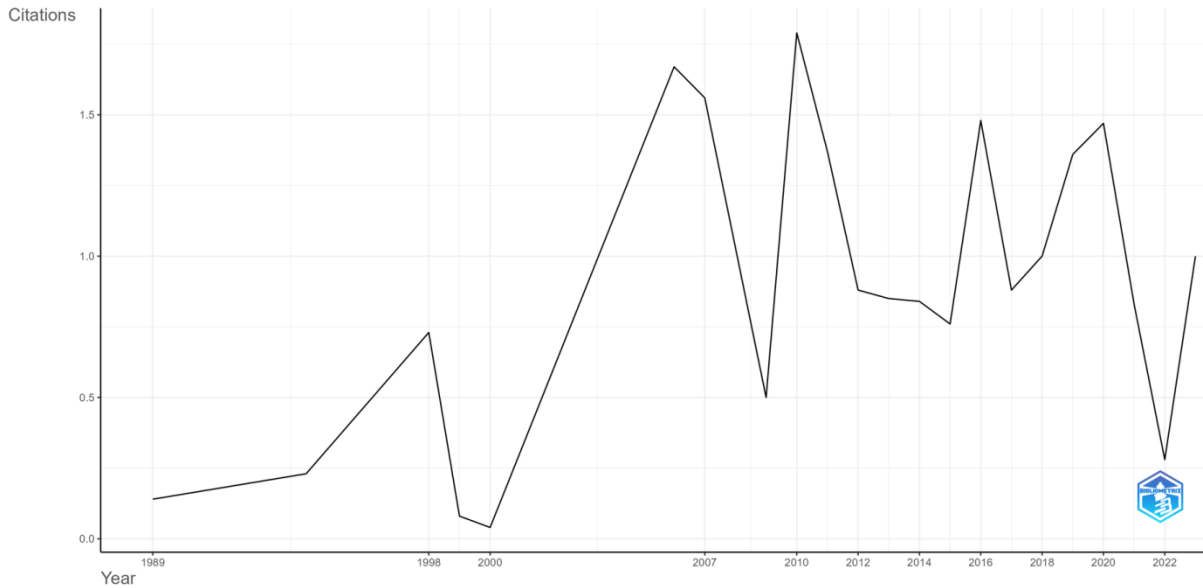


Figure 3: Average citation per year

Figure 4 displays the evidence regarding scientific production by country/region sheds light on the research focus on takaful, with diverse contributions from various nations. Malaysia emerges as the leading contributor, with 451 publications dedicated to exploring takaful as an Islamic alternative to conventional insurance. Pakistan follows closely behind with 50 publications, reflecting its significant research interest in the field. Other countries such as Indonesia, Saudi Arabia, and the United Kingdom demonstrate noteworthy scientific production, emphasizing their engagement in investigating the concepts and applications of takaful. Additionally, countries like the United Arab Emirates, the United States, Tunisia, Australia, and Turkey contribute substantially to the scholarly discourse surrounding takaful. The data underscores the global nature of research on takaful, with countries from different regions actively participating in advancing knowledge and understanding in this domain. However, some countries appear to have a relatively limited presence in terms of published research on takaful. These countries include Afghanistan, Algeria, Bangladesh, Canada, Egypt, Japan, Mauritius, Norway, Poland, Romania, Singapore, Spain, and Thailand, each represented by only one publication.

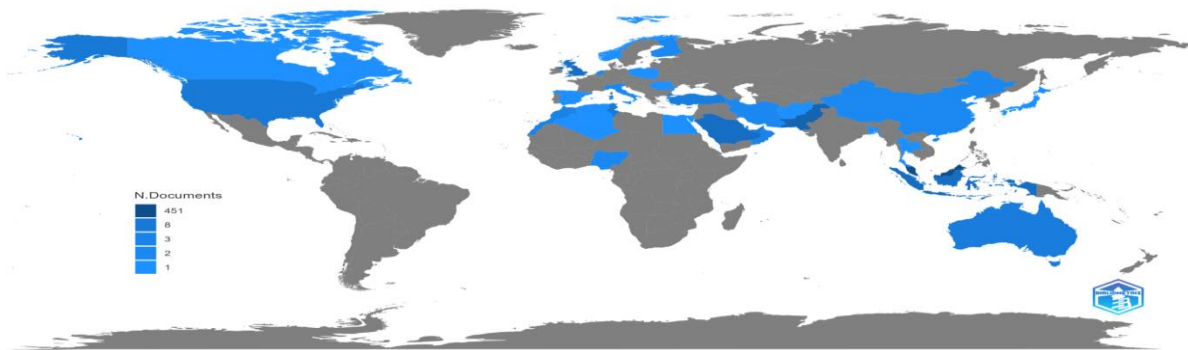


Figure 4: Countries' scientific production

Figure 5 provides information on the distribution of articles across different sources in the field of takaful research. The Journal of Islamic Accounting and Business Research emerges as the primary source with 23 articles, indicating its significant contribution to the scholarly literature in this area. The journal started publishing research on Takaful in 2010 and is currently in its 14th volume with an h-index of 26. The Journal of Islamic Marketing with an h-index of 49 follows with 15 articles, focusing on the marketing aspects of takaful.

The ISRA International Journal of Islamic Finance with an h-index of 12, Academy of Accounting And Financial Studies Journal with an h-index of 17, Arab Law Quarterly with an h-index of 16, Asian Social Science with an h-index of 37," and the International Journal of Islamic and Middle Eastern Finance and Management with an h-index of 38 exhibit a similar number of articles, with each source contributing 7 articles. Other sources such as Jurnal Pengurusan with an h-index of 16, Al-Shajarah with an h-index of 6, and the Far East Journal of Mathematical Sciences with an h-index of 20 have also made notable contributions with 6 and 5 articles, respectively.

