

HALALSPHERE

International Islamic University Malaysia - INHART



INHART's research landscape: A case study of trends and patterns (2008-2023)

Amal A.M. Elgharbawy

International Institute for Halal Research and Training (INHART), International Islamic University Malaysia (IIUM), Jalan Gombak, 53100 Kuala Lumpur, Malaysia.

Corresponding author: E-mail address: amalgh@iium.edu.my

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Abstract

This study thoroughly examines publication trends at INHART from 2008 to 2023, employing quantitative and qualitative methodologies to analyse the institute's thematic evolution and scholarly contributions. Results reveal a significant increase in publication volume and a strategic diversification of research topics over the examined period. In recent years, I have witnessed a focus on addressing complex issues such as "halal risk" and "halal critical points," which is indicative of INHART's responsiveness to emerging challenges in the global halal market. Furthermore, INHART's research trajectory aligns with broader sustainability goals and demonstrates proactive integration of advanced technologies. These findings highlight INHART's significant influence on halal practices and its potential to shape policy-making and societal well-being. The study concludes with recommendations for INHART to continue fostering interdisciplinary collaboration, expanding international partnerships, and prioritising educational initiatives to solidify further its impact in promoting ethical and sustainable practices within the halal industry.

1. Introduction

The International Institute for Halal Research and Training (INHART) has become pivotal in halal research and development. This report presents a detailed analysis of INHART's publications from 2008 to 2023 to unravel the thematic concentration and evolution of the institute's scholarly endeavours. Through this period, INHART has demonstrated impressive growth in publication volume and a strategic diversification of research topics. The analysis utilises quantitative and qualitative data from the institute's extensive library of publications, focusing on the distribution of keywords that indicate core research areas.

The key findings from this analysis have been visualised through a word cloud that encapsulates the frequency and prevalence of specific terms, providing a graphic representation of INHART's research focus. The institute has shown a sustained emphasis on halal-related research, with a noticeable pivot towards "halal risk" and "halal critical points" in recent years. This shift indicates INHART's response to the complexities and growing sophistication of the global halal market, emphasising the need for rigorous risk assessment and control mechanisms in halal certification processes. Over the past fifteen years, the institute has expanded its research portfolio to include environmental science, technological innovation, and sustainability. This is evident from the consistent presence of keywords such as "environmental monitoring," "sustainability," and "technological application" throughout the publications. The year-wise trend analysis

reveals a strategic alignment with global sustainability goals and the incorporation of advanced technologies to enhance research outcomes in halal studies. The publication trend line chart elucidates a significant increase in research output, reflecting INHART's commitment to academic excellence and its role as a research hub. The upward trajectory in the number of publications is a testament to the institute's growing influence and capacity to engage with contemporary research challenges. In conclusion, INHART's research trajectory over the years reveals a multi-faceted scholarship approach that aligns with its foundational objectives and emergent global priorities. The institute has successfully established a niche in halal research while branching into interdisciplinary studies that address the intersection of technology, sustainability, and societal needs. As INHART looks to the future, fostering an integrative research environment that encourages innovative studies across various disciplines is recommended. Emphasising research that addresses contemporary global challenges, such as sustainability and technological innovation within the halal sector, can further solidify INHART's standing as a leading research institution. Additionally, expanding collaborations with international bodies can aid in disseminating INHART's research findings, contributing to the global discourse on halal practices and sustainable development.

The institute should also consider leveraging its research capabilities to influence halal standards and environmental stewardship policy-making. By doing so, INHART can play a critical role in shaping industry practices and consumer behaviour, reinforcing halal products and services' ethical and

health-related aspects. Moreover, the institute is encouraged to continue its investment in empirical research that directly impacts the Muslim community and beyond. Studies focusing on financial inclusion, student welfare, and healthcare, as evidenced by the recent surge in relevant publications, align with the institute's core values and contribute to societal well-being and economic prosperity. Finally, INHART's focus on educational advancement through research should remain a priority. Cultivating knowledge in halal sciences, coupled with exploring modern scientific methods and ethical considerations, will prepare the next generation of researchers and industry leaders. This will also help maintain the relevance and application of halal principles in an ever-evolving global landscape. By adhering to these recommendations, INHART can enhance its research impact, foster sustainable growth, and continue to provide valuable insights into the multi-faceted dimensions of halal research and practice.

2. Materials and methods

2.1 Data collection

The primary data for this analysis was collected from the IIUM library database, which includes a comprehensive record of all publications by the institute's researchers from 2008 to 2023. The data was also collected from INHART's responses to a distributed survey to identify INHART's niche area. This data included various types of publications such as journal articles, conference papers, book chapters, and report.

2.2 Data extraction

Relevant information, particularly the titles, abstracts, and keywords of the publications, was extracted for analysis. This extraction process was crucial to understanding the focus of each publication and identifying the main research themes. Each entry's publication year was also noted to facilitate a temporal analysis of the research trends.

