

# Bibliometric Analysis Of Financial Inclusion, Islamic Financial Institutions, Financial Inclusion Framework Research In Islamic Finance: Trends, Challenges, And Future Directions

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**Abstract.** Over the past decade, research on financial inclusion has experienced significant growth, focusing on areas such as assessing its impact and identifying obstacles to accessing and using financial services. As this area of research continues to evolve, it becomes increasingly important to review the existing literature, highlight prominent key themes and trends, and outline directions for future studies. This study aims to examine the current research landscape in financial inclusion and pave the groundwork for future research by identifying unexplored dimensions and perspectives. A systematic analysis was conducted on 126 papers published between 2010 and 2024, retrieved from the Google Scholar database using Publish and Perish software. VOSviewer was utilised to map bibliographic data, focusing on the leading authors in this field at the journal and institution levels, citation patterns, keyword distribution, highly cited works, co-authorship networks, and the most influential journals and authors. The findings revealed that several articles concentrate on analysing the evolution of scientific output. These studies examine the distribution of publications by subject area and journal, assess the productivity of authors, institutions, and countries, and explore keyword trends. This study holds importance for researchers, policymakers, and industry stakeholders committed to advancing financial inclusion. By reviewing past research and suggesting future research directions it provides a roadmap for exploring new dimensions of financial inclusion. These insights can contribute to the development of more inclusive financial systems while addressing potential challenges and setbacks along the way.

**Keywords:** Financial Inclusion, Islamic Financial Institutions, Financial Inclusion Framework, Bibliometric, Systematic Analysis.

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## 1 INTRODUCTION

Financial inclusion in Malaysia has advanced considerably, particularly with the involvement of Islamic financial institutions and the policies introduced by Bank Negara Malaysia (BNM). It refers to all segments of society, especially those underserved and unserved, have access to appropriate, affordable, and high-quality financial services. The World Bank identifies financial inclusion as a vital enabler for seven of the 17 Sustainable Development Goals (SDGs), highlighting its essential role in alleviating extreme poverty and fostering shared prosperity. By providing equitable access to financial services, Malaysia contributes to reducing poverty (SDG 1), promoting economic growth (SDG 8), reducing inequalities (SDG 10), and encouraging innovation in financial infrastructure (SDG 9). This alignment with the SDGs underscores the broader impact of financial inclusion in promoting sustainable development, raising living standards, and creating a more inclusive economy that benefits all citizens, regardless of their socioeconomic background. Bank Negara Malaysia (BNM) introduced a comprehensive Financial Inclusion Framework in 2023 - 2026, to improve access to financial services nationwide. Financial inclusion has become a crucial driver of economic growth, acting as a foundational pillar by ensuring that individuals, regardless of their socioeconomic status, have access to essential financial services. By advocating for universal access, financial inclusion encourages economic participation, reduces income inequality, and empowers individuals and businesses to contribute to broader economic development, thereby reinforcing the overall financial ecosystem (Fonseca & Matray, 2024).

In the past, scholars have shown a keen interest in studying financial inclusion through various empirical studies that incorporate multi-disciplinary perspectives. These studies have utilised diverse theoretical frameworks and methodological approaches to explore the complex and varied aspects of financial inclusion. For example, researchers have examined the effects of financial innovation, poverty levels, and regulatory environments on financial inclusion, as well as the distinct roles played by Islamic finance and

ICT development. As the field of financial inclusion has progressed, it has continually attracted the attention of researchers. Their focus has expanded beyond simply understanding and measuring the implementation of financial inclusion initiatives to investigating the complex factors that affect their effectiveness. Recent studies have explored deeper into how financial inclusion is influenced by various elements such as financial innovation, poverty levels, and regulatory frameworks, as well as how these factors interact in different contexts:

1. General Trends: Recent studies have consistently revealed that financial inclusion tends to have a positive effect on economic growth. However, the magnitude of this impact is shaped by several factors, including income levels, the stability of the financial sector, and the quality of digital infrastructure. For example, research by Demirgüç-Kunt and Klapper (2012) and Ozturk and Ullah (2022) highlights that while financial inclusion promotes economic development, its effectiveness depends on the economic and infrastructural conditions of a region. This nuanced perspective demonstrates that financial inclusion is not a universal solution but must be tailored to the unique needs and circumstances of different economies.

2. Islamic Finance: Islamic financial institutions offer a unique perspective in discussions on financial inclusion. Unlike conventional banks, they operate based on principles of equity and ethical finance, emphasising shared risk and reward rather than interest-based transactions (Hassan, 2020; Lujja et al., 2016; Salman et al., 2017; Binti Ismail & Hassan, 2020; Wisham et al., 2011; Salman & Hassan, 2020; Salman, 2014; Htay & Salman, 2013; Htay et al., 2013). Studies by Hasan and Dridi (2010) reveal that these institutions have demonstrated resilience during economic downturns, sustaining profitability and stability. Furthermore, Islamic financial institutions enhance financial inclusion by adhering to Sharia principles, which emphasise ethical and socially responsible financial practices (Aziz & Naima, 2021). This distinctive approach not only sets Islamic finance apart from conventional methods but also highlights its potential to provide inclusive financial services that align with ethical standards.