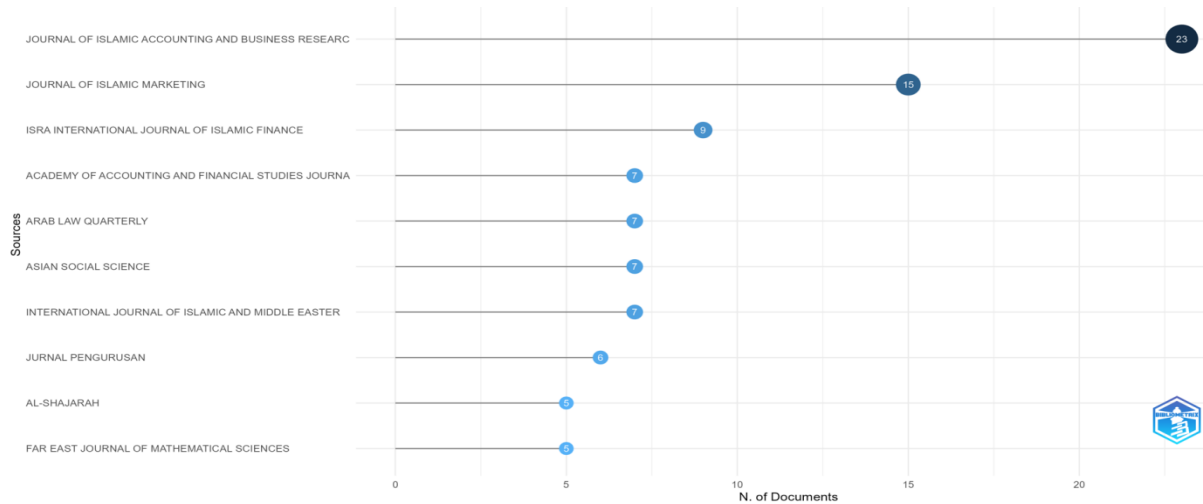


Figure 5: Most relevant sources

Table 2 provides valuable insights into the publication productivity and citation impact of several authors in the field of Takaful research. Ranked by the number of articles published, Salman SA first with 14 articles, followed by, Ghazali PL with 12 articles, Mamat M with 10 articles, and Md Husin M stands out with 8 articles. These authors have made significant contributions through their extensive publication records. In terms of citation impact, Md Husin M leads the ranking with an impressive total of 185 citations. Ab Rahman A follows closely with 149 citations, while Ghazali PL and Mamat M have each accumulated 114 citations. These authors have achieved considerable recognition for their work, as reflected by the high citation counts they have received. It is noteworthy that other authors such as Htay SNN, Ahmad WMAW, Akhter W, Yakob R, and Amin H have also made notable contributions to Takaful research, both in terms of the number of articles published and the citation impact they have achieved. Overall, these statistics provide valuable insights into the productivity and impact of these authors in the field of Takaful research, highlighting their contributions through both the quantity and quality of their publications.

Table 2: Most active authors

Rank	Author	Publication Year Start	Number Publication	Total Citation
1	SALMAN SA	2013	14	57
2	GHAZALI PL	2012	12	114
4	MAMAT M	2012	10	114
3	HTAY SNN	2013	9	52
5	MD HUSIN M	2013	8	185
6	AB RAHMAN A	2011	6	149
7	AHMAD WMAW	2011	5	57
8	AKHTER W	2012	5	51
9	YAKOB R	2012	5	13
10	AMIN H	2011	4	95

Table 3 provides insights into the distribution of articles across various affiliations in the field of Takaful research. The International Islamic University Malaysia (IIUM) emerges as a prominent contributor with 61 articles, followed by Universiti Kebangsaan Malaysia (UKM) with 32 articles and Universiti Malaya (UM) with 31 articles. Other notable affiliations include Universiti Teknologi Mara, which has produced 30 articles, Universiti Sultan Zainal Abidin with 28 articles, and Universiti Malaysia Terengganu with 26 articles. Notably,

Salman SA, a renowned researcher from IIUM, has focused on Takaful issues, demonstrating expertise in the field. Similarly, Yakob R from UKM has conducted research on the efficiency of Takaful companies, while Rahman AA from UM has explored the factors influencing participation in Takaful products. These affiliations have made substantial contributions to Takaful research, highlighting their active engagement and expertise in the field.

Table 3: Most relevant affiliations

Affiliations	Articles
International Islamic University Malaysia	61
Universiti Kebangsaan Malaysia	32
Universiti Malaya	31
Universiti Teknologi Mara	30
Universiti Sultan Zainal Abidin	28
Universiti Malaysia Terengganu	26
Universiti Teknologi Malaysia	19
Universiti Utara Malaysia	18
Universiti Sains Islam Malaysia	17
Universiti Putra Malaysia	12

Figure 6 shows that Malaysia and Pakistan produced the highest number of research articles, both in terms of single and multiple country publications. The majority of their publications are focused on single country publication (SCP), which confirms previous research findings. Out of the total of 228 research studies analyzed, 15% (34 studies) were single-authored, with a total of 486 authors contributing to the research. The co-author per document score for the existing research is 2.92. Interestingly, researchers from Oman, Nigeria, Morocco, Brunei, Australia, Algeria and Tunisia tend to focus on SCP, as opposed to researchers from Afghanistan, Bahrain, China and Finland focus on multiple country publications (MCP). Based on figure 7, the most cited countries is Malaysia, which is consistent with the evidence provided by the most relevant affiliations and countries’ scientific production. Notably, Malaysia, Pakistan and United Kingdom are among the countries with the highest scientific production on Takaful research and have a high citation count.