2.3 Data cleaning and preparation

The extracted data underwent a cleaning process to ensure accuracy and consistency. This included standardising formats, correcting errors, and removing duplicates.

2.4 Quantitative analysis

The data was then aggregated and tabulated to facilitate an easy comparison and visualisation of trends. A quantitative analysis was conducted to count the frequency of publications per year and the occurrence of specific keywords. This helped identify the areas of research that emphasised the most and trends over time.

2.5 Qualitative analysis

A qualitative assessment was carried out on the publication titles and abstracts to understand the context and depth of the research topics.

2.6 Trend analysis

Year-wise trends were analysed to observe how research themes have evolved and shifted. This involved tracking the frequency and prominence of specific keywords and themes across different periods. The trends were then mapped against global developments in halal studies and related fields to

understand how INHART's research aligns with or responds to these broader trends.

2.7 Visual data representation

Key findings were visualised using various graphical tools for a more transparent and engaging presentation. This included the creation of a word cloud to illustrate the most frequently occurring keywords and a line chart to display the publication trends over the years.

2.8 Synthesis and reporting

The collected data and analyses were synthesised into a comprehensive report. This report presented the findings and interpreted them in the context of INHART's mission and the broader field of halal studies. The synthesis aimed to provide a holistic understanding of INHART's research trajectory, highlighting key achievements, identifying gaps, and suggesting future directions.

3. Results

3.1 General analysis

The word cloud (Figure 1) presented is a visual representation of the frequency and relevance of terms within the data set related to research interests in the context of "halal." In a word cloud, the size of each word corresponds to its frequency or importance in the context from which the data was drawn. More prominent words indicate topics of greater prominence among the respondents' research interests.

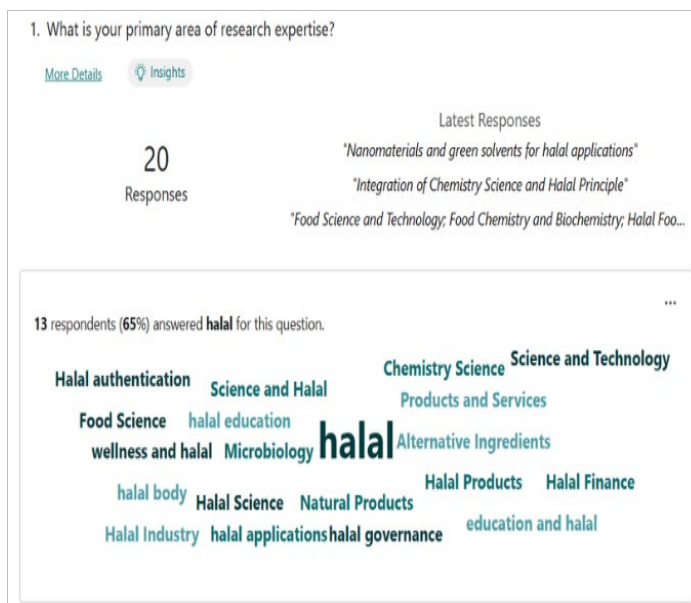


Figure 1: Word cloud presentation of primary area of research expertise.

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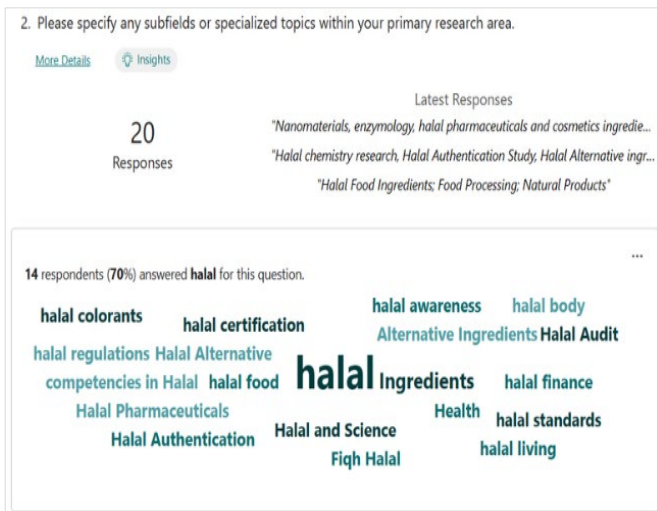


Figure 2: Word cloud presentation of sub-fields of research expertise.

The analysis noted that 100% of INHART staff have published in their area of expertise. In addition, 85% of INHART researchers are leading projects relevant to their research area, as demonstrated in Figure 3.