3. ICT and Financial Inclusion: The relationship between information and communication technology (ICT) and financial inclusion is another critical area of research. ICT development is increasingly recognised as a key factor in advancing financial inclusion by enabling broader access to financial services via digital platforms. However, the effect of ICT on financial inclusion varies across different regions. Chatterjee (2020) and Satria and Anita (2021) illustrate that while improved digital infrastructure can significantly boost financial inclusion, its benefits are less evident in some developing countries where information and communication technology (ICT) is less advanced. This disparity underscores the need for targeted investments in digital infrastructure and education to fully leverage the potential of ICT for financial inclusion.

4. Regional Insights: Regional studies have offered valuable insights into the specific challenges and opportunities associated with financial inclusion. For instance, research on African countries and those involved in the Belt and Road Initiative (OBRI) uncovers a complex relationship between financial inclusion and economic growth. While financial inclusion is linked to positive economic outcomes, it also poses challenges, such as increased CO<sub>2</sub> emissions from digital financial activities (Ozturk & Ullah, 2022; Van et al., 2021). These findings highlight the dual nature of financial inclusion: it can drive economic development but also requires careful management of its environmental impacts.

By examining these various perspectives, scholars have aimed to address the nuanced implications of financial inclusion on economic growth, stability, and social justice, providing a thorough understanding of its benefits and challenges across different economies and financial systems. While the literature extensively covers topics such as financial innovation, poverty levels, and regulatory frameworks, the relationship between Islamic financial institutions and the financial inclusion framework remains underexplored, with a notable gap in critical reviews in this area. The study aims to analyse the current research landscape in financial inclusion and identify unexplored dimensions and perspectives to guide future investigations. The findings will assist behavioural scientists, researchers, decision makers, and academic institutions in identifying research hotspots and emerging trends in financial inclusion, Islamic financial institutions and the financial inclusion framework, thereby informing their future research efforts. Specifically, the study will address the following research questions:

RQ1: What trends in publication volume and national involvement can be identified in Financial Inclusion, Islamic Financial Institutions and Financial Inclusion Framework research from 2010–2024?

RQ2: What are the most prominent research disciplines and systematic clusters within the field of Financial Inclusion, Islamic Financial Institutions and Financial Inclusion Framework?

RQ3: What are the potential areas and future directions of Financial Inclusion, Islamic Financial Institutions and Financial Inclusion Framework research?

This research is structured into four distinct sections, each presenting information and analysis in a logical sequence. The first section introduces the topic, followed by a clearly explained review of literature. The methodology is detailed in the second section. The third section presents the results and findings and the last section provides the conclusion, managerial implications, and limitations of the study.

## 2 RESEARCH METHODOLOGY

In this study, several methodological considerations were addressed, with appropriate justifications provided. As the field of Financial Inclusion has evolved into a mature discipline, the extensive body of literature posed a challenge in selecting a suitable sample for analysis. The focus was on research articles containing the keywords "Financial Inclusion," "Islamic Financial Institutions," and "Financial Inclusion Framework" in their titles. To streamline the analysis, conference proceedings, editorial documents, and chapters from edited books were excluded. To include high-impact research, the Google Scholar database was used to compile a bibliometric dataset covering the period from 2010 to July 2024. After applying the necessary exclusion criteria, 126 articles were selected for further analysis. These articles were retrieved using the Publish or Perish (PoP) software from the Google Scholar database and were exclusively written in English, with non-English publications excluded from the study. Articles with a minimum of four citations were included in the final bibliometric analysis, resulting in a total of 199 articles. A subsequent manual review led to the exclusion of 73 articles due to incomplete information. Following this rigorous screening process, 126 articles were finalised for the bibliometric analysis. The detailed steps of this process are illustrated in Figure 1. The final set of articles analysed spanned from 2010 to 2024. A co-word analysis was conducted using the abstracts, author-provided keywords, and additional keywords through the VOSviewer software (Visualising Scientific Landscapes, 2018). This software identifies the interconnections between keywords, revealing key research areas in the selected articles based on the principles of keyword conjunction and concurrence of keywords (Lozano, at. el., 2019). The co-word analysis was carried out in a stepwise process. First, bibliographic data were downloaded as a comma-separated values (CSV) file from the Google Scholar database, and used as input for the VOSviewer software. The final analysis identified five clusters, which were subsequently categorised into four broad themes, as shown in Table 4. The most frequently occurring keywords formed clusters that were then identified as research themes. A network map illustrating the interconnections between these keywords was generated, followed by a density map, as shown in Fig. 3, 4 and 5.