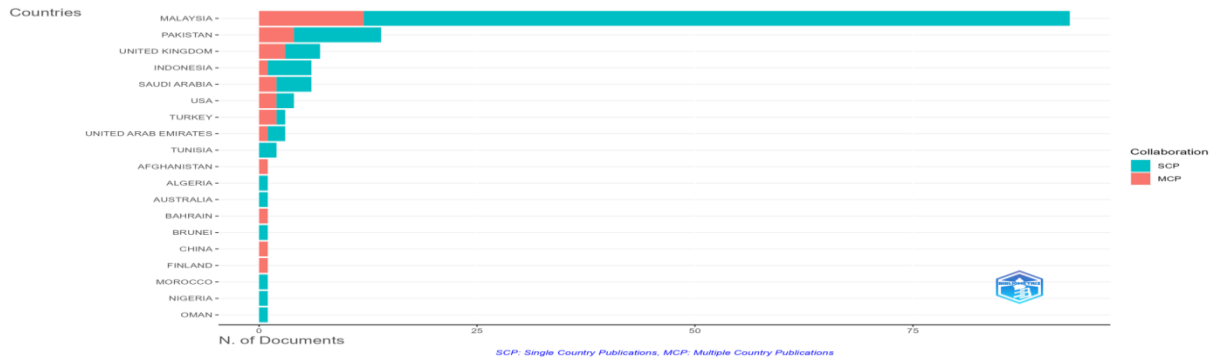


Figure 6: Author’s country

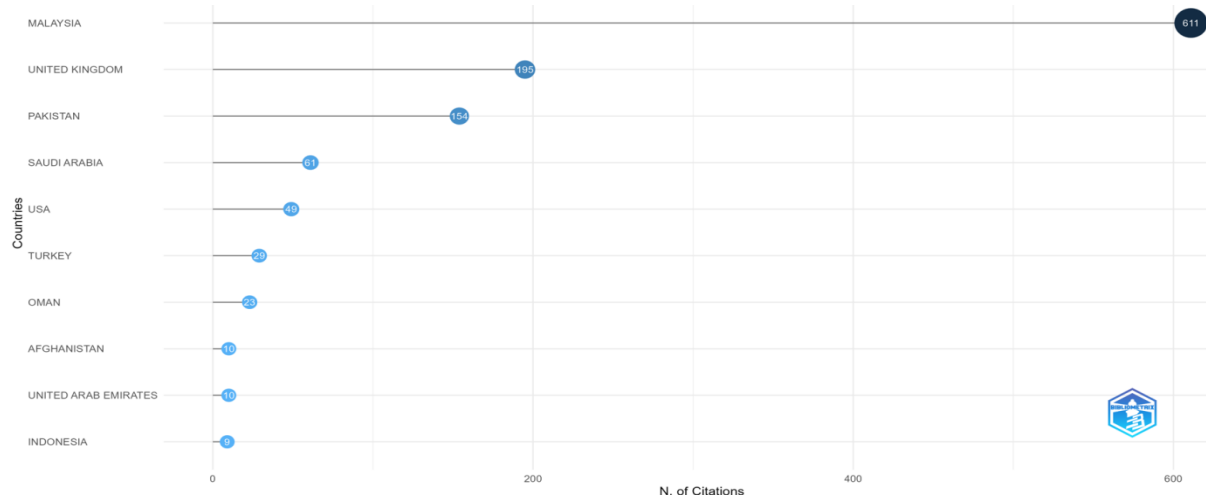


Figure 7: Most cited countries

The field of Takaful research has been significantly influenced by highly cited papers. Table 4 reveals that the study by Dikko, M., and published in Qualitative Report in 2016, titled "Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in takaful (Islamic insurance)," is the most frequently cited paper with 61 citations, with an average citation rate of 7.63 per year. It has played a crucial role in validating and ensuring the reliability of qualitative interviews in Takaful research. Another noteworthy paper, written by Kader, H.A., Adams, M., and Hardwick P., and published in Geneva Papers on Risk and Insurance: Issues and Practice in 2010, focuses on "The cost efficiency of takaful insurance companies." This paper has accumulated 55 citations, with an average citation rate of 3.93 per year. Its exploration of the cost efficiency aspect within Takaful insurance companies has been influential in understanding and improving their operational effectiveness. The third most cited paper, authored by Md Husin, M., Ismail, N., and Ab Rahman, A., and published in the Journal of Islamic Marketing in 2016, delves into "The roles of mass media, word of mouth, and subjective norm in family takaful purchase intention." With 53 citations and an average citation rate of 6.63 per year, this paper has shed light on the factors influencing individuals' intentions to purchase family Takaful products, considering the significance of mass media, word of mouth, and subjective norms. These highly cited papers have made substantial contributions to the Takaful research field, establishing the groundwork for qualitative research methods, analyzing cost efficiency in Takaful insurance companies, and exploring determinants of consumer behavior in the Takaful industry.

Table 4: Most global cited document

Author(s)	Title	Journal / year	Total Citations	TC per Year
Dikko, M.	Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in takaful (Islamic insurance)	Qualitative Report / 2016	61	7.63
Kader, H.A., Adams, M., & Hardwick P.	The cost efficiency of takaful insurance companies	Geneva Papers on Risk and Insurance: Issues and Practice / 2010	55	3.93
Md Husin, M., Ismail, N., & Ab Rahman, A.	The roles of mass media, word of mouth and subjective norm in family takaful purchase intention	Journal of Islamic Marketing / 2016	53	6.63
Khan, A., Hassan, M.K., Paltrinieri, A., Dreassi, A., & Bahoo, S.	A bibliometric review of takaful literature	International Review of Economics and Finance / 2020	49	12.25
Wahab, A.R.A., Lewis, M.K., & Hassan, M.K.	Islamic takaful: Business models, Shariah concerns, and proposed solutions	Thunderbird International Business Review / 2007	45	2.65
Md Husin, M., & Ab Rahman, A.	Do Muslims intend to participate in Islamic insurance?: Analysis from theory of planned behaviour	Journal of Islamic Marketing / 2016	41	5.13
Aziz, S., Md Husin, M., Hussin, N., & Afaq, Z.	Factors that influence individuals' intentions to purchase family takaful mediating role of perceived trust	Asia Pacific Journal of Marketing and Logistics / 2019	41	8.20

Ab. Rahim, F., & Amin, H.	Determinants of islamic insurance acceptance: An empirical analysis	International Journal of Business and Society/ 2011	37	2.85
Sherif, M., & Shaairi, N.A	Determinants of demand on family Takaful in Malaysia	Journal of Islamic Accounting and Business Research / 2013	37	3.36
Md Husin, M., & Ab Rahman, A.	Predicting intention to participate in family takaful scheme using decomposed theory of planned behaviour	International Journal of Social Economics / 2016	35	4.38

Science Mapping

Co-Citation Analysis

Figure 8 illustrates the results of co-citation analysis, which unveils three distinct clusters. The most prominent cluster denoted by blue nodes pertains to research on the customer satisfaction, family takaful, corporate governance and business models of Takaful. The green cluster focuses on studies related to the concept, application, and development of the Takaful industry, factors influencing participation in Takaful products, quantitative analysis, and the theory of planned behavior (TPB) while the red cluster includes studies concerning performance measurement and efficiency on Takaful.