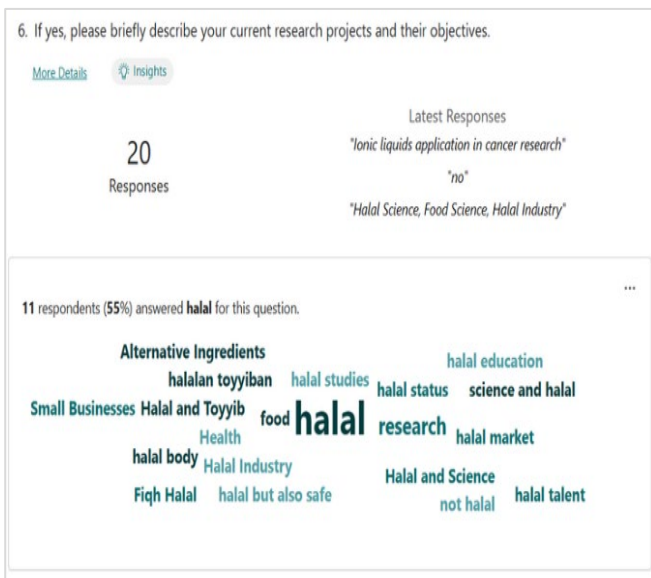


Figure 3: Current research projects by INHART researchers.

A summary of keywords identified by the researchers can be found in Figure 4.

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1. Central theme of 'halal':

The predominant term 'halal' in the centre of the cloud suggests that it is the most frequently mentioned keyword

across the responses. This indicates that 'halal' is a significant focus area within the research community, potentially spanning various applications and disciplines.

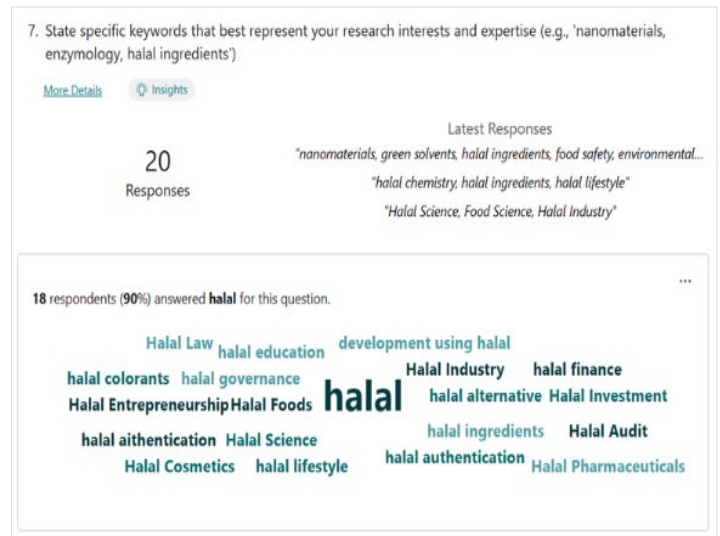


Figure 4: Specific keywords representation of INHART researchers.

2. Diversity in research topics:

The word cloud contains various terms associated with 'halal,' such as 'halal authentication,' 'halal education,' 'halal products,' and 'halal finance,' among others. This diversity illustrates that the research is not only centred on the concept of 'halal' as a singular theme but explores a range of subtopics that indicate a multidisciplinary approach within this overarching theme.

3. Interdisciplinary connections:

The presence of terms like 'Food Science,' 'Microbiology,' 'Chemistry Science,' and 'Science and Technology' adjacent to 'halal' suggests that the research has a solid interdisciplinary aspect. Researchers are not limiting their work to theoretical or theological aspects of halal but are also incorporating scientific and technological research to advance the field.

4. Application and industry relevance:

Words such as 'Products and Services,' 'Applications,' and 'Industry' point towards a practical research orientation with implications for commercial and industry applications. This could indicate an alignment with industry needs and a focus on translating research into practical solutions.

5. Educational aspect:

The mention of 'education' in conjunction with 'halal' implies that the research has an educational component, which could include the development of curricula, educational resources, or broader efforts to inform and educate about halal principles and practices.

6. Governance and policy influence:

The term 'governance' suggests that some research may be directed towards policy-making, regulation, and establishing standards in halal practices, which is critical for ensuring

compliance and ethical considerations in halal-related industries.

In conjunction with the earlier data, the analysis of this word cloud reinforces the conclusion that halal-related research is a prominent and multi-faceted field within the academic community. It underscores the potential for collaboration, the importance of industry partnerships, and the need for continued exploration of halal in various contexts to meet this field's educational, scientific, and commercial needs.

3.2 Keywords analysis

The detailed analysis of keywords from the subfields and research interests revealed the following top 10 most frequently mentioned keywords among the respondents:

Table 1: Top 10 Keywords

Rank	Keyword	Frequency
1	Halal Alternative Ingredients	4
2	Halal Ingredients	4
3	Halal Science	4
4	Halal Authentication	3
5	Halal Governance	3
6	Halal Education	2
7	Halal & Toyyib Lifestyle and Well-being	2
8	Consumer behaviour	2
9	Shari'ah Governance	2
10	Halal Cosmetics	1

Table 1 shows the top 10 keywords based on their frequency in the provided text. The presence of terms like "halal alternative ingredients" and "halal science" mentioned multiple times indicates a common interest or focus among researchers in the areas related to halal studies. Other keywords suggest interest in food authentication, health benefits of natural products, and environmental science topics such as bioremediation.