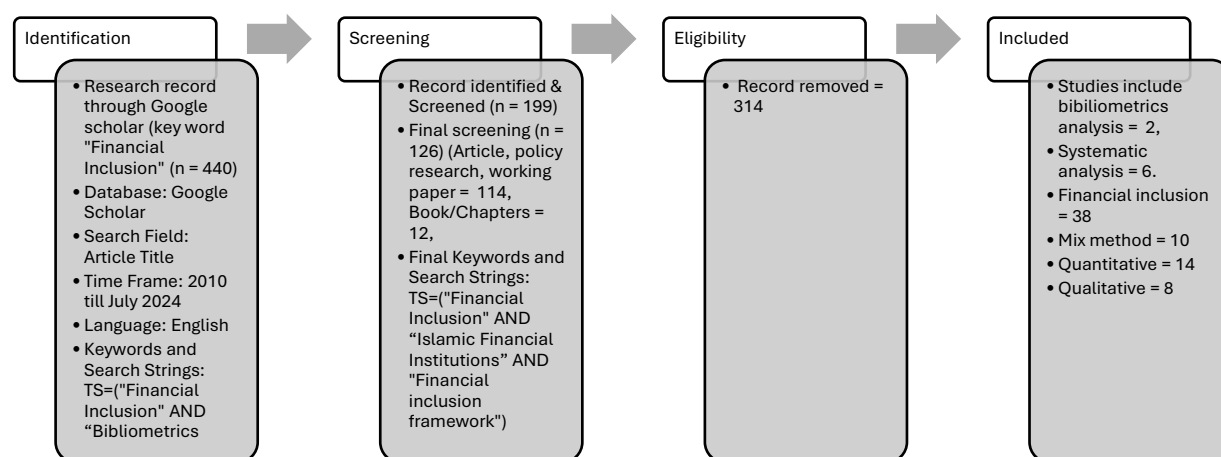


Fig. 1. PRISMA flowchart illustrating the literature search process

**Table 3:** Summary of methodologies used in studies by various authors

| Author's Name                     | Year | Qualitative               | Quantitative |
|-----------------------------------|------|---------------------------|--------------|
| I Ozturk, S Ullah                 | 2022 | ✓ (Bibliometric Analysis) | ✓            |
| DW Arner, RP Buckley, DA Zetzsche | 2020 | ✓ (Bibliometric Analysis) |              |

|                               |        |                         |   |
|-------------------------------|--------|-------------------------|---|
| A Demirgüç-Kunt, L Klapper    | 2012   | ✓ (Systematic Analysis) | ✓ Global Index Database Analysis                              |
| A Demirgüç-Kunt, L Klapper    | 2013   | ✓ (Systematic Analysis) | ✓   |
| PK Ozili                      | 2021   | ✓ (Systematic Analysis) | ✓   |
| R Mushtaq, C Bruneau          | 2019   | ✓ (Systematic Analysis) |   |
| S Ghosh, D Vinod              | 2017   | ✓ (Systematic Analysis) | ✓   |
| V Matsebula, D Yu             | 2020   | ✓ (Systematic Analysis) | ✓ Non-linear U-Shaped Relationship Analysis                   |
| Sakai                         | 2014   |                         |   |
| Van, Vo, Nguyen, & Vo         | 2021   |                         | ✓   |
| Ahmad, Majeed, Khan, & Sohaib | 2021   |                         | ✓ Empirical Analysis of Financial Inclusion and Human Capital |
| Hasan & Dridi                 | 2010   |                         | ✓   |
| Kim, Yu, & Hassan             | 2018   |                         | ✓ Panel VAR Analysis  |
| Arner, Buckley, & Zetzsche    | 2020   |                         | ✓   |
| Chauvet & Jacolin             | (2017) |                         | ✓   |
| Naceur, Barajas, & Massara    | 2017   |                         | ✓ Regression Analysis   |
| Y Liu, Luan, Wu, Zhang, & Hsu | 2021   |                         | ✓   |
| AD Satria, A Anita            | 2021   |                         | ✓ Digital Innovation Impact Analysis                          |

### 3 FINDING AND RESULT

Between 2010 and 2024, 126 relevant journal articles, extracted from Google Scholar, examined various aspects of financial inclusion in relation to Islamic Finance institutions. The bibliometric analysis of these articles provides a deeper insight into the domain, clarifying its logical structure and improving the understanding of related research areas. This section offers a detailed discussion of the key themes that emerged from the bibliometric analysis. It covers several critical aspects, including data trends, research growth, publication performance, the most productive authors, keyword analysis, and cluster analysis. Additionally, it examines the most cited publications, the highest frequency keywords, and overall keyword occurrences.

#### 3.1 Publication performance

The earliest publication in the Google Scholar database that aligns with the keywords "financial inclusion," "Islamic Financial Institutions," "Islamic Financial Framework," and "bibliometrics" is titled "Sharia' Supervision of Islamic Financial Institutions" by S. Nathan Garas and C. Pierce, dating back to 2010. Table 1 provides a summary of the literature search results. From 2010 to July 2024, a total of 126 publications were identified in Google Scholar. These publications collectively amassed 33,065 references, with an average of 262.37 citations per document and an impressive average of 2,361.79 citations per year per document. This citation rate surpasses that of similar emerging concepts within the social sciences and management disciplines. The field saw contributions from 61 authors, with 126 publications by individual authors and the remainder co-authored. The collection includes journal articles, conference proceedings, 114 review papers, and 12 book chapters. Results from the Publish or Perish analysis (see Table 1) highlight the number of papers exceeding specific Academic Citation Count (ACC) thresholds: "ACC above 1, 2, 5, 10, 20: 125, 125, 122, 116, 84," indicating how many papers have surpassed these thresholds. The consistent figure of 125 papers for the initial thresholds (ACC > 1 and ACC > 2) indicates broad research activity in this domain, with a significant number of papers receiving at least one or two citations. However, as the citation threshold increases, the number of papers decreases slightly (from 125 to 84), reflecting a typical trend in academic publishing. While many papers contribute to the field, only a select few attain substantial impact and recognition within the academic community.

The drop from 116 papers with at least 10 citations to 84 papers with 20 citations highlights the increasing challenge of achieving higher citation counts, underscoring the competitive nature of academic publishing and citation impact. An h-index of 111 indicates that 111 papers from this research have each been cited at least 111 times, reflecting substantial influence and productivity in the field. A g-index of 126 further underscores the substantial number of highly cited works, emphasising both the quantity and quality of the research output. The hl, norm value of 74 suggests that the researcher's h-index is relatively high compared to their peers, indicating strong performance in terms of citations relative to the average in their discipline. The hl, annual value of 5.29 signifies that, on average, each paper has received approximately 5.29 citations per year. Lastly, an h A-index of 41 indicates that the researchers have 41 papers cited at least 41 times per year on average, highlighting the consistent impact and ongoing relevance of their work within the academic community.

**Table 1.** Table captions should be placed above the tables.

| Metric Data       | Refine Research | Initial research |
|-------------------|-----------------|------------------|
| Publication years | 2010 - 2024     | 2010 -2024       |
| citation years    | 14              | 14               |
| papers            | 126             | 199              |
| citations         | 33065           | 48375            |
| cites/ year       | 2361.79         | 3455.36          |
| cites/ paper      | 262.37          | 243.09           |
| cites/authors     | 61.2            | 22784.94         |
| Authors/paper     | 2.61            | 94.33            |
| h-index           | 111             | 151              |
| g-index           | 126             | 199              |
| hl,norm           | 74              | 87               |
| hl,annual         | 5.29            | 6.21             |
| hA-index          | 41              | 48               |

Paper with ACC above 1,2,5,10,20: 125,125,122,116,84.

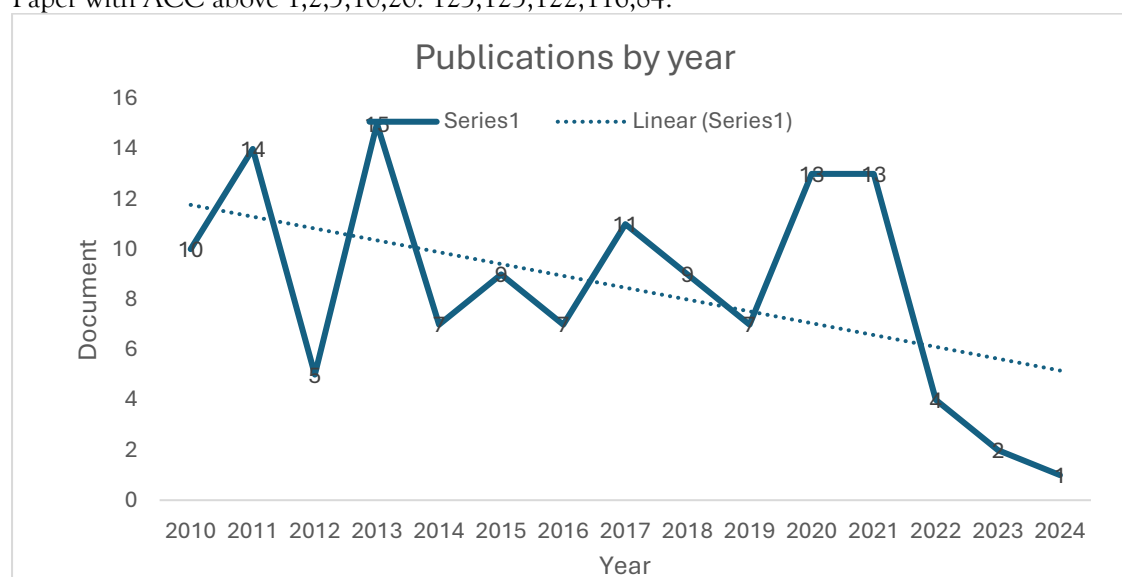


Figure 2. Publication yearly (2010 – 2024).

### 3.2Publications by year

Although the first publications on Financial Inclusion, Islamic Financial Institutions, and Financial Inclusion Framework appeared in 2010 with ten articles, significant interest in the topic began to grow more prominently in 2011, with 14 out of the 126 documents published that year. There was a notable increase in publications from seven articles in 2019 to thirteen in 2020 reflecting rising academic attention to the subject. However, interest plateaued in 2021 and declined to just one article in 2024. From 2010 to 2024, the average citation count was 2,361.79 per year. By 2022, the mean number of citations per article had decreased to 97.875. This decline in average citations in recent years can be attributed to the typical citation lag, where older articles tend to accumulate more citations than newer

ones. Despite this decline, the potential for short-term impact should not be underestimated. Future research on Financial Inclusion, Islamic Financial Institutions, and the Financial Inclusion Framework should prioritise the introduction of innovative and creative ideas that have the potential to significantly advance both theoretical and practical aspects of the field. Overall, it is clear that the topic has garnered substantial attention from academics and publishers, particularly over the past decade, as evidenced by the increasing number of annual publications.

### 3.3 Most Productive Authors

In this study, key sources of financial backing for research on Financial Inclusion, Islamic Financial Institutions, and Financial Inclusion Frameworks (FI, IFI, & FIM) spanning from 2010 to 2024 were identified. The evaluation of researchers' micro-level competitiveness in global scientific research reveals significant contributions by A. Demirgüç-Kunt, with four papers, and H. Askari and O. Evans, each contributing three papers.

**Table 2.** Prominent Authors in the field of financial inclusion, Islamic Financial Institutions and Financial Inclusion Framework.

| Author's Name   | NoD | TC    | CpD     |
|-----------------|-----|-------|---------|
| A Demirgüç-Kunt | 4   | 3343  | 835.75  |
| B Setiawan      | 2   | 215   | 107.5   |
| H Askari        | 3   | 576   | 192     |
| O Evans         | 3   | 530   | 176.67  |
| R Grassa        | 2   | 405   | 202.5   |
| MM Hasan        | 2   | 1068  | 534     |
| BA Fianto       | 2   | 373   | 186.5   |
| H Ahmed         | 2   | 444   | 222     |
| MK Hassan       | 2   | 554   | 277     |
| N Alam          | 2   | 309   | 154.5   |
| total           | 24  | 7817  | 2888.42 |
| Average         | 2.4 | 781.7 | 288.84  |

Sources: Compiled and computed from the Google Scholar database for the period 2010 to 9th August 2024 (NoD - Number of documents, TC- Total citations, CPD = Citations per document)

**Table 3:** Top highest citation articles

| Author's Name                | citation | Topic   | Year of publication |
|------------------------------|----------|---|---------------------|
| A Demirgüç-Kunt, LF Klapper  | 1975     | Measuring Financial Inclusion: The Global Findex Database   | 2012                |
| Z Iqbal, A Mirakhor          | 1750     | An Introduction to Islamic Finance: Theory and Practice   | 2011                |
| A Demirgüç-Kunt, L Klapper   | 979      | Measuring Financial Inclusion: Explaining Variation in use of Financial Services Across an Within Countries | 2013                |
| MM Hasan, J Dridi            | 911      | The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study                     | 2010                |
| DW Kim, JS Yu, MK Hassan     | 723      | Financial Inclusion and Economic Growth in OIC Countries  | 2018                |
| C Mallin, H Farag, K Ow-Yong | 623      | Corporate Social Responsibility and Financial Performance in Islamic Banks                                  | 2014                |
| MA Omar, K Inaba             | 597      | Does Financial Inclusion Reduce Poverty and Income Inequality in Developing                                 | 2020                |

|  |     |  |      |
|--|-----|--|------|
|  |     | Countries? A Panel Data Analysis                                     |      |
| M Abduh, M Azmi Omar                   | 572 | Islamic Banking and Economic Growth: The Indonesian Experience       | 2012 |
| DW Arner, RP Buckley, DA Zetzsche, ... | 491 | Sustainability, FinTech and Financial Inclusion                      | 2020 |
| PK Ozili                               | 477 | Financial Inclusion Research Around the World: A Review              | 2021 |
| J Ledgerwood, J Earne, C Nelson        | 450 | The New Microfinance Handbook: A Financial Market System Perspective | 2013 |

Table 3 illustrates a significant level of collaboration among academics, including Demirgüç-Kunt, L.F. Klapper, Z. Iqbal, and A. Mirakhor, with notable citation impacts of 2,954 and 1,750 citations, respectively. Table 3 also presents authors and their top-cited articles globally, based on metrics such as Number of Documents (NoD), Total Citations (TC), and Citations per Document (CPD). The top three contributors are:

1. **A. Demirgüç-Kunt and LF Klapper (2012)**: This study highlights key barriers and advancements in account ownership, offering a foundational assessment of financial inclusion frameworks through the Findex Database.
2. **Z. Iqbal and A. Mirakhor**: Their research investigates how Islamic financial institutions contribute to financial inclusion, providing a foundational understanding of Islamic finance principles and practices.
3. **A. Demirgüç-Kunt and L.F. Klapper (2013)**: This study examines factors influencing the usage of financial services, providing insights into frameworks for enhancing financial inclusion across various economic contexts.

All cited authors have adhered to academic conventions by meticulously selecting relevant titles and keywords to delineate the scope and boundaries of their research.

### 3.4 Analysis of Keywords

**Table 4.** Keywords and themes in studies on financial inclusion, Islamic financial institutions, and financial inclusion frameworks

| Cluster no | Keywords   | Major theme         |
|------------|--|---------------------|
| 1          | Challenges, conceptual framework, corporate social responsibility, finance, Islamic financial institutions, Islamic financial services, Malaysia, regulatory framework | Finance             |
| 2          | Conventional framework, financial performance, Islamic, Islamic bank, Islamic banking  | Islamic bank        |
| 3          | Digital financial inclusion, economic growth, financial inclusion, financial stability   | Financial inclusion |
| 4          | Customer, impact, inclusive finance, service   | Service             |
| 5          | Formal financial service, Islamic finance institution, use   |                     |

Table 4 Categorises keywords and themes in financial inclusion studies, offering a structured overview of the research focus areas. The identified themes reflect the multifaceted nature of financial inclusion, including regulatory frameworks, the role of Islamic finance, digital innovations, customer-centric services, and the practical use of financial products.

#### 1. Cluster 1: Finance

Keywords: Challenges, conceptual framework, corporate social responsibility, finance, Islamic financial institutions, Islamic financial services, Malaysia, regulatory framework. This cluster highlights the core aspects of finance, with a particular emphasis on the challenges and frameworks governing Islamic financial institutions. The inclusion of corporate social responsibility underscores the ethical considerations within finance, while the focus on the regulatory framework points to the crucial role of governance in fostering financial inclusion in Malaysia.

## 2. Cluster 2: Islamic Bank

**Keywords:** Conventional framework, financial performance, Islamic, Islamic bank, Islamic banking. This cluster focuses on Islamic banking, drawing comparisons with conventional banking frameworks. It examines the financial performance of Islamic banks, highlighting how these institutions can effectively compete and succeed within the broader financial landscape while maintaining adherence to Islamic principles.

## 3. Cluster 3: Financial Inclusion

**Keywords:** Digital financial inclusion, economic growth, financial inclusion, financial stability. This cluster is crucial as it captures the central theme of financial inclusion. It underscores the role of digital financial services in promoting economic growth and maintaining financial stability. The focus on digital inclusion reflects the growing importance of technology in widening access to financial services.

## 4. Cluster 4: Service

**Keywords:** Customer, impact, inclusive finance, service. This cluster centres on the service dimension of financial inclusion, exploring the impact of financial services on customers. It highlights the significance of customer experience and the need for tailored services that address the diverse needs of various populations, especially those who have historically been excluded from traditional financial systems.

## 5. Cluster 5: Use

**Keywords:** Formal financial service, Islamic finance institution, use. The cluster focuses on the practical application of financial services, with a special emphasis on Islamic finance institutions. It highlights the importance of utilising these services and identifies barriers to access, which are crucial for advancing financial inclusion. The analysis indicates that, despite significant progress in understanding financial inclusion, challenges persist, particularly in integrating digital solutions and ensuring that services are accessible and beneficial to all segments of society. The interaction between these clusters reflects a growing awareness of the necessity for a comprehensive approach to financial inclusion. This approach must incorporate regulatory, technological, and service-oriented perspectives to foster inclusive economic growth.

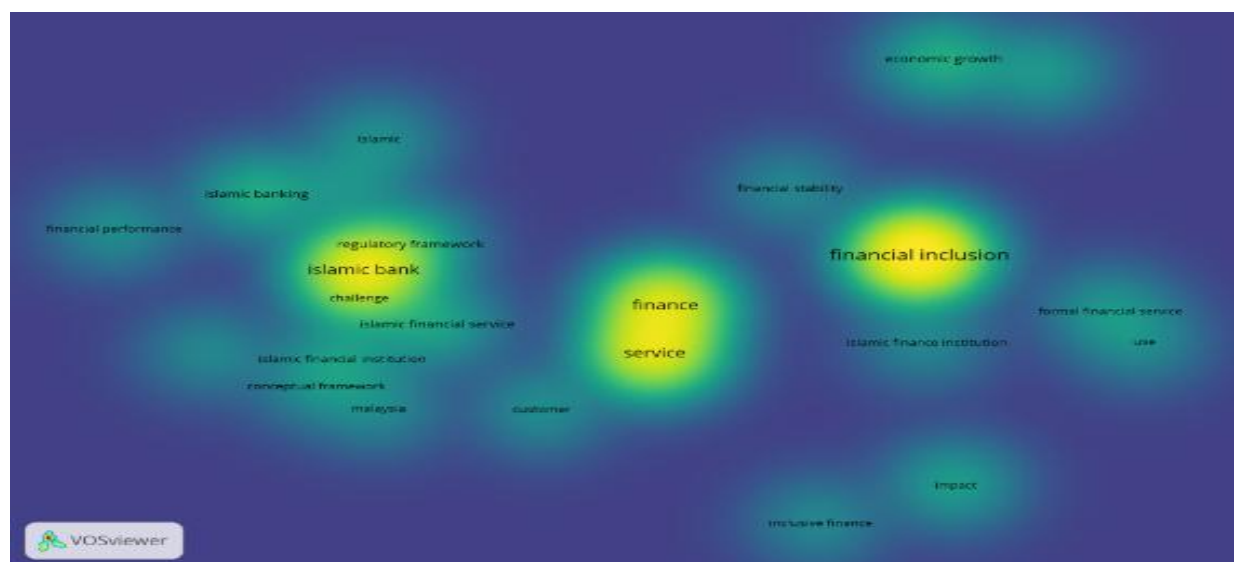


Figure 3. The density visualisation of keywords in financial inclusion literature, created using VOSviewer, displays varying density levels through font size: A larger font indicates a higher density of keywords.

Source: Compiled by researcher using VOSviewer based on data from the Google Scholar database.

In the visualisation, the colours of the clusters represent distinct keyword networks, while the size of the bubbles represents the frequency of these keywords within the articles. The density visualisation in VOSviewer offers an overview of keyword density in the financial inclusion literature. The font size of the keywords corresponds to their density, with larger fonts indicating higher levels of density. In Fig. 3, the clusters are colour-coded to represent distinct keyword networks, and the size of the bubbles is proportional to the frequency of the keywords in the 126 articles. Only keywords that appear at least 10 times across the articles are included, leading to a total of 21 keywords.

The density visualisation highlights the following key points:



1. "Financial inclusion" is represented by a single large bubble, indicating a strong relationship and high density with other keywords. Its prominent appearance in many articles highlights its central role in the research discourse.

2. "Islamic banks," "challenges," and "regulatory framework" are clustered together, indicating a close relationship and frequent mention in the context of financial inclusion research. This indicates that "Islamic banks," "challenges," and "regulatory framework" often appear together, implying that researchers are exploring how regulatory policies impact the operations and challenges faced by Islamic banks. This highlights a key area of inquiry, suggesting that understanding these challenges is crucial for enhancing the effectiveness and reach of Islamic banking services. The presence of "regulatory framework" signifies the role of government and financial authorities in shaping the environment in which Islamic banks operate. This suggests a focus on how regulations can either facilitate or hinder the growth and stability of Islamic banking institutions.

3. The larger size of the bubbles for "financial inclusion," "finance, service," "Islamic banks," "challenges," and "regulatory framework" compared to other keywords, indicate that these terms are more prominent and frequently used in the articles.

The proximity of the bubbles and the connections between them (which are not shown in the provided image) would further reveal the relationships and co-occurrences of the keywords within the financial inclusion literature.

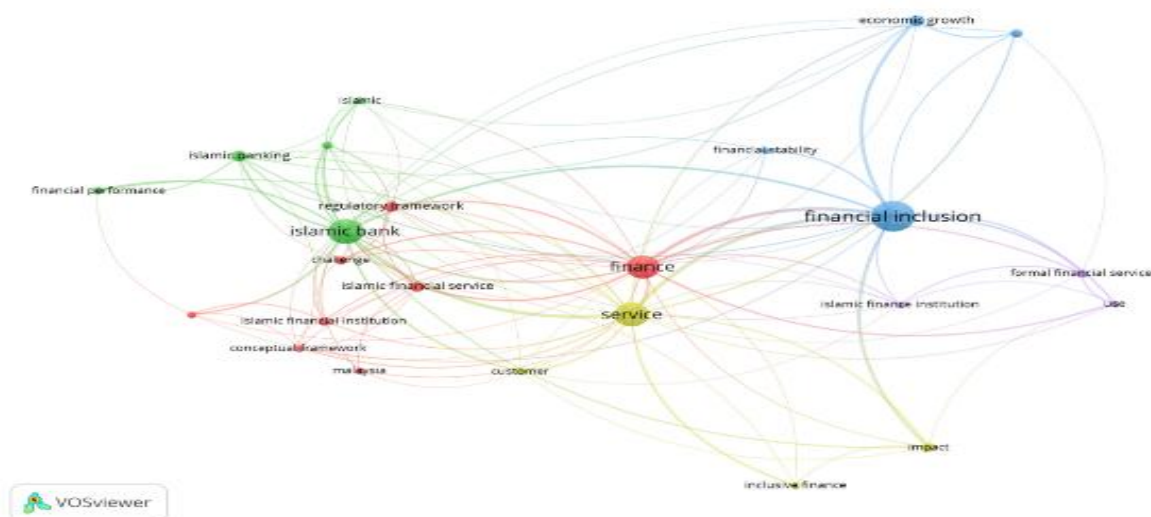


Fig. 4. Network visualisation: Co-occurrence analysis of all keywords.

Source: Compiled by the researcher using VOSviewer based on the Google Scholar database.

Keywords that appear most frequently form clusters, which are identified as research themes. A network map is generated to display the interlinkages between these keywords, followed by a co-occurrence analysis and density map, as illustrated in Fig. 3, 4, and 5. The largest cluster, depicted in green, is labeled "Financial Inclusion" and comprises 15 keywords: digital financial inclusion, economic growth, formal financial services, usage, Islamic financial institutions, impact, conceptual framework, customer, service, finance, regulatory framework, Islamic banks, Islamic banking, Islamic, and financial stability. The red cluster, named "Finance," includes 12 keywords: regulatory framework, challenges, Islamic financial services, Islamic financial institutions, conceptual framework, corporate social responsibility, usage, formal financial services, financial inclusion, customer, and Islamic banking. These clusters represent the intellectual framework of the research domain, defining the body of knowledge in the fields of Financial Inclusion, Islamic Financial Institutions, and Financial Inclusion Frameworks. The VOS viewer analysis employs two bibliometric approaches—bibliographic coupling and co-occurrence analysis—to map the intellectual structure of the field. Each cluster reflects a cohesive subject within the field (Donthu et al., 2021). Employing various bibliometric analytical techniques for scientific mapping enables the triangulation of themes that shape the field, drawn from diverse sources and methodologies.

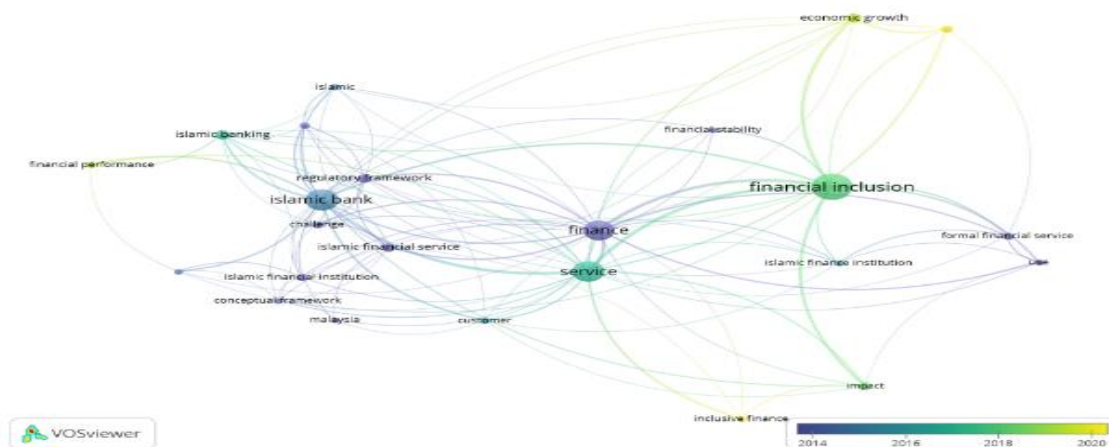


Fig. 5. Evolution of keyword clusters based on co-occurrence.

Source: Compiled by the researcher using VOSviewer, based on data from the Google Scholar database. Finally, Fig. 5 highlights the main research trends based on the evolution of keywords, showcasing the most dynamic areas of current and future research. It is evident that financial inclusion remains a focal point, particularly in relation to finance, Islamic banking, and services. Keywords associated with financial inclusion are crucial for promoting economic growth and ensuring financial stability, especially through the efforts of Islamic financial institutions. This aspect significantly influences inclusive finance. The regulatory framework established by Bank Negara Malaysia (BNM) in its Financial Inclusion Policy 2023-2026 is anticipated to enhance the service offerings and outreach of Malaysian Islamic Financial Institutions (IFIs). This policy underscores the importance of integrating digital technologies to broaden access to financial services, particularly for underserved populations. By promoting innovations such as mobile banking and digital wallets, the policy aims to reduce entry barriers for individuals and small businesses. It also encourages collaborations between IFIs and fintech companies to leverage technological advancements for enhanced service delivery. The initiative aims to create a more inclusive financial ecosystem, contributing to overall economic stability and growth. Within the realm of Islamic Banking Factors, despite the limited range of research topics, there is notable activity focused on financial performance as a key driver of Financial Inclusion. This concept serves as a tool for enhancing access to Islamic banks. However, to date, there appears to be a lack of research papers specifically addressing this sub-field within the broader investigation of financial inclusion.

#### 4 CONCLUSION

This study provides a comprehensive overview and detailed analysis of bibliometric data sourced from Google Scholar databases. This research represents a significant advancement for future studies in the field. Bibliometric analysis was employed to uncover emerging trends in scholarly articles and journals, assess the level of collaboration between institutions and countries, and identify leading journals on the topic. Tools such as Publish or Perish and VOSviewer were utilised for bibliometric and systematic analysis, often associated with the PRISMA method. The Publish or Perish and VOSviewer approach provides several notable advantages for researchers aiming to conduct thorough analyses of academic literature, including:

- **Comprehensive Data Collection:** Aggregates a wide range of bibliometric data for a holistic view.
- **Visualisation Capabilities:** Generates clear visual representations of data, such as co-occurrence and density maps.
- **Analysis of Research Trends:** Tracks evolving trends in research topics and publication patterns.
- **Identification of Key Authors and Publications:** Highlights influential authors and seminal works in the field.
- **Systematic Review Support:** Facilitates systematic reviews by organising and summarising large volumes of data.
- **User-Friendly Interface:** Provides an accessible and intuitive interface for conducting analyses.
- **Empirical Evidence and Case Studies:** Provides empirical data and case studies to support research findings.

The integration of Publish or Perish and VOSviewer provides a robust and efficient approach to bibliometric and systematic analyses, making these tools essential for researchers across various disciplines. Additionally, the analysis remains objective by monitoring citation counts, publication frequencies, and keyword appearances. The analysis has encompassed various dimensions, including data information, research growth, publication performance, most productive authors, keyword analysis, and clustering by citation frequency and keyword occurrence. The findings from this bibliometric analysis highlight substantial research efforts in the field of financial inclusion, particularly focusing on Islamic financial institutions. From the inception of this research area, several key focus areas have emerged:

- a. Understanding how financial inclusion impacts the financial performance of Islamic banks, particularly in the context of challenges faced by these institutions.
- b. The interplay between financial inclusion and the offerings of Islamic financial services remains underexplored. Research could focus on how various Islamic financial products (such as microfinance, sukuk, and takaful) can be tailored to improve financial inclusion among underserved populations
- c. Analyse the regulatory environment, consumer behaviour, and the role of technology in enhancing access to Islamic banking services. Comparative studies between urban and rural areas in Malaysia could also provide insights into regional disparities in financial inclusion.
- d. Conduct comprehensive studies that evaluate the financial performance of Islamic banks in relation to their financial inclusion efforts. Research could explore how different financial performance indicators (such as return on equity, profitability, and cost-to-income ratios) are affected by the banks' strategies to enhance financial inclusion. This could include case studies of successful Islamic banks that have effectively integrated financial inclusion into their business models.

This study represents a significant advancement in the field of financial inclusion, particularly concerning Islamic financial institutions and frameworks. Amid ongoing global uncertainties, academic research carries a heightened responsibility to provide insightful analyses and guidelines that advance scientific understanding and inform strategic adjustments. The field of financial inclusion, encompassing Islamic financial institutions and financial inclusion frameworks, is evolving from initial explorations to more comprehensive analyses across various dimensions. This transition reflects the field's maturation, highlighting the need for reflective studies to identify critical areas for future research. This study has made a significant contribution to the discourse by providing a detailed bibliometric analysis that charts existing knowledge, identifies research gaps, and suggests future research directions. However, the study has certain limitations. It relies exclusively on articles from the Google Scholar database for the period from 2010 to 2024, potentially exclude relevant literature not captured by this database. Additionally, reports, governmental studies, and other scholarly works that explore these topics in depth may not be represented in this analysis. Future research could enhance the knowledge base by incorporating these additional sources and aligning findings with broader scholarly work. The implications of these findings are substantial for policymakers and practitioners, highlighting the need for informed policy development, effective framework implementation, and technological innovation to advance financial inclusion. Furthermore, expanding the bibliometric approach to include author comparisons, country-specific statistics, and co-citation or regional analyses could offer a more nuanced and comprehensive understanding of the literature. Such approaches would deepen the intellectual foundation of the field and enhance the structure of published research, contributing to more effective and inclusive financial systems.

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