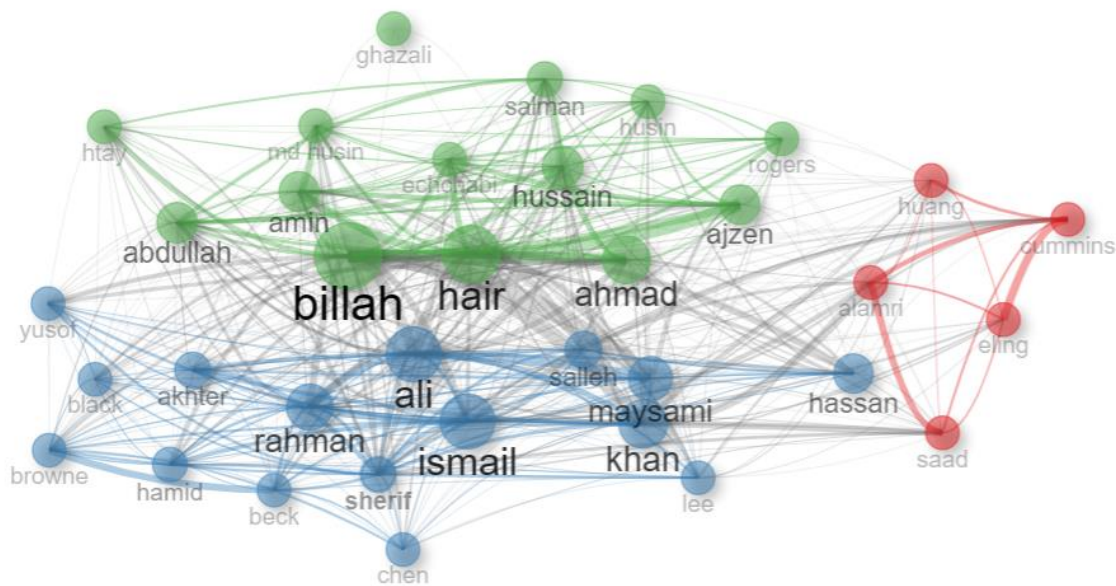


Figure 8: Co-citation network

Figure 9 illustrates a chronological direct citation network representing the historiography of Takaful literature, encompassing diverse publications that delve into different aspects of the subject. These studies examine contemporary Takaful issues, marketing strategies, consumer adoption, governance standards, productivity analysis, and the performance of Takaful companies. The insights derived from these works provide a deeper understanding of Takaful's fundamental principles, challenges, market dynamics, and growth prospects. Notably, the historiography emphasizes the significance of comprehending consumer behavior, the role of values and religiosity, as well as the influence of governance and disclosure standards on Takaful operations. As a whole, this comprehensive overview of Takaful research combines quantitative and qualitative approaches to shed light on the evolving field.

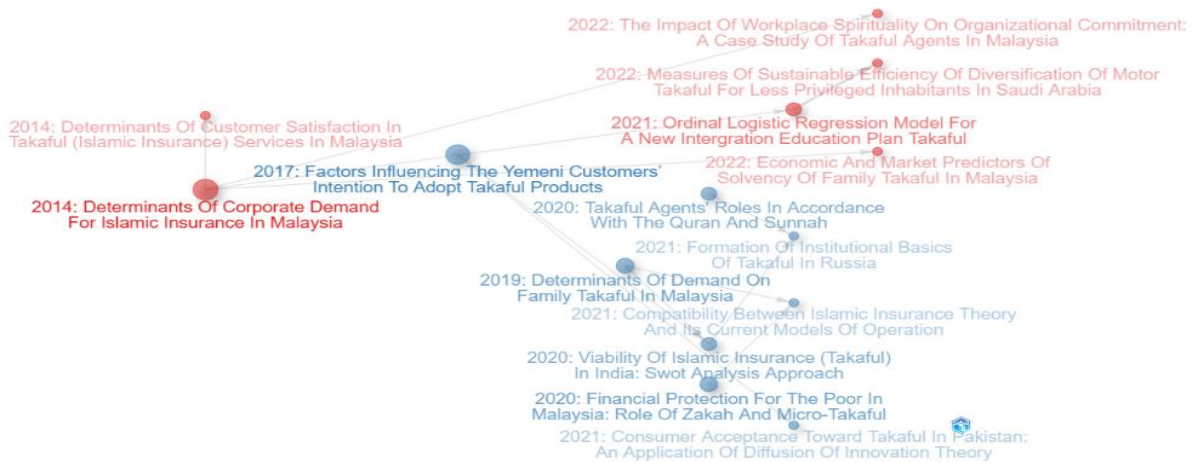


Figure 9: Historiographical direct-citation network

Bibliographic Coupling

Figure 10 illustrates a factorial map showcasing the arrangement of variables into distinct clusters. The first cluster encompasses studies related to Takaful models, riders, religiosity, trust, and factors within the theory of planned behavior (TPB) such as purchase intention, awareness, attitude, and subjective norm. The second, smaller cluster consists of studies examining service quality, corporate image and reputation, marketing, and customer loyalty. This visualization offers valuable insights into the categorization and relative significance of research variables within the two distinct clusters.