This information could be valuable for identifying common research themes and potential areas for collaboration among the researchers. It also highlights the diverse yet interconnected nature of the research interests within the academic community, which could be attractive to industry partners or sponsors looking for multidisciplinary research opportunities.

Based on the keywords you provided, several deductions can be made about the context and focus areas they represent:

1. Strong focus on halal sector: The prevalence of "halal" in the keywords indicates a primary focus on aspects related to halal products and services. This encompasses food, ingredients, cosmetics, pharmaceuticals, and lifestyle products.
2. Diverse applications in halal industry: The variety of keywords such as 'Halal Alternative Ingredients', 'halal Cosmetics', and 'Halal Pharmaceuticals' suggests a broad application of halal principles beyond just food. This indicates an expanding market and diversification in halal-compliant products and services.
3. Integration with science and technology: Keywords like 'Halal Science', 'Blockchain', and 'Nanomaterials' imply a significant integration of science and technology in the

halal sector. This could involve research and development in halal products, technological advancements in halal certification, and innovation in halal-compliant materials and processes.

4. Educational and governance aspects: The presence of 'Halal Education', 'Halal Governance', 'Shari'ah Governance', and 'Halal Audit and Certification' keywords suggest an emphasis on the educational, regulatory, and governance aspects of the halal industry. This points towards the importance of proper training, standardisation, and regulatory frameworks in maintaining halal integrity.
5. Ethical and sustainable practices: Keywords like 'Sustainability', 'Ethical', and 'Corporate Social Responsibility' indicate a growing awareness and integration of ethical and sustainable practices within the halal industry. This reflects a broader trend of environmental consciousness and ethical considerations in business and consumer choices.
6. Consumer behaviour and market trends: The mention of 'Consumer Behaviour' and 'Purchase Intention' suggests a focus on understanding how consumers perceive and choose halal products, which is crucial for market strategy and product development.
7. Financial aspects in halal sector: The presence of keywords like 'Halal Finance', 'Islamic Finance', and 'Halal Investment and Finance' highlights the financial dimensions of the halal industry, indicating a specialised niche in finance that complies with Islamic principles.
8. Interdisciplinary research and development: The diversity of keywords, ranging from 'Food Sciences' and 'Environmental Health' to 'Molecular Microbiology' and 'Psychological Experience', suggests that the field is interdisciplinary. This reflects the integration of various scientific, social, and environmental studies in understanding and developing the halal sector.
9. Health and lifestyle focus: Keywords like 'Halal & Toyyib Lifestyle and Well-being' and 'Food Safety' emphasise the importance of health, well-being, and safety in the halal sector, indicating a consumer base that is health-conscious and concerned about the quality and safety of products.
10. Technological and digital innovations: The mention of 'Blockchain', 'Virtual Reality Applications', and 'Gamification' indicates an exploration of digital and technological innovations in the halal sector, possibly in marketing, consumer engagement, or supply chain management.

In summary, these keywords paint a picture of a dynamic and growing halal sector that is diverse in its product and service offerings and deeply integrated with technological, educational, ethical, and financial dimensions.

3.3 Publications analysis (2008-2023)

Summary of the publication trends from 2008 to 2023 based on the data:

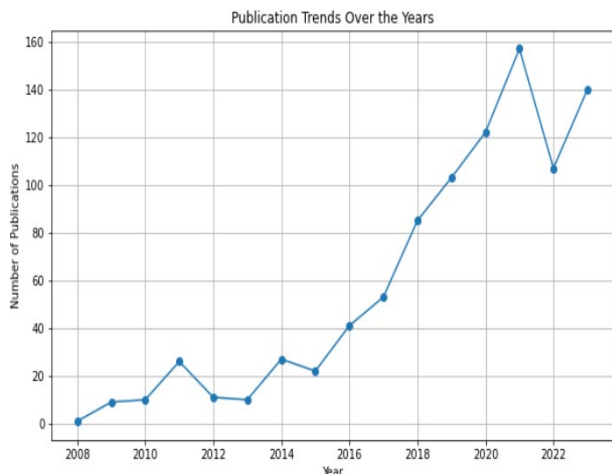


Figure 5: INHART publications 2008-2023.

