

The knowledge ecosystem of women entrepreneurs in the era of digital finance mapping: global scholarly evidence

Ann Baby

Rajagiri College of Social Sciences, Kochi, India

Nycil Romis Thomas and V. Kalyani

Department of Social Work, Rajagiri College of Social Sciences, Kochi, India, and

P.V. Vijesh

Rajagiri College of Social Sciences, Kochi, India

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Abstract

Purpose – This paper aims to outline and review the domain of research on women entrepreneurs from 2015 to 2025. Based on a bibliometric strategy, this paper assesses the increase in publications, the journals and authors that have the most impact, geographic and institutional ramifications, citation patterns and topic development. It also analyzes the research networks and their collaboration with emerging conceptual connections between the areas of financial inclusion, microfinance and digital financial technologies. Using mapping measures, the study will aim to identify the structural growth, knowledge and research gaps that characterize the synergy between women's entrepreneurship and digital finance across the world.

Design/methodology/approach – This research created a systematic scholarly output mapping framework (SOMF) that conducted the bibliometric analysis. Figure 1 shows a SOMF that summarizes the method adopted in a systematic process of bibliometric analysis. The framework starts with the initial step of text mining, in which search criteria are specified and information is extracted through the selection of a database source. This research is based on Scopus records, which are further narrowed down by the use of standardization, spellcheck and inclusion and exclusion filters between the years 2015 and 2025. Having implemented the inclusion and refinement criteria, a final list of 352 articles in 193 books was obtained. These comprised articles, reviews, book chapters, conference papers and editorials of a wide range of types of documents. All the bibliographic data, such as authorship, institutional connections, references and citations, as well as sets of keywords were exported to be analyzed. Biblioshiny 5.2.1 was used as the web interface of the Bibliometrix R package to do data cleaning and standardization. The process included elimination of duplicates, name unification of authors and standardization of keywords. Calculations were made regarding descriptive performance indicators such as annual growth trends, citation distributions, authorship qualities and country distribution. VOSviewer 1.6.20 was to be used in order to study the intellectual and collaborative structure of the field. This optimization leads to a useable database, which is refined further through data cleaning and standardization procedures such as eliminating duplicate records and merging author information.

Findings – The data show rapid academic progress since 2020, which aligns with interest in the digital financial inclusion of female entrepreneurs in enterprises all over the world. Research is geographically dispersed, with emerging economies adding up to much output, whereas developed economies have better citation power. From the thematic mapping, it is possible to note that the theme of microfinance and financial inclusion is still at the center, becoming more and more interrelated with the empowerment of women, sustainability, institutional frameworks and digital innovation. The collaboration networks demonstrate a rising global interaction and

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uneven inter-regional integration. On the whole, the research area is no longer solely focused on access-based finance but, instead, is becoming more of an ecosystem, which highlights structural, institutional and sustainability aspects of women's involvement in digital financial systems.

Research limitations/implications – Although the current research provides an extensive bibliometric review of the literature addressing women entrepreneurs in the digital finance age, it has certain drawbacks. To begin with, it analyses only the Scopus database. Though Scopus is a high-quality database, sources such as Web of Science, Google Scholar, regional databases and other policy reports have been overlooked. Second, the research is restricted to the English-language publications. This selection can underrepresent academic output in non-English speaking areas, in particular Latin America, Francophone Africa and some of Asia. Third, the bibliometric methods are concerned with quantitative trends on knowledge creation and citation, which fail to reflect the substantive quality, the contextual richness or methodological rigor of individual studies. More recent publications might also receive a disadvantage regarding citation-based indicators because of time-lag effects. Lastly, thematic analyses that are based on keywords are dependent on pre-set author-assigned terms and indexing practices, which could be false due to underlying conceptual associations.