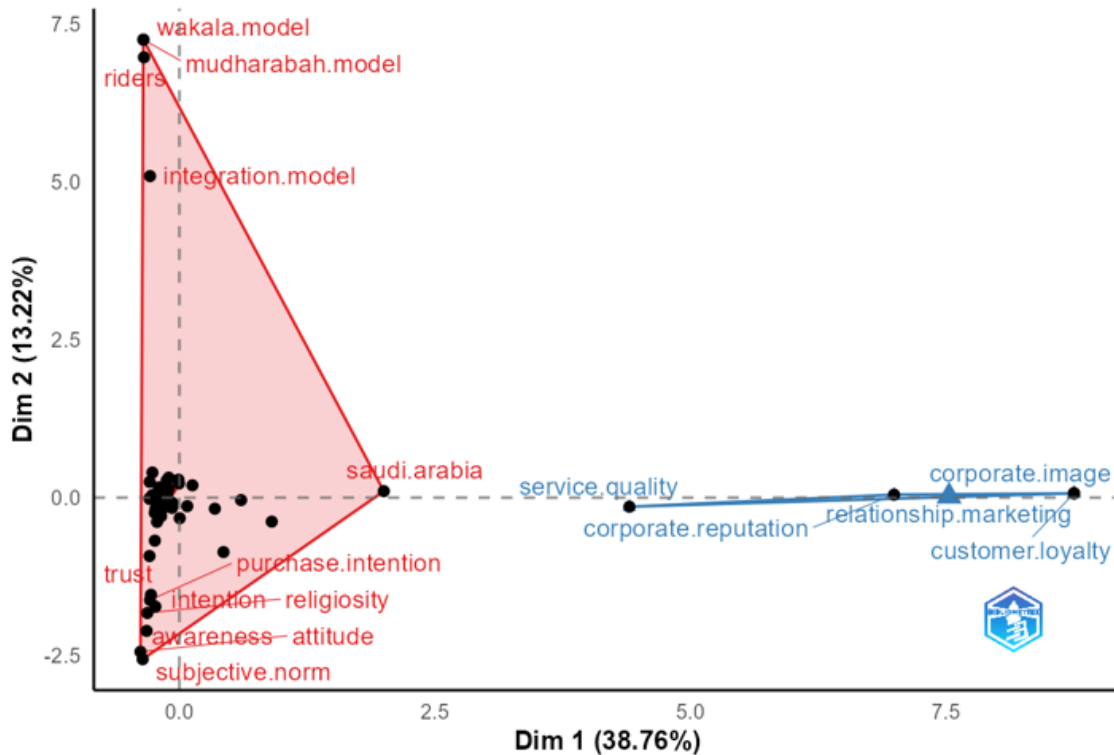


Figure 10: Multiple correspondence analysis-conceptual structure map

Figure 11 presents a thematic map that illustrates the primary themes discovered through the research analysis. The thematic analysis highlighted several basic or fundamental themes, including corporate governance, cost efficiency, takaful, insurance, Islamic finance, marketing, and shariah. However, these themes are relatively underdeveloped and interconnected with other areas. Additionally, theme such as takaful industry is currently weak and exhibit either emerging or declining trends. Moreover, the thematic analysis uncovered various topics encompassed within the research on Takaful. These topics include takaful performance, technical efficiency, goods and services tax (gst), insurance efficiency, ratio analysis, shariah compliance, Islamisation, participants' risk fund, profit distribution, and risk-sharing. Notably, the thematic map identified motor themes in Takaful research, such as family takaful products, trust, innovation attributes, loyalty, and relationship commitment. These motor themes have achieved significant development and contribute substantially to the field.

Furthermore, the thematic analysis revealed a shift in research focus from the takaful industry to attitude, religiosity, subjective norm, and awareness. These areas are explored in more detail in Section 4 of the article, providing a comprehensive examination of the identified themes.