1. Overall increase: The general publication trend significantly increased over the 16 years. Starting from just one (1) publication in 2008, there is a notable rise to 140 publications by 2023.
2. Initial growth (2008-2014): Between 2008 and 2014, the number of publications gradually increased. The period started with only one (1) publication in 2008 and gradually rose, reaching 27 publications by 2014. This phase is characterised by slow but steady growth.
3. Rapid expansion (2015-2021): From 2015 onwards, the number of publications significantly accelerated. The number more than doubled from 22 in 2015 to 157 in 2021, marking the peak of the trend. This period represents a phase of rapid growth and heightened activity.
4. Recent fluctuations (2021-2023): After reaching a peak in 2021, there was a slight dip in 2022, followed by a recovery in 2023. These fluctuations might suggest a stabilisation in the field or varying factors influencing publication rates.
5. Notable peaks and dips: The highest number of publications was in 2021 (157), while the lowest (excluding the starting year) was in 2009 and 2010 (both 10). The reasons behind these fluctuations could be multiple, including changes in research funding, shifts in research focus, or external global factors.

The overall publication trend is significant growth, with rapid expansion in the middle years and some fluctuations towards the more recent years. The data reflects an increasing interest and development in the field over time.

The provided pie chart (Figure 6), represents a distribution of the types of publications by the International Institute for Halal Research and Training (INHART) from 2008 to 2023. Here is an analysis based on the visible data:

1. Articles (63.5%):

The most significant portion of the chart is occupied by Articles, making up 63.5% of all publications. This indicates that journal articles are the most common publication type by INHART, suggesting a strong focus on contributing to academic journals

and disseminating research findings through peer-reviewed platforms.

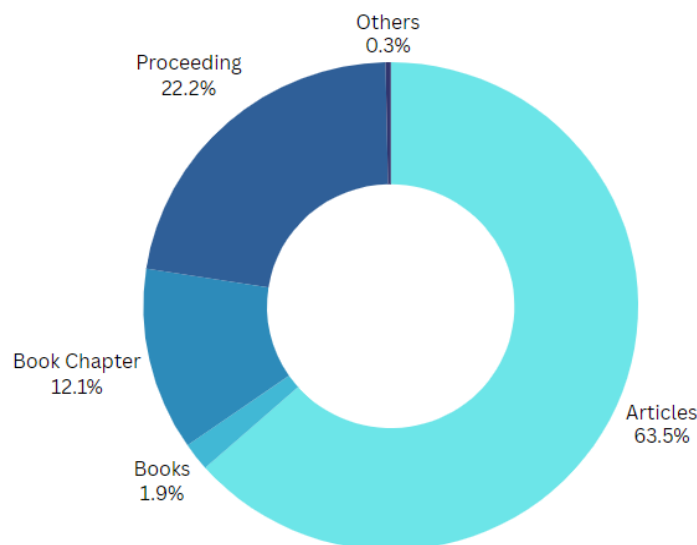


Figure 6: INHART publications type overview.

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3. Proceedings (22.2%):

Conference proceedings account for 22.2% of the publications, which is significant and shows active participation in academic conferences and symposiums. It reflects the institute's commitment to engaging with the scholarly community and sharing research outcomes in collaborative environments.

4. Book chapters (12.1%):

Book chapters comprise 12.1% of the publications, contributing to scholarly books. This could suggest a more in-depth exploration of specific topics within the field of halal studies that are suited to the format of book chapters.

5. Books (1.9%):

Books represent 1.9% of the publications, which is relatively small compared to articles and proceedings. This suggests that while INHART does create comprehensive works, the focus is more on articles and shorter pieces that contribute to collective volumes.

6. Others (0.3%):

The category labelled as others accounts for only 0.3% of the total publications. This could include other publication types, such as reports, monographs, working papers, or policy briefs. The small percentage suggests these outputs are a minimal part of INHART's overall publication strategy or are less frequent projects.

The pie chart provides a clear visual representation of INHART's prioritisation in publication types, with a strong emphasis on journal articles, which are often valued for their peer-reviewed status and academic rigour. The considerable portion of conference proceedings also highlights INHART's importance on academic discourse and networking within the research community.

The distribution suggests that while INHART contributes significantly to the body of knowledge through detailed articles and findings presented at conferences, there is a notable but minor engagement in creating comprehensive scholarly works and specialised book chapters. The minimal presence of 'Others' indicates niche or less conventional outputs, which may serve particular purposes or audiences within halal research.

Overall, the pie chart indicates a well-rounded approach to disseminating research with a clear preference for peer-reviewed articles, which may enhance the institute's academic credibility and impact within the halal research community. It also points towards strategic opportunities for increasing the production of books and other publications, which can provide more substantial contributions to the field and offer comprehensive insights into complex subjects related to halal studies.