Practical implications – The paper emphasizes that policymakers and practitioners should go beyond the simple access to finances to empower women with digital and entrepreneurial skills. Gender-responsive digital finance policies should be designed by governments to incorporate financial literacy, digital skills training and institutional support. Financial institutions and fintech companies have the ability to design inclusive products to meet the needs of women entrepreneurs. Moreover, the collaborative entrepreneurship ecosystems, mentorship networks and market access can help women-led businesses to be more sustainable, scalable and successful in a variety of economic settings.

Social implications – The study highlights how digital finance can transform the way gender equality and social inclusion are achieved. With the ability to participate in economic activities, digital entrepreneurship can improve the levels of autonomy, decision-making and social status of women. Nevertheless, the unbalanced access to technology and the obstacles of socio-cultural background might strengthen the existing inequalities, when not addressed. It is important to promote inclusive digital environments, education and community support systems to achieve equal benefits, decrease gender inequalities and help to make a larger contribution to more generalized societal development and sustainable and inclusive growth results throughout the world.

Originality/value – This research introduces a methodological approach based on the SOMF. It adds conceptualization to a body of literature and determines the research gaps in studies. The results offer practical implications for scholars, policymakers and practitioners in the field, enabling them to develop evidence-based policies that promote gender-responsive digital financial ecosystems worldwide.

Keywords Women entrepreneurship, Digital finance, Financial inclusion, Bibliometric analysis, Science mapping

Paper type Research article

Introduction

Entrepreneurship is one of the essential sources of economic growth, innovation and generation of employment, which serves as the basis of regional and national development. Entrepreneurs themselves can be described as the agents of change because they bring in new products, technologies and services that catalyze the progress in competitiveness and productivity (Srivastava and Mohan, 2025). Being an entrepreneur is a natural feature of every person regardless of his or her sex. The engagement of females in business activities is critical to the economic development that can reach its highest potential (Al-Qahtani *et al.*, 2022; Cabrera and Mauricio, 2017; Ge *et al.*, 2022). Women around the world are exercising greater ownership of their careers by establishing their businesses (Gimenez-Jimenez *et al.*, 2022). Entrepreneurship gives women economic freedom, which helps them break free of challenges, achieve their potential and promote gender equality (Narayani, 2025). Women entrepreneurs have to overcome one of the key challenges, which is the family-work balance (Ferreira dos Santos *et al.*, 2019).

To enhance the theoretical basis of the current research, this paper has merged important theoretical insights into the overall research area of women's digital entrepreneurship. In particular, it uses financial inclusion theory to conceptualize access to and utilization of financial services; women empowerment frameworks to conceptualize change in agency and autonomy; the digital entrepreneurship ecosystem viewpoint to capture the impact of technological and institutional environments and the capability approach to emphasize how access to resources can convert into meaningful opportunities and outcomes. The integration

of these theoretical aspects enables the study to locate the bibliometric analysis within the pre-existing theoretical context and offers a better idea of how current research is related to the larger scholarly discussions.

Women entrepreneurship in the digital era

Based on the identified gap, this paper fills it by conducting a bibliometric analysis of the literature published between 2015 and 2025. The proposed study seeks to trace the trends in research, outline the most significant themes and analyze collaborative networks in the area, thus providing an overall picture of the intellectual framework and development of the research at the border of women entrepreneurship and digital finance. The importance of sustainable entrepreneurship and innovation in the entrepreneurial ecosystems and the long-term economic development is increasingly stressed in the latest studies. In addition, entrepreneurial strategies with a sustainability focus are gaining significance for the understanding of digital transformation, market participation and inclusive growth among women entrepreneurs.