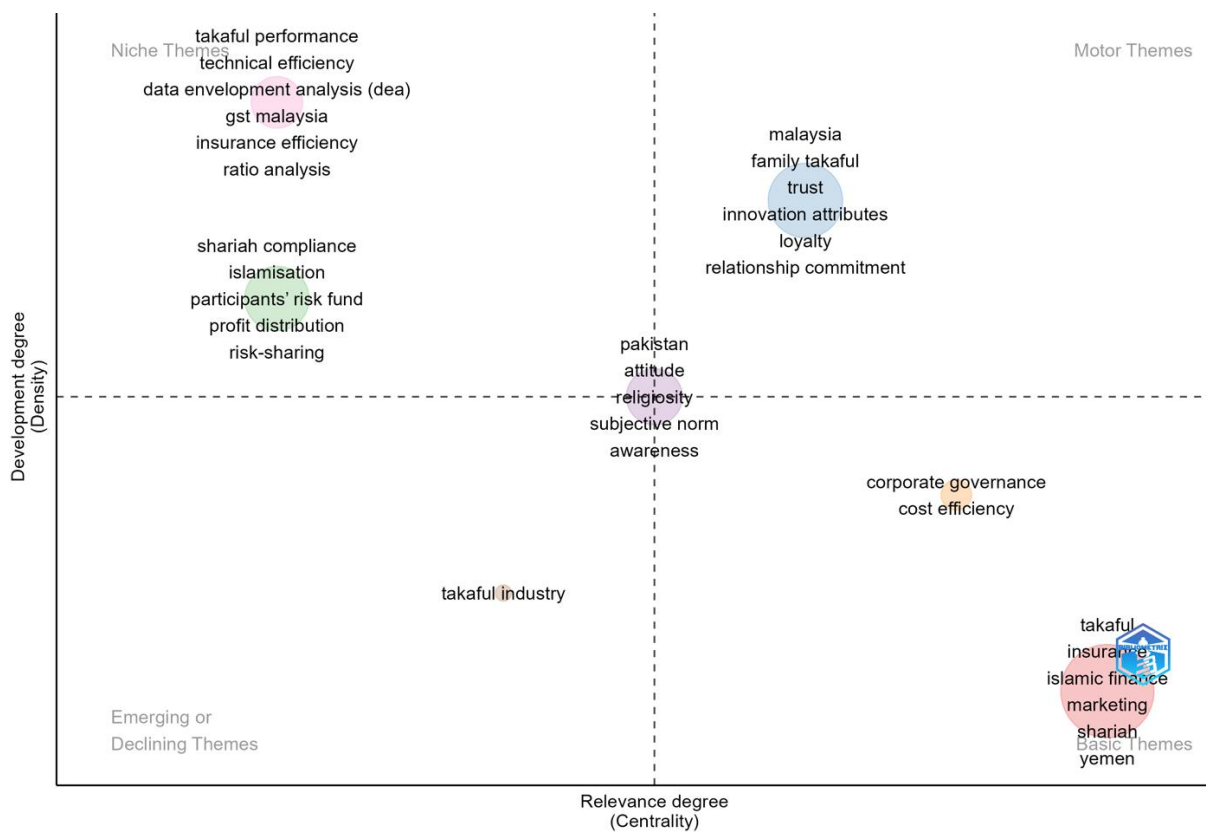


Figure 11: Thematic map

Figure 12 illustrates the thematic evolution of Takaful research from 1989 to 2023, revealing significant trends. Initially, the focus centered on attitude-related factors, corporate governance, and efficiency measures. However, in later years, there was a noticeable shift towards broader themes such as insurance, Malaysia, and Islamic finance. The incorporation of concepts like data envelopment analysis, technical efficiency, and takaful performance indicates a growing interest in operational efficiency within the Takaful industry. Additionally, the analysis highlights the emergence of new themes and the declining importance of certain topics. For instance, there is a transition from attitude-related aspects to themes like religiosity and subjective norm. Moreover, the research scope has expanded to encompass family takaful, trust, innovation attributes, loyalty, and relationship commitment. Notably, recent studies by Bangaan Abdullah et al. (2022) and Riaz et al. (2021) have investigated factors influencing family Takaful ownership. Overall, this thematic evolution demonstrates a dynamic and

evolving research landscape in Takaful. Researchers have explored various facets of the industry, including governance, efficiency, marketing, Islamic insurance, and compliance with Shariah principles. Relevant contributions by Sulaiman et al. (2022) and Sallemi et al. (2021) have specifically examined the significance of corporate governance in promoting the Takaful industry. These findings contribute to a deeper understanding of the research trajectory in the field of Takaful.

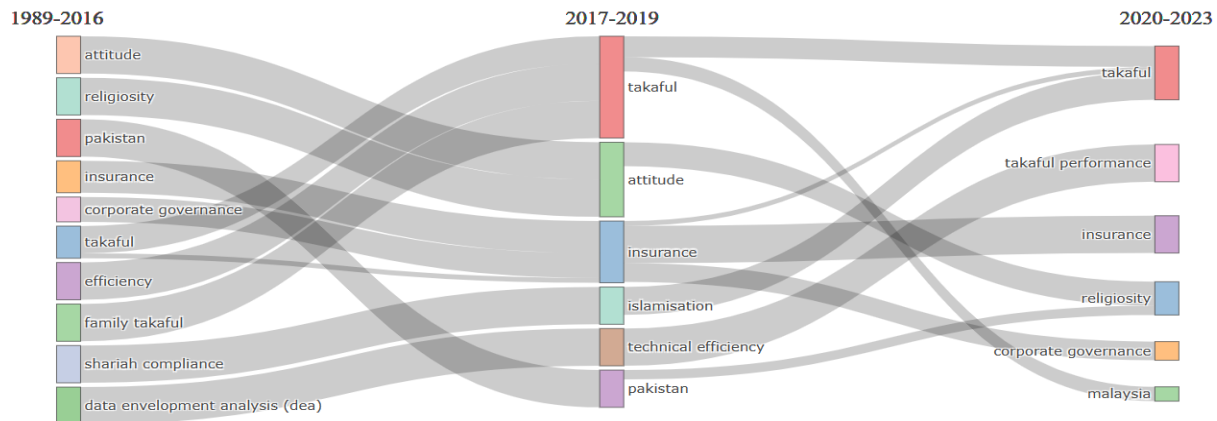


Figure 12: Thematic Evolution

Word and Co-Ward Analysis

The word cloud analysis presented in figure 13 provides insights into the thematic landscape of Takaful research. The frequency of terms depicted in the word cloud reflects the primary themes and topics that have emerged in the field. Prominent terms such as "takaful," and "malaysia" indicate the central focus on Takaful as an Islamic insurance concept, particularly in the context of Malaysia. The inclusion of terms like "insurance," "marketing," and "shariah compliance" suggests the broader areas of interest within the Takaful industry. Additionally, terms such as "corporate governance," "efficiency," and "trust" highlight the importance of organizational and operational aspects in Takaful research. Overall, the word cloud analysis demonstrates the thematic evolution and current trends in Takaful research, aligning with the article's title and providing a visual representation of the primary themes in the field. According to the list in Table 5, the most frequent word is "takaful" with 135 occurrences, followed by "malaysia" with 28 occurrences and "insurance" with 27 occurrences. Other significant words include "islamic finance" with 18 occurrences, "family takaful" with 15 occurrences, "marketing" with 14 occurrences, and "shariah compliance" with 12 occurrences. Additionally, the dataset includes words such as "islamisation," "participants' risk fund," and "profit distribution" with 11 occurrences each. The occurrence of words such as "takaful," "insurance," "malaysia," and "islamic finance" reflects the core focus of the article, which likely explores various aspects of the Takaful industry, including its principles, practices, and regulatory framework. The inclusion of terms like "shariah compliance," "family takaful," and "profit distribution" further indicates the emphasis on Islamic finance principles and the unique characteristics of Takaful as an Islamic insurance concept. Overall, the frequency of these words suggests that the article delves into the Takaful industry, its practices, and related topics, aligning with the title and providing a glimpse into the article's subject matter.