3.4 Publication Type

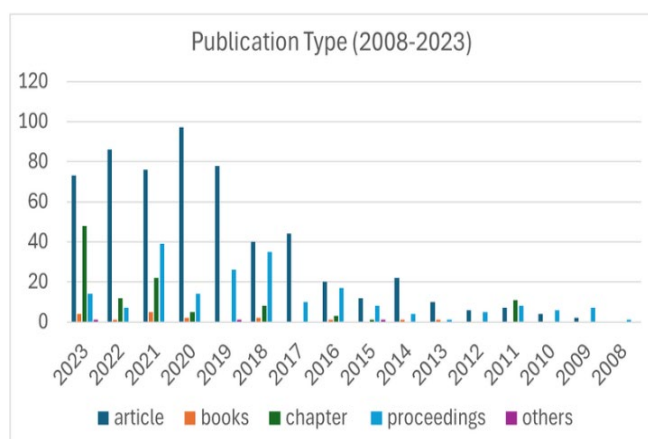


Figure 7: INHART publications type 2008-2023.

- **Publication trend over time:**

The chart indicates a fluctuating trend in the number of publications over the given period. There are years with high publication counts and others with relatively few.

- **Most common publication type:**

Articles are the most common type of publication throughout the entire period, with their numbers peaking significantly in specific years like 2021, 2020, and 2019.

- **Books and book chapters:**

Publications classified as books and book chapters are present but constitute a smaller portion of the output. Book production appears to have remained relatively steady, though low, across the years.

- **Conference proceedings:**

Conference proceedings are another category that has shown a sporadic presence over the years. Notably, there seems to be a peak in conference proceedings around 2019.

- **Other publications:**

The 'others' category suggests additional publications that do not fit the standard categories of articles, books, chapters, or proceedings. These occur less frequently but are a consistent part of the publication mix.

- **Overall output:**

The overall publication output shows significant variation from year to year. Notably, there is a visible peak in 2021, followed by a decrease in 2022 and a slight increase in 2023.

- **Recent years:**

In the most recent years, 2021 and 2023, the number of articles has remained high, indicating a strong focus on research articles as the primary mode of disseminating research findings.

- **Long-term trend:**

While the data fluctuates, there seems to be a general upward trend in the total number of publications over the years, with some fluctuations that could be attributed to various factors such as changes in research focus, funding, or external events impacting research productivity.

This chart provides valuable insights into INHART's publication practices, highlighting the preferred modes of research communication and how they have evolved. The predominance of articles aligns with academic trends of prioritising peer-reviewed journals for disseminating research. For a more comprehensive analysis, it would be essential to consider additional context, such as institutional priorities, changes in staff or strategy, and external factors that may have influenced these trends.

3.5 Keywords analysis

- **Year-wise keyword trends:** The research focus has progressively incorporated emerging trends, with recent years highlighting the significance of "halal risk" and "halal critical point analysis," showing a nuanced approach to the complexities of halal certification and compliance.

- **Frequency analysis:** "Halal" remains the overarching theme, with other keywords like "sustainability" and "halal integrity" gaining prominence.

- **Word cloud visualisation:** The updated word cloud for 2008-2023 provides a visual reflection of the institute's wide-ranging research focus, with "halal," "sustainability," and "risk" being notably prevalent. (Figure 6).

The comprehensive analysis of INHART's publications from 2008 to 2023 reveals significant trends and patterns in research topics. A year-over-year examination indicates a diverse and evolving research agenda punctuated by a sustained emphasis on halal-centric studies. The early years were characterised by a focus on environmental monitoring and the integration of technology, as demonstrated by keywords such as "microclimate," "sensors," and "AWS." This focus on technological applications points to an initial drive to harness scientific advancements in service of environmental stewardship and monitoring.

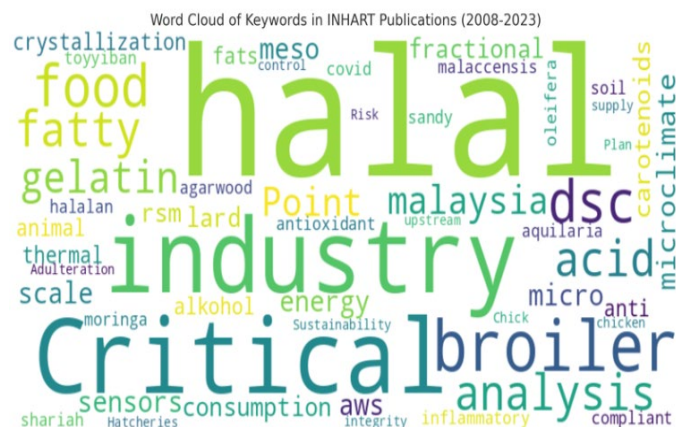


Figure 6: Word cloud of keywords in INHART publications (2008-2023).

As the years progressed, a distinct pivot towards halal studies became apparent, with keywords such as "halal," "gelatin," "shariah compliant," and "halal industry" surging to the forefront. This shift reflects the growing global demand for halal-certified products and the increasing complexity of the process. By 2023, the research had further specialised into nuanced areas of the halal sphere, with "Halal Risk," "Halal Critical Point," and "Halal Critical Point Analysis Plan" emerging as prominent themes. These keywords underscore a matured focus on risk assessment, critical control, and analysis within halal practice, highlighting the institute's commitment to leading-edge research in halal process integrity and certification.