Women entrepreneurs are inclusive, resilient and innovative in their views on enterprise development. Inclusion of financial institutions and digital finance is important to strengthen their contribution to the development of competitive economies. It also supports the future viable growth and creates sustainable social value in emerging digital entrepreneurial systems (Kataria *et al.*, 2020). The problem of financial literacy has become an important facilitator of entrepreneurial involvement and empowerment of women in the digital age of finance (Lwamba *et al.*, 2021). Financial literacy, which is the capacity to comprehend and properly utilize a number of financial competencies like planning, saving, spending and debt control, has come into the limelight as an essential financial driver of economic development and stability (Lusardi, 2019). Accessibility to external funding has been found to be significant in determining the probability of business establishment (Ahlstrom and Bruton, 2010; Hoskisson *et al.*, 2000). The financial problem of entrepreneurship may be explained by different reasons, among which are the excessive risk levels of the entrepreneurship activities (Shepherd *et al.*, 2000) and the comparatively high failure rates of new business (Reynolds, 2007; Ucbasaran *et al.*, 2013).

Digital literacy has consistently become a focal capacity determining the meaning by which businessmen receive data, benefit digital markets and also make strategic decisions (Peng and Mao, 2022; Raharjo *et al.*, 2024; Bachmann *et al.*, 2024). In the context of developing countries such as India, female entrepreneurs are far behind in converting their intentions into robust and expanding scale-up businesses (Tanaji *et al.*, 2025). The momentum of female entrepreneurs is becoming an important contribution to the global economy, as is witnessed in India. Indian women entrepreneurs show increased interest in the development of innovations that are environmentally sustainable in a variety of industries in comparison with men (Fernández *et al.*, 2021). Digital technology promotes entrepreneurship among women because of its speed of development (Pergelova *et al.*, 2018). Female business owners embrace online technologies to improve entrepreneurship on online platforms, digital objects and services with Internet capabilities (Von Briel *et al.*, 2017; Kraus *et al.*, 2019). Over the past decades, there has been a developmental trend of encouraging women to work and enter the economy and the issue of women entrepreneurship has become one of the empowering factors that create jobs and stimulate sustainable economic development (Noor *et al.*, 2022).

The emerging wave of female entrepreneurship, particularly the growth of fintech, and the democratization of entrepreneurship as a result of the inclusive nature of digital technologies have contributed to limitations to the gender-specific functions (Peter *et al.*, 2025). The perceived role fit socializes the dual tasks of caregivers and entrepreneurs and tends to socialize women as ill-suited to entrepreneurship (Malmström *et al.*, 2023; Santos *et al.*, 2024). Digital technologies have altered the way female-led enterprises conduct their business, engage with audiences and access the international markets (Mashpure *et al.*, 2022;

Varadarajan *et al.*, 2022). Women can also be disadvantaged, including their inability to move freely, limited access to finances and control over decision-making (Chhabra *et al.*, 2022). The increasing wave in female entrepreneurship in patriarchal society (Wiig *et al.*, 2023) must challenge gendered stereotypes (Lagrasta *et al.*, 2024; Santos *et al.*, 2024) and the glass ceiling in entrepreneurial finance to create economic outcomes (Sanchez-Riofrio *et al.*, 2021). Globalization has highlighted the importance of women in the world of business to enhance sustainable growth in the economy and social development. They are perceived as the upcoming economic giants in the developing states that can raise the welfare and prosperity (Terjesen *et al.*, 2015; Uche and Ngepah, 2024). Women entrepreneurs possess strong qualities that set them apart, such as self-confidence, proactiveness and a strong sense of control, which support their entrepreneurial success (Gerke *et al.*, 2023).

Objectives of the study

The bibliometric research will develop an analytical and mapping approach to the academic landscape of women entrepreneurs in the digital finance era in a global context. In particular, the research aims to.

- (1) Examine the growth and evolution of research on women entrepreneurship and digital finance (2015–2025), identifying major trends and shifts in the field;
- (2) Identify leading journals, publication sources and document types, and assess their productivity and citation impact;
- (3) Analyze authorship patterns by identifying prolific and highly cited authors shaping the field;
- (4) Map the geographical and institutional distribution of research, including international collaboration trends;
- (5) Explore the conceptual structure of the literature through keyword co-occurrence and thematic mapping to identify key and emerging themes;
- (6) Visualize intellectual and collaborative networks using co-authorship, co-citation, and keyword analyses and
- (7) Identify emerging research directions, gaps, and underexplored areas related to financial inclusion, digital transformation and women's economic empowerment.