Table 5: Most frequent author keywords

Words	Frequency	Words	Frequency
Takaful	135	Shariah compliance	12
Malaysia	28	Islamisation	11
Insurance	27	Participants' risk fund	11
Islamic finance	18	Profit distribution	11
Family takaful	15	Risk-sharing	11
Marketing	14	trust	9



Figure 13: Word cloud

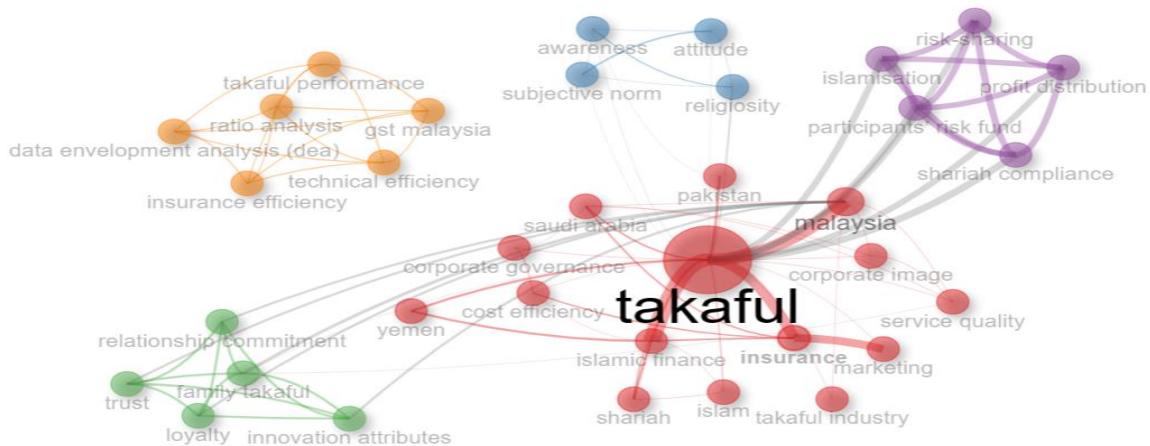


Figure 14: Co-occurrence network

Figure 14 displays a co-occurrence network illustrating keyword associations across five clusters. The red node in Cluster 1 includes pivotal terms like "takaful," "insurance," "islamic finance," and "marketing," which are central to the Takaful industry, geographic and organizational aspects. Cluster 2, represented by the blue node, encompasses terms related to psychological and behavioral aspects such as "attitude," "religiosity," "awareness," and "subjective norm." The green node in Cluster 3 comprises terms associated with the customer-related factors, including "relationship commitment" "family takaful," "trust," and "innovation attributes." Cluster 4, depicted by the purple node, highlights a focus on Islamic principles and regulatory aspects through terms like "shariah compliance," "islamisation," and "profit distribution." Lastly, Cluster 5 represented by the orange node, consists of terms related to operational efficiency, such as "takaful performance," "technical efficiency," and "data envelopment analysis." The network analysis provides valuable insights into the interconnectedness and relevance of various themes in the Takaful field, revealing influential nodes like "takaful" that act as connectors between different parts of the network. Furthermore, nodes like "family takaful" and "participants' risk fund" demonstrate a high potential for disseminating information quickly within the network due to their proximity

to other nodes. However, the orange node representing operational efficiency does not have any connections with other clusters.

According to Figure 15, there has been a consistent focus on keywords such as "takaful," "malaysia," "shariah," and "marketing." These topics have gained prominence from around 2014 to 2020, with varying levels of frequency and distribution throughout the years. Additionally, themes like "shariah compliance," "family takaful," "insurance," and "Islamic finance" have also emerged as significant areas of interest within the Takaful industry. These trends reflect the evolving landscape of Islamic insurance and highlight the importance of key factors such as trust, attitude, religiosity, awareness, and corporate image. This evidence reinforces previous findings that demonstrated the growth of various Takaful themes in existing research.

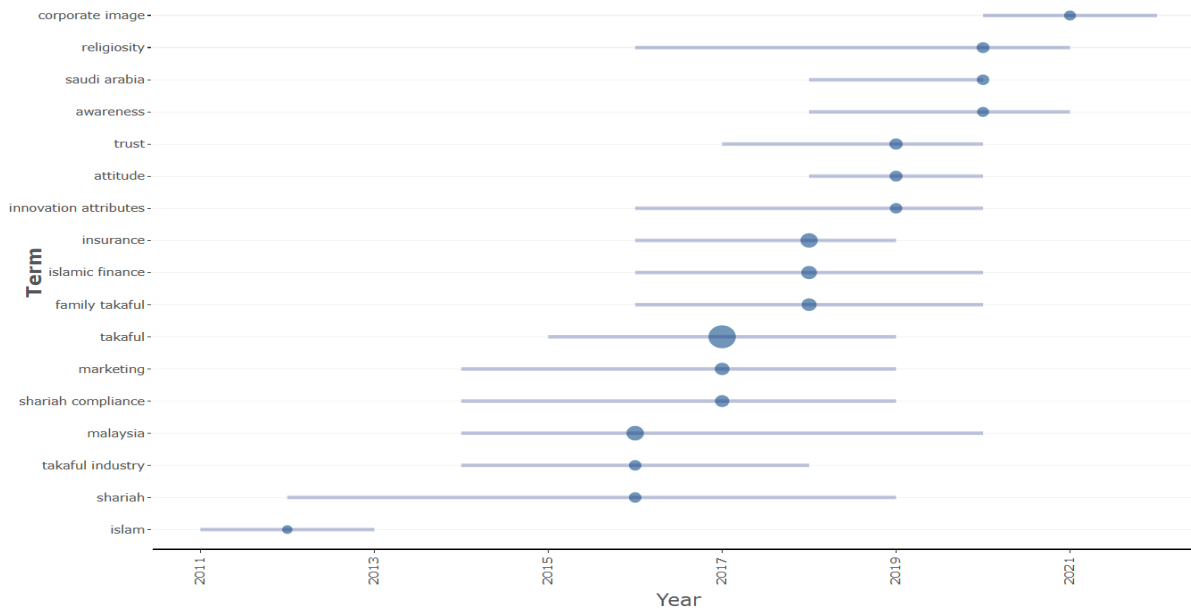


Figure 15: Trend topics

THEMATIC ANALYSIS AND DISCUSSION

This section divides the existing studies into five themes and presents evidence on different forms of research on Takaful as an alternative to conventional insurance. The themes identified in this section highlight the application of Shariah principles in Takaful, the development of the Takaful business, governance and regulatory framework, behavioral aspects and other distinct features. Table 3 below lists key elements under discussion in the themes identified from the literature on Takaful. The thematic map presented in Figure 11 provided guidelines for the initial classification of existing studies, and further analysis led to the evolution of the themes.