- The frequency analysis of keywords across the fifteen years shows "halal" as the most recurrent keyword, indicating the central role of halal studies within INHART's research portfolio. However, the institute has not been insular in its focus. Keywords such as "sustainability," "risk management," and "financial inclusion" signal a broader engagement with interdisciplinary themes that intersect with the core halal research. Such a broadened scope suggests that INHART is looking at halal as a certification of products and as a comprehensive framework that encompasses ethical finance, sustainable business practices, and social responsibility.
- The word cloud generated from the keywords provides a visual testament to the breadth and depth of INHART's research interests. It illustrates the dominant themes and the interconnectivity between various research topics. The larger the word, the more frequently it appears in the dataset, allowing for an at-a-glance understanding of the research focus areas.
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3.5 Discussion

The findings from the data analysis invite a nuanced discussion about the trajectory of INHART's research and its alignment with global trends. The consistent focus on halal topics reflects the institute's foundational mission but also indicates a responsive adaptation to the evolving needs of the Muslim community and global market demands. Halal research is prominent for its religious implications and economic and social impact, as halal products and services are increasingly sought after in international markets. The institute's pivot towards addressing complex issues within the halal sector, such as risk analysis and critical control points, suggests a deepening of expertise and a move towards thought leadership in creating advanced halal certification processes. This evolution mirrors the global trend towards greater scrutiny and standardisation in food safety and ethical practices.

INHART's engagement with sustainability issues intersects with the halal sphere, as both areas share common ethical considerations and a focus on stewardship. This is reflected in the rising frequency of sustainability-related keywords over recent years. The integration of these themes points to a holistic approach to halal studies, one that encompasses broader ethical and environmental concerns. The institute's foray into financial inclusion and modern analytical techniques, such as HPLC and GC-MS, indicates an interdisciplinary approach that bridges Islamic studies with modern science and economics. This blend of traditional and contemporary knowledge positions INHART as a progressive research entity capable of addressing current and future challenges.

Furthermore, introducing keywords related to pharmaceuticals, bioactive ingredients, and healthcare suggests that INHART is expanding its reach into the health sciences, potentially addressing the need for halal pharmaceuticals and healthcare services. This expansion indicates an awareness of the comprehensive needs of Muslim consumers and a commitment to serving those needs through research.

The analysis of publication trends shows a healthy and growing output, signifying a vibrant research environment at INHART. The increase in publication numbers aligns with the expanding scope of research topics and indicates a successful effort to foster a productive scholarly community. However, the fluctuation in publication numbers in recent years may suggest a need to consolidate research efforts or reflect global events that have impacted academic productivity.

In conclusion, the discussion reveals INHART's dynamic research approach, which reflects its core mission and adapts to emerging global challenges. By maintaining a balance between deepening its expertise in halal studies and exploring new interdisciplinary research avenues, INHART is well-positioned to contribute meaningful insights and solutions that

align with its vision and the needs of the broader community.

4. Recommendation

Considering the trends and insights gleaned from the publication analysis, the following strategic directions and initiatives are recommended:

1. Strengthening halal research leadership:
 - Continue to lead and innovate in the field of halal studies. Given the prominence of 'halal' in your research, further developing this niche can position INHART as a global thought leader.
 - Explore advanced halal certification processes and ethical standards, addressing emerging complexities in global halal markets.
2. Interdisciplinary research integration:
 - Foster interdisciplinary research that bridges halal studies with sustainability, technology, and health sciences. This approach can lead to more holistic and impactful studies addressing societal and environmental issues.
 - Encourage collaboration between departments to create synergy in research efforts, leading to innovative solutions that cut across traditional academic boundaries.
3. Industry and community engagement:
 - Increase engagement with industry partners to ensure research remains relevant and impactful. This can include collaborative projects, consultancy, and knowledge transfer programs.
 - Strengthen community outreach programs to raise awareness about halal practices and their benefits, enhancing societal understanding and acceptance.
4. Global collaboration and networking:
 - Establish and strengthen international collaborations with other leading institutions and research centres. This can lead to joint research projects, academic exchanges, and shared best practices.
 - Participate in global conferences and forums to showcase INHART's research, fostering international recognition and influence.
5. Research in emerging technologies:
 - Invest in research on the application of emerging technologies in halal certification and monitoring processes, such as blockchain, IoT, and AI.
 - Explore the potential of these technologies in enhancing traceability, transparency, and efficiency in the halal supply chain.
6. Student and young researcher development:
 - Nurture the next generation of researchers through mentorship programs, research internships, and workshops. Encourage student involvement in research projects from the early stages.
 - Offer specialised training and development programs in halal studies and related fields to equip young researchers with the necessary skills and knowledge.
7. Policy influence and advisory role:
 - Utilize the institute's expertise to influence policy-making in national and international halal standards.