Significance of the study

Women in business are critical for delivering sustainable and inclusive economic growth, especially in the fast-changing digital financial environments. Although the size of the body of literature on women entrepreneurship, financial inclusion and digital finance continues to expand, it is still disorganized in terms of discipline, location and methodology. The given bibliometric work presents a consistent and evidence-based review of the world academic literature published from 2015 to 2025, which would provide a picture of how the area grew and what direction it is taking. The study will uncover the intellectual frame and thematic areas of this field by analyzing publication patterns, impactful authors and/or sources, geographical and/or institutional contributions, the impact of citing and networking in collaboration. The use of bibliometric methods will also help to determine the main themes of research, conceptual relations and the underestimated directions. This research has useful implications for the academic community, as it will enable them to contextualize future studies, policymakers who want to implement gender-sensitive digital finance solutions and practitioners who desire to adopt evidence-based policies to empower women to access a wider variety of financial technologies.

Methodology

The research design of this study is a systematic bibliometric research design that will map and analyze the knowledge structure across the world regarding women entrepreneurs in the digital finance era. The academic data were obtained only via the Scopus database because it has a large coverage and a high level of indexing of peer-reviewed data. A structured search query was executed within the *TITLE-ABS-KEY* fields using combinations of keywords such as

TITLE-ABS-KEY

("women entrepreneur*" OR "female entrepreneur*" OR "women-owned business*" OR "women-led enterprise*")

AND

("financial inclusion" OR "access to finance" OR microfinance OR "digital finance") AND PUBYEAR >2014 AND PUBYEAR <2026

This research created a systematic scholarly output mapping framework (SOMF) that conducted the bibliometric analysis. Figure 1 shows an SOMF that summarizes methods