Table 3: Present status of focus of research on Takaful

Theme	Elements under discussion
The application of Shariah principles in Takaful	<ul style="list-style-type: none"> ● Application of Shariah Principles ● Operational model of Takaful
Operation and Takaful business development	<ul style="list-style-type: none"> ● Shariah Board Governance and Compliance ● Impact of Shariah Board and Capital Intensity on Financial Performance ● Influence of Economic and Ethical Activities on Business Performance
Governance and regulatory framework of Takaful Industry	<ul style="list-style-type: none"> ● Diversity in Governance Structures Among Takaful Operators ● Regulatory Issues During Early Development Phases such as:

	-Late Payment Charges and Operational Shariah Issues -Accessibility and Affordability of Micro-Takaful for Low-Income Earners
Incorporating behavioral aspects and Takaful subscription motivation	<ul style="list-style-type: none"> • Importance of Behavioral Studies in Takaful Subscriptions • Assessing Subscription Intentions Using Theory of Planned Behavior and Surveys
Other aspect of Takaful operations and issues	<ul style="list-style-type: none"> • Advanced Financial Technology for Takaful Models • Marketing and awareness

The Application of Shariah Principles in Takaful

The application of Shariah principles in Takaful is foundational to ensuring that Takaful operations comply with Islamic law. The principles provide a framework that differentiates Takaful from conventional insurance, ensuring all activities adhere to the ethical, social, and financial guidelines set forth in Shariah. Key principles include the prohibition of Riba (interest), Gharar (excessive uncertainty), Maysir (gambling), and the necessity for ethical investments (Bakar, 2009; Hassan, 2020).

Operation and Takaful Business Development

The Shariah board is one of important component in the governance structure of the Takaful business to ensure its compliance with the Shariah. Hemrit (2020) found that the effect of the Shariah board and capital intensity on the financial performance of Takaful insurance is overall positive in the Saudi market. Nazri et al. (2020) provided evidence for the impact of economic and ethical activities on the business performance of Takaful agencies with direct impact of CSR activities.

Governance and Regulatory Framework of The Takaful Industry

We observed some degree of diversity in the governance structure of the Takaful operators. Archer et al. (2009) documented on various issues relating to the regulatory requirements of Takaful, especially in its early development phase. For example, Ahmad and Lukman (2017) documented the effect of the Islamic Financial Services Act 2013 in Malaysia on the late payment charge in the Takaful industry where compensation had a positive impact. The research also found some Shariah operational issues in terms of its implementation among Takaful operators. On the other hand, Fikri et al (2022) confirmed guidelines on micro-Takaful operating in Malaysia support the micro-Takaful requirement to be affordable, valuable, accessible, understandable and simplified which enable the low-income earners to subscribe to micro takaful.

Incorporating Behavioral Aspects and Takaful Subscription Motivation

In addition, this study confirms the importance of incorporating behavioral study of subscriptions to take takaful. Md Husin and Ab Rahman (2016a) and Md Husin and Ab Rahman (2016b) use decomposed theory of planned behavior and theory of planned behavior to assess intent to subscribe to family takaful in Malaysia while Raza et al (2020) in Pakistan. Akhtar and Hussin (2012) conduct a survey to determine the perception of takaful practices in Pakistan.

Other Aspects of Takaful Operations And Issues

The industry acknowledges that Takaful models require advanced financial technology to enhance Takaful services. Technological integration is crucial for improving the efficiency and transparency of Takaful operations (Elomari, 2023). Marketing and awareness initiatives play a vital role in educating potential participants and addressing cultural sensitivities, alongside ongoing product innovation to meet diverse market needs (Amuda et al, 2020).

Research Gaps and Directions for Future Research

In summary, exploring different aspects of research on Takaful can help identify the current trends in the industry. Based on the above discussion of the recent developments we can identify three main research gaps that are briefly outlined in the following paragraphs.

First, the existing research focused on the application of Shariah principles in Takaful; however, it was limited to the Takaful models. The study's findings indicate that more research focusing on impact analysis is required to acknowledge its role as an Islamic alternative to conventional insurance. For instance, Takaful has to comply with the Shariah, and the offered products and services also have to serve the objectives of Islamic law (*maqāsid al-sharī'ah*), rather than conventional products in an Islamic disguise to tap into the Muslim market. A legitimate Takaful company must offer products that are in line with the Shariah objectives to preserve the intellect, progeny, religion, wealth and life. So far, empirical studies have yet to evaluate this important aspect of Takaful, and such an assessment would enhance the importance of Takaful as an Islamic alternative to conventional insurance.

Second, the findings show that there is no research focus on Takaful benefits. For example, there are benefits derived from Takaful by providing pious endowment (*waqf*) services, which renders Takaful as a powerful tool to mitigate risk and support the socio-economic development of the community. Thus, new studies are needed to assess the role of extended Takaful elements as additional factors that influence Muslims to opt for Takaful.

Third, another promising avenue for future research is micro-Takaful which is offered as a market segment targeted to lower income customers. Micro-Takaful can be extended to undeveloped markets for lower monthly premiums. There are also Takaful products offered for the disabled market segment and no research has been done to investigate the acceptance of these products. Takaful operators are intent on offering products for all market segments as part of their value-based initiatives. However, new studies have yet to examine the awareness among certain groups, for instance, parents or persons with disabilities.

CONCLUDING REMARKS AND LIMITATIONS

This study examined the development of Takaful research using evidence from the Scopus database by identifying, visualizing, and analyzing the existing literature. The bibliometric analysis focused on performance analysis and science mapping. Significant research has been published in reputable academic journals; however, many aspects of Takaful remain unexplored or require further scrutiny. This review aims to encourage researchers to investigate diversification benefits, governance mechanisms, and technology adoption in marketing existing Takaful products. It also aims to increase Takaful penetration through online subscriptions. This study has presented certain limitations such as It relied solely on bibliometric analysis to review the existing literature on Takaful. In addition, the study did not employ other literature mapping tools, such as page rank analysis. Furthermore, the study was limited to data from Scopus. Therefore, it is recommended for future studies could explore other databases, such as the Web of Science and use different search terms, which might yield different performance analysis and science mapping results. The study's comprehensive account of current Takaful research can support researchers in the field of Takaful and Islamic finance. Future research, particularly in relation to the objectives of Islamic law, will further advance this area of study.

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