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**Shaik Azhar Iqbal**
Research Scholar, School of Commerce, Gangadhar Meher University, Sambalpur, Odisha, India

**Dr. Priyabrata Panda**
Head and Assistant Professor, School of Commerce, Gangadhar Meher University, Sambalpur, Odisha, India

# A decade of research on fintech and financial literacy: A global bibliometric analysis of trends, themes, and collaboration (2014-2024)

## Shaik Azhar Iqbal and Priyabrata Panda

**Abstract**
This article presents a comprehensive bibliometric analysis of global research in the fields of fintech, digital financial inclusion, and financial literacy over the past decade from 2014-2024. Using 738 peer-reviewed journal articles sourced from Dimensions.ai database, analysed using Biblioshiny, a web-based interface of the bibliometrix R package. The analysis reveals the aspects related to scholarly output, citation patterns, international collaboration etc. The study also reveals that there was an increase in publications after 2020, The journal Sustainability emerged as the most impactful sources, while China led as the highest and most impactful volume of work. The keyword co-occurrences indicate a convergence around financial literacy, fintech, digital inclusion, and behavioural finance to increase within the discipline. The data shows that research towards interdisciplinary approaches and global partnerships to tackle financial inclusion and innovation issues are on the rise. This study contributes to the understanding of research dynamics and evolving priorities in the financial inclusion landscape, offering direction for future scholarly inquiry and global policy engagement.

**Keyword:** Fintech, digital financial inclusion, financial literacy

## Introduction

In recent years, the intersection of financial technology (fintech), digital financial literacy, and inclusion have gained significant attention in academic and policy discourse. The rapid digitalization of financial services (due to the impact of COVID-19) has radically altered traditional banking and economic practices, while also emphasizing the need for financial education and inclusion in terms of accessing digital tools (Demir, 2020; Liu, 2021) [3, 8]. As aspects of fintech disrupt the conventional financial ecosystem as we know it, it is important to analyse the progression and advancement of academic research in this domain so that we may pinpoint areas of knowledge gaps, policy priorities, and innovation points of interest.

Despite the growing body of literature, there has been very little systematic analysis of how research trends have shifted over time within countries, disciplines, and institutions. This study aims to fill this gap through a bibliometric analysis, with the aim of advancing the understanding of the intellectual structure, key players, and collaborative patterns of area of inquiry in global fintech and financial literacy research. This study uses data from leading scientific databases, which ultimately attempt to demonstrate the thematic evolution, journal impact, author profile, and cross-national collaboration patterns of research in these areas, and increasingly show readers what rise in maturity and direction this field may exert. To investigate the scholarly landscape of digital financial inclusion and financial literacy. The present study uses bibliometric analysis, which is a quantitative method for examining patterns and trends in academic literature, (Donthu *et al*., 2021) [5]. The purpose of this study is to identify the most significant topic developments, research clusters, research papers, and collaboration networks in the field throughout the previous ten years.

## Methodology

This research uses a bibliometric technique to investigate the academic published research on fintech, financial literacy, and financial inclusion in a systematic way. Bibliometric analysis is a traditional quantitative technique, which can be used to evaluate trends in

**Correspondence Author:**
**Shaik Azhar Iqbal**
Research Scholar, School of Commerce, Gangadhar Meher University, Sambalpur, Odisha, India

research, authorship, impact of sources, citation structures related to published academic literature (Aria & Cuccurullo, 2017) [1]. Data was extracted from Dimension ai to cover publications between 2010-2024. The keyword search was for "financial literacy," "fintech," "financial inclusion," and "digital finance," along with synonyms. The bibliometric analysis used the Bibliometrix R-package (Aria & Cuccurullo, 2017) [1] for the bibliometric data, and a web interface, Biblioshiny for visualizations of author patterns of production and collaboration, thematic maps, and pattern of citations. The key Parameters Analysed for bibliometric analysis include, Annual Scientific Production, Most

Relevant Sources, Most Prolific Authors, Country Collaboration Map, Keyword Analysis and Word Cloud, Most Cited Countries and Documents etc. The bibliometric dataset was collected from Dimensions.ai. The search strategy includes the articles with the following Boolean query applied to the title and abstract fields:

("digital financial inclusion" OR "fintech" OR "mobile banking") AND ("financial literacy" OR "financial behavior" OR "financial knowledge" OR "financial attitude").