- Serve as an advisory body to governments and international organisations on issues related to halal certification, regulation, and industry practices.
8. Funding and resource allocation:
 - Seek diversified funding sources to support and expand research activities, including grants, industry partnerships, and endowments.
 - Allocate resources strategically to prioritise high-impact research areas and to support emerging research fields.
 9. Publication and dissemination:
 - Encourage and support the publication of research findings in high-impact journals and platforms.
 - Develop a comprehensive dissemination strategy that includes open-access publications, digital repositories, and engaging with broader audiences through media and public forums.
 10. Monitoring and evaluation:
 - Implement a robust monitoring and evaluation framework to assess the impact and relevance of the research conducted.
 - Use these insights for continuous improvement and strategic planning of future research directions.

By embracing these recommendations, INHART can enhance its research impact, foster innovation, and continue to contribute significantly to the field of halal studies and beyond

5. Conclusion

The comprehensive analysis of the publication trends at the International Institute for Halal Research and Training (INHART) from 2008 to 2023 provides a vivid narrative of the institute's scholarly evolution and intellectual contributions to halal studies. The increasing volume of research outputs, coupled with the diversification of topics, underscores INHART's growing prominence and pivotal role in shaping the discourse on halal practices regionally and globally. The focus on "halal" as a central theme throughout the years has not only reinforced INHART's position as a leading authority in halal certification and compliance but has also demonstrated the institute's commitment to advancing halal as a comprehensive lifestyle concept that permeates various aspects of social and economic life. The recent progression into specialised areas such as "Halal Risk" and "Halal Critical Point Analysis" marks a significant advancement in the institute's research capabilities, addressing the increasingly sophisticated demands of halal certification processes and the associated industry standards. The alignment of INHART's research themes with broader global concerns such as sustainability, ethical finance, and healthcare innovation reflects a strategic foresight and a recognition of the interconnected nature of modern challenges. These are not isolated academic pursuits but critical issues that resonate with a global audience, providing valuable insights and pragmatic solutions catering to diverse stakeholders. Moreover, the institute's research trajectory effectively responds to the dynamic changes in the international landscape, including shifts in market needs, consumer behaviour, and regulatory environments. By embracing an interdisciplinary approach and integrating traditional Islamic principles with contemporary scientific methods, INHART has demonstrated the ability to remain relevant and influential in an ever-changing world. As INHART looks to the future, it is imperative to build on this solid

foundation and continue to push the boundaries of research. Encouraging innovative studies, fostering international collaborations, and influencing policy-making will amplify the institute's impact. There is also an opportunity to enhance the dissemination and application of research findings, ensuring that the knowledge generated leads to tangible benefits for society. In summary, INHART's research from 2008 to 2023 paints a picture of an institute deeply rooted in its core mission while dynamically adapting to new challenges. It is a testament to the institute's dedication to research excellence and its vision to be at the forefront of halal studies and related fields. Moving forward, the institute is well-positioned to continue its growth trajectory, influence, and contribution to the global halal industry and the broader context of ethical and sustainable practices.

5.1 Conclusion of INHART's niche area

Main Niche Area: Halal Studies INHART has firmly established its niche in halal studies, demonstrating a strong focus on the comprehensive aspects of halal certification, compliance, and integration with contemporary challenges. This area aligns with the institute's core mission and responds to the global interest in ethical and religiously compliant practices.

Major Sub-Niches:

1. Halal certification and compliance process:

- This sub-niche encompasses developing and refining standards and methodologies for halal certification. It covers the ethical, legal, and procedural dimensions of ensuring products and services meet halal requirements.
- Research in this area is critical for upholding the integrity of halal certification in diverse markets and adapting to changing regulatory environments.

2. Integration of halal with technology:

- A key area of focus is the intersection of halal studies with technological advancements, including alternative ingredients and modern tools and techniques in halal certification, monitoring, and enforcement.
- The institute's emphasis on technologies like blockchain for traceability, AI for product analysis, and IoT in supply chain management reflects its commitment to innovation in halal practices.

3. Halal and sustainability:

- Sustainability in halal practices represents a vital research area, focusing on halal production and consumption's environmental and ethical aspects.
- This sub-niche includes studies on sustainable business models in the halal industry and the environmental impacts of halal certification, promoting sustainable practices within halal frameworks.

These sub-niches under the broader umbrella of halal studies showcase INHART's role as a forward-thinking research institution. By embracing these areas, INHART not only

upholds its expertise in traditional halal studies but also addresses contemporary global challenges and technological developments. This multi-faceted approach positions INHART as a leader in research that is culturally significant and globally relevant. Figure 8 shows a mind map representing the above.



Figure 8: INHART niche areas and sub-areas based on the analysis.

6. Acknowledgement

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