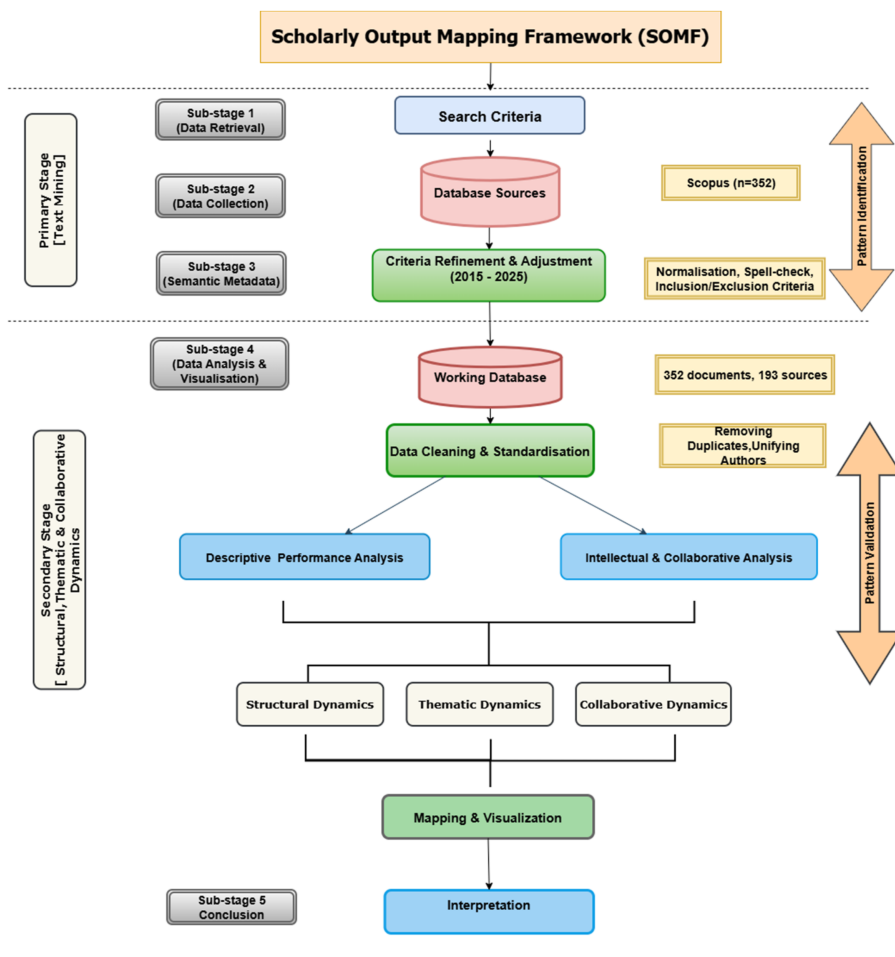


Figure 1. Research methodology adopted for the study. Source: Authors' conceptualization

adopted in a systematic process of bibliometric analysis. The framework starts with the initial step of text mining in which search criteria are specified, and information is extracted through the selection of database sources. This research is based on Scopus records, which are further narrowed down by the use of standardization, spellcheck and inclusion and exclusion filters between 2015 and 2025. Having implemented the inclusion and refinement criteria, a final list of 352 articles in 193 books was obtained. These comprised articles, reviews, book chapters, conference papers and editorials of a wide range of types of documents. All the bibliographic data, such as authorship, institutional connections, reference and citation and sets of keywords, were exported to be analyzed. Biblioshiny 5.2.1 was used as the web interface of the Bibliometrix R package to do data cleaning and standardization. The process included the elimination of duplicates, the name unification of authors and the standardization of keywords. Calculations were made regarding descriptive performance indicators such as annual growth trends, citation distributions, authorship qualities and country distributions. VOSviewer 1.6.20 was to be used to study the intellectual and collaborative structure of the field. This optimization leads to a useable database, which is further refined into data cleaning and standardization procedures, such as eliminating duplicate records and merging author information.

Analysis and results

As shown in [Table 1](#), the metadata profile of the scholarly corpus researching women in the digital finance era as entrepreneurs provides a complete overview of the dataset. The data,

Table 1. Main information about data

Description	Results
<i>Main information about data</i>	
Timespan	2015:2025
Sources (journals, books, etc)	193
Documents	352
Annual growth rate %	28.6
Document average age	2.57
Average citations per doc	11.75
References	2,579
<i>Document contents</i>	
Keywords plus (ID)	439
Author's keywords (DE)	861
<i>Authors</i>	
Authors	879
Authors of single-authored docs	59
<i>Authors collaboration</i>	
Single-authored docs	72
Co-authors per doc	2.75
International co-authorships %	31.82
<i>Document types</i>	
Article	241
Book	5
Book chapter	66
Conference paper	18
Conference review	10
Erratum	1
Review	11
Source(s): Biblioshiny	

covering 2015–2025, consist of 352 articles in 193 different sources due to the interdisciplinary and fast-growing nature of the research field. The significantly large growth rate of 28.6% per year indicates the growing scholarly attention to the topic of women’s entrepreneurship-digital finance association, and the average age of the documents, 2.57 years, indicates the changing interest of the literature. The field is both visible in scholarly circles and grounded in theory, as evidenced by an average of 11.75 citations per document and a total of 2,579 citations in the reference base. The conceptual development is strong, as evidenced by the large number of keywords used, including 439 keywords and 861 author-defined keywords. Patterns of authorship indicate the presence of a wide range of research communities, including 879 authors; even though the share of single-authored works is not very high, there are rather strong indications that collaborative research is preferred. This is further enhanced by a mean of 2.75 authors per document and a substantial rate of international co-authorship of 31.82, which is an indication of significant cross-border scholarly interaction. Regardless