**Result and Discussion**
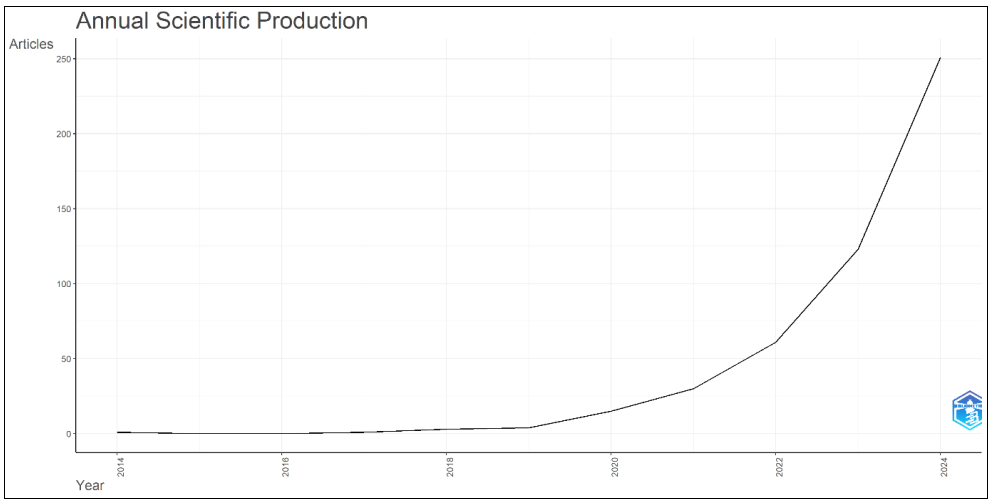


**Source:** Compiled by authors from Biblioshiny

**Fig 1:** Annual Scientific Production

Figure 1 represent the bibliometric analysis of annual scientific production of digital financial inclusion and financial literacy literature in last ten years. From the table it can be interpreted that there is consistent increase in the literature of digital financial inclusion and financial literacy

and particularly after 2020. This indicates a growing academic interest and research activity in the studied domain, reflecting its emerging relevance and scholarly importance.
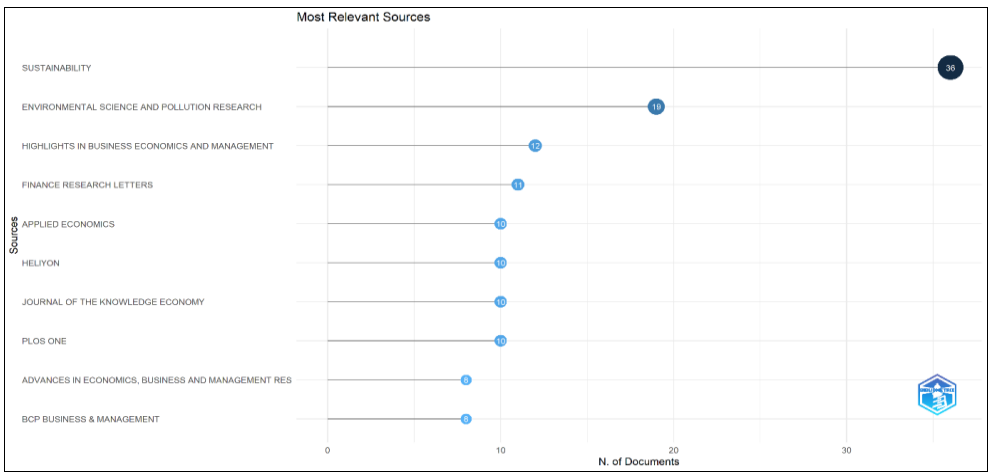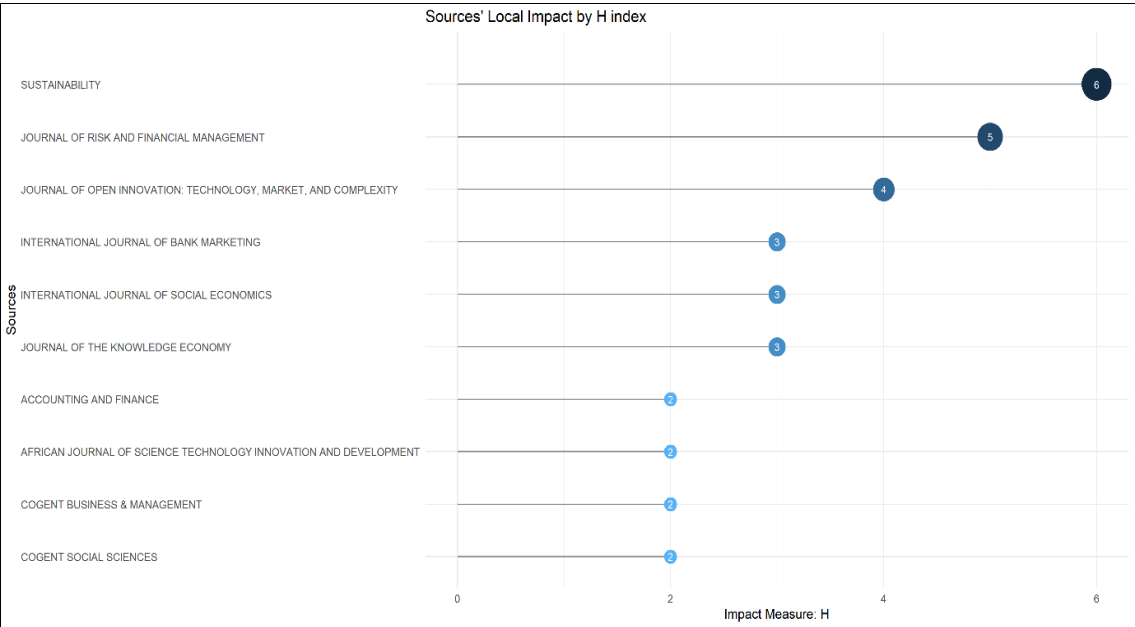


**Source:** Compiled by authors from Biblioshiny

**Fig 2:** Most Relevant Sources

The figure 2 displays the most relevant journal in the research area based on the number of published documents. Sustainability journal has leading journal with 36 publications, followed by Environmental Science and Pollution Research with 19. Other important sources include

Highlights in Business Economics and Management, Finance Research Letters, and Applied Economics. This result reflects an interdisciplinary focus, combining environmental, economic, and managerial themes in the academic literature.

**Fig 3:** Sources Local Impact

Figure 3 depict the journal local impact of based on the H-index parameter. The journal "Sustainability" leads with the highest H-index of 6, indicating strong local influence and citation followed by the "Journal of Risk and Financial Management" with H Index of 5 and the "Journal of Open Innovation: Technology, Market, and Complexity" with H index of 4.
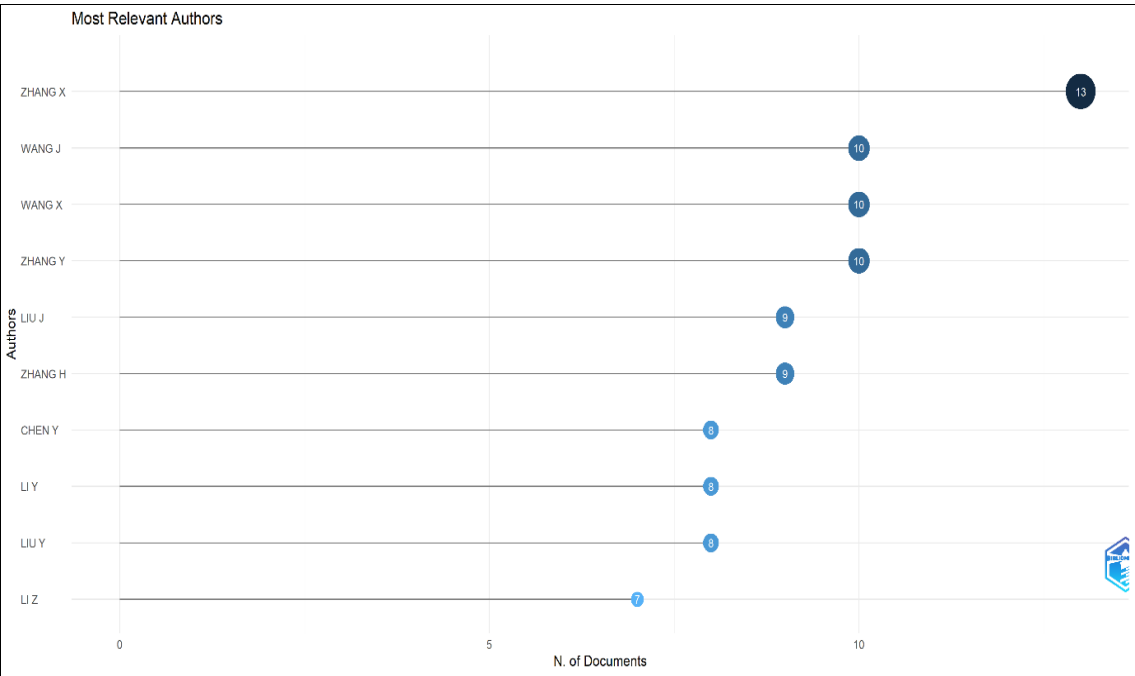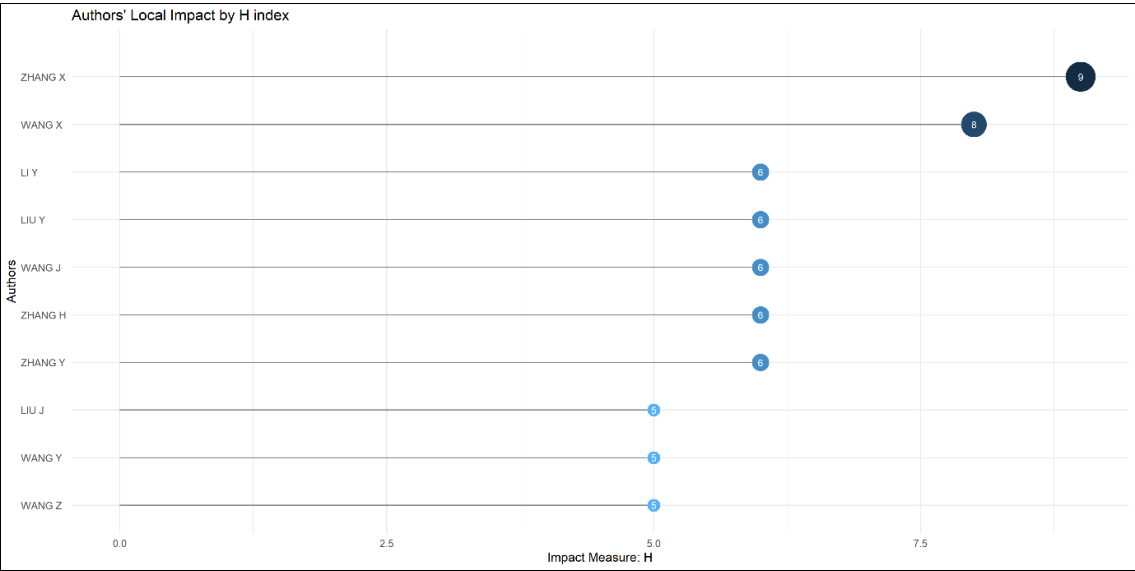
**Fig 4:** Most Relevant Authors

The figure 4 represents the most relevant authors based on the number of published documents. With 13 publications, Zhang X leads, followed by Wang J, Wang X, and Zhang Y, each of whom produced ten documents. Liu J and Zhang H, with nine papers each, are two more notable authors who demonstrate a great interest in the subject of research.

**Fig 5:** Authors Local Impact

The figure 5 represents each author's local influence based on their H-index scores. The highest H-index is Zhang X with a value of 9, and the second highest is Wang X with 8. The excellent H-indexes for both indicated some citation impact and regular contribution of authorship to the scholarly literature across the field. Other authors including Li Y, Liu Y, and Wang J have H-indexes of 6, suggesting an increase in regional impact. This trend indicates a cohort of scholars with high regional impact who are contributing to the literature.
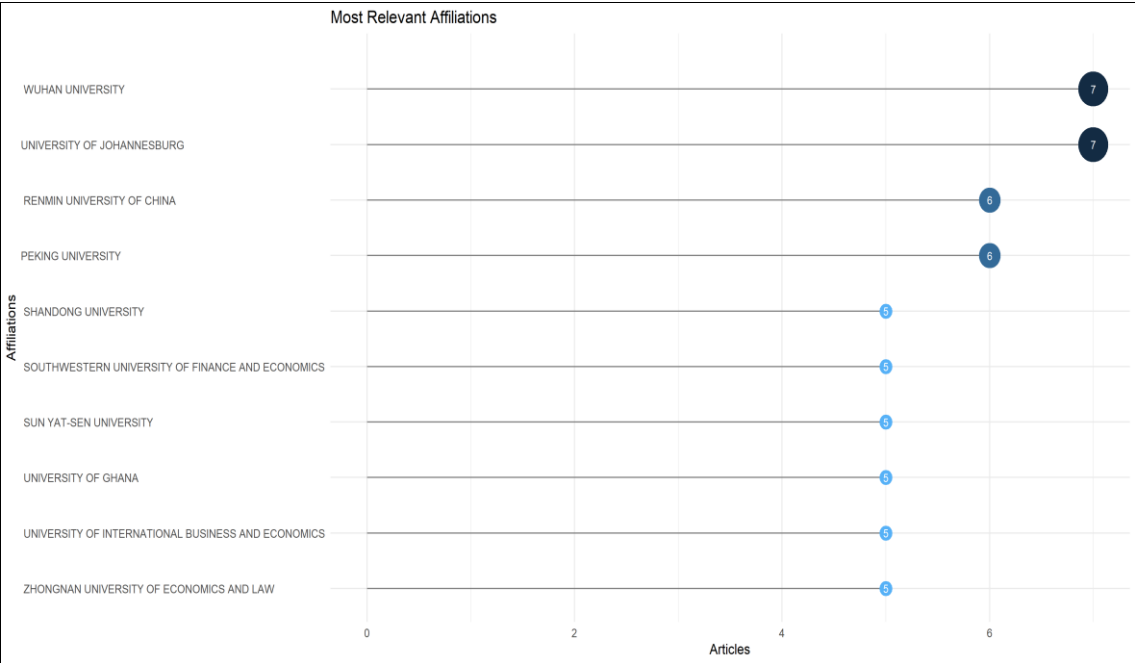
**Fig 6:** Most Relevant Affiliations

Figure 6 displays the most relevant affiliations in terms of the number of published articles. The first two affiliations of Wuhan University and the University of Johannesburg both had 7 articles each, with Renmin University of China and Peking University coming closely behind with 6 articles each. Other affiliations and institutions also contributed to the research, including Shandong University and the University of Ghana. This indicates a high degree of research engagement from Chinese and international institutions and a high level of collaboration within the field worldwide. The largest published articles at certain universities likely indicates the creation of specialized research hubs.
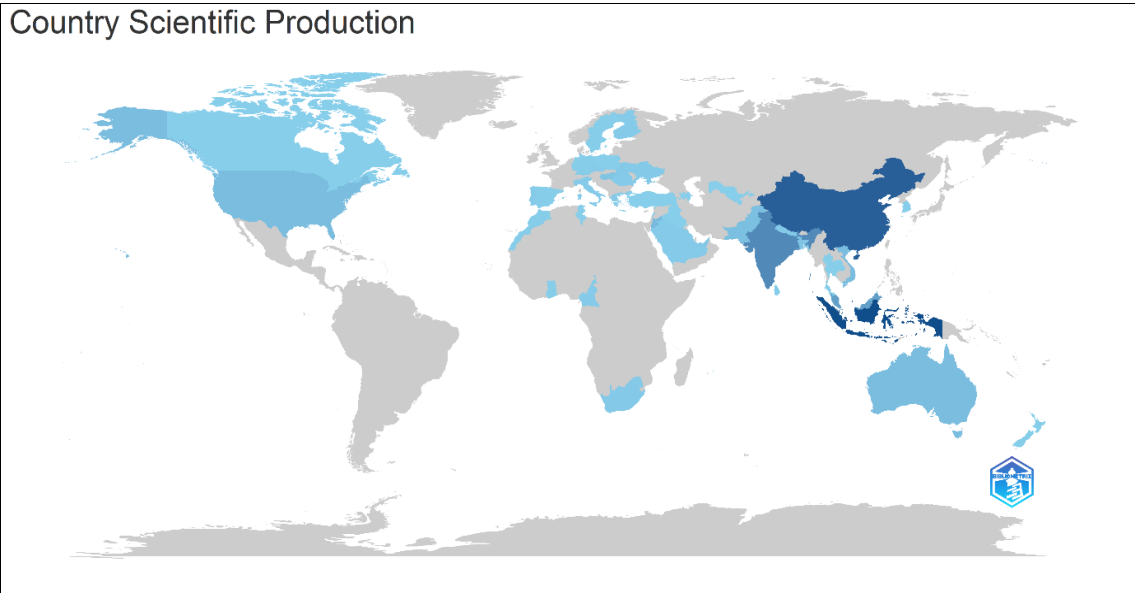
**Fig 7:** Country Scientific Production

The world map displays the scientific output worldwide(figure 7), with countries in different shading based on output. China has the greatest output, followed by India, Indonesia, and the United States, represented in the darkest shading. Moderate output has come from countries in Europe, Southeast Asia, and Africa. It is clear there is a strong presence of research coming from Asia, indicating the region's re-emerging role in global scientific discourse and publication. The geographical spread also reflects increased international collaboration in the field.
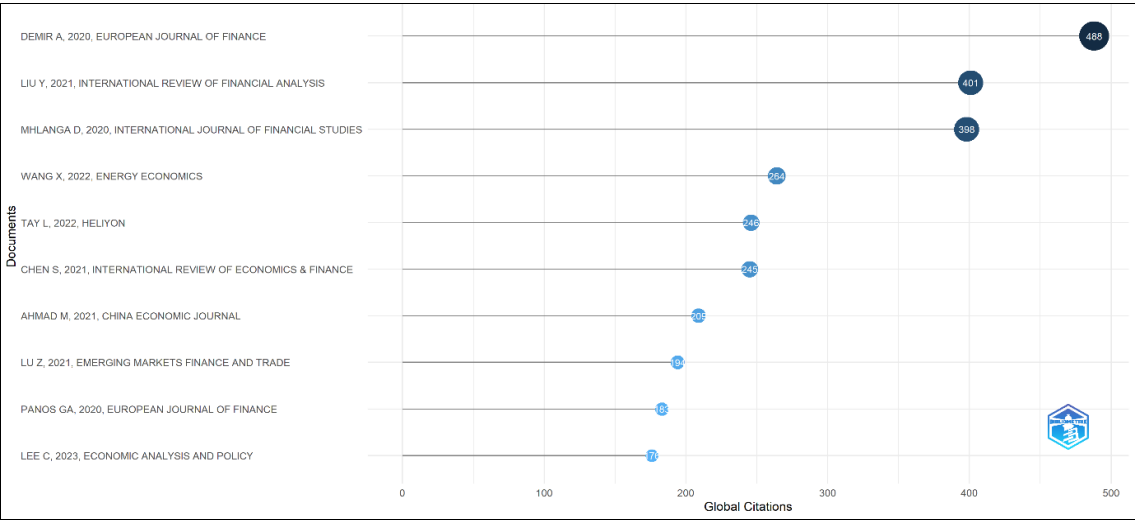
**Fig 8:** Most Global Cited Documents

Figure 8 shows the 10 most globally cited documents in our bibliometric dataset in terms of total global citations. The most cited document is by Demir A. (2020) [3] in the European Journal of Finance, with 488 citations. Liu Y. (2021) [8] and Mhlanga D. (2020) followed next, each with over 390 citations. The documents show a variety of economic and finance journals which suggests high-impact publications in various outlets. Beyond the top three, there are diminishing citations, but the documentation shows there are many scholarly impact distributions. Figure Y shows key publications that have fuelled academic discussion in the area.
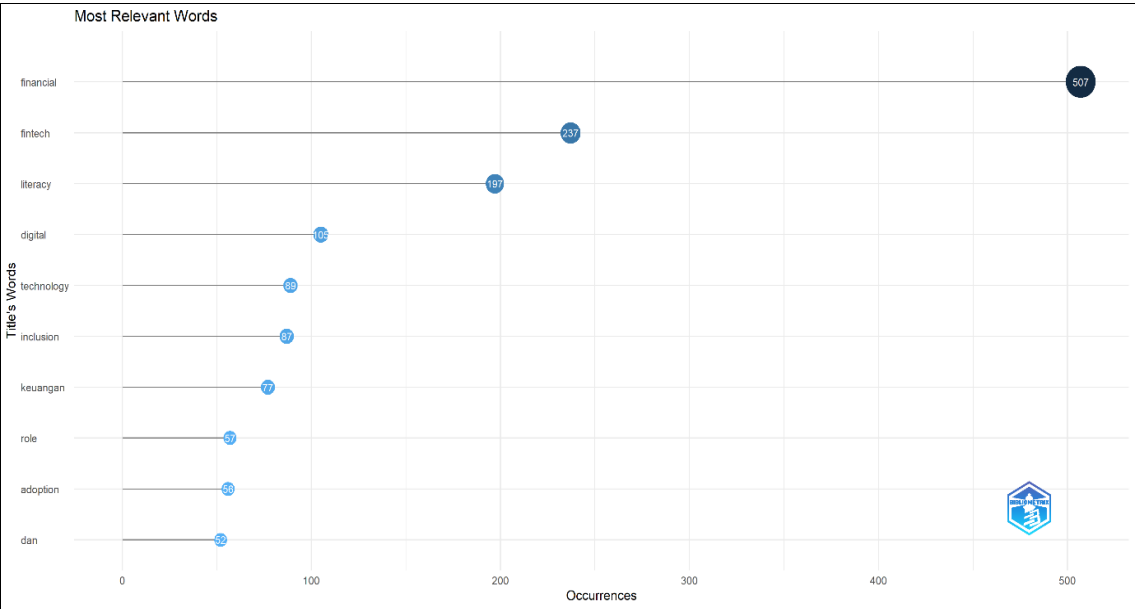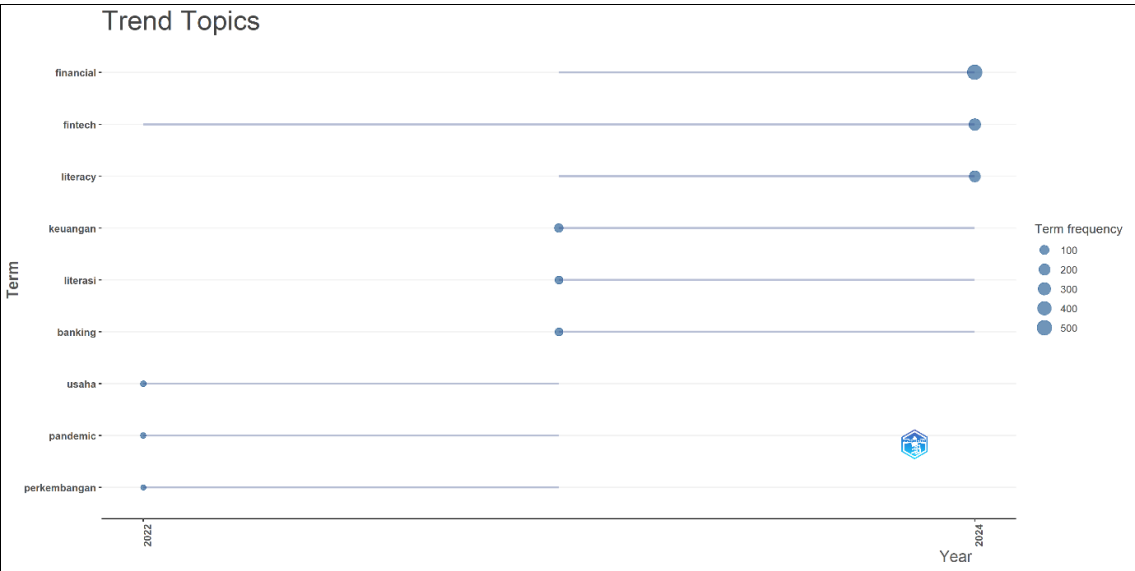
**Source:** Compiled by authors from Biblioshiny

**Fig 9:** Most Relevant Words

Figure 9 illustrates the most significant words from document titles in the bibliometric dataset based on frequency. The concept of "financial" is the most frequently used word at 507, followed by "fintech" (237) and "literacy" (197), pointing towards increased research interest in financial technology and technology education. Digital, technology, and inclusion are common words, representing core themes regarding digital finance. Collectively, the figure depicts concepts that inform the core ideas and trends shaping the literature.



**Source:** Compiled by authors from Biblioshiny

**Fig 10:** Trending Topics

Figure 10 shows the trending topic, a clear thematic development in academic discourse from 2022 to 2024. The recent literature contains a number of terms including "financial," "fintech," and "literacy," which all appear with high frequencies in the 2024 data, indicating a significant and growing academic interest at the intersection of finance and technology.

**Source:** Compiled by authors from Biblioshiny

**Fig 11:** Word Cloud

The word cloud (figure 11) signifies the strong importance of financial, literacy and fintech as prevalent themes in the existing literature. The co-occurrence of terms like digital, inclusion, technology and research imply the multifocal and multidisciplinary nature of studying financial innovation and accessibility. The keywords study, data and impact seem to indicate a relapse into empirical focus in dealing in the examination of financial behaviours and financial outcomes. These trends relate to changes in other working social processes dealing with global challenges associated with financial literacy, inclusion and the changing technological landscape. The word cloud along with its visual emphasis also underscores the thematic importance of fintech related solutions addressing social and economic development concerns for people and communities.

**Conclusion and Scope for Future Research**
In conclusion, this study provides a thorough examination of global scholarly efforts in financial technology, digital financial inclusion, and financial literacy from 2014 to 2024, revealing a significant increase in publication volume and a shift toward interdisciplinary and international collaboration, particularly among Asian institutions. The presence of core topics like fintech, literacy and digital finance and their regional language variation highlights the changing global context for research. Future research should investigate cross-regional collaboration strategies, examine the implications for policy in the practice of financial literacy and fintech, and advocate for increased language diversity in the disclosure of scientific knowledge. Research on the impact of future technologies such as AI and blockchain on financial inclusion can also add value to efforts to develop fair and sustainable financial ecosystems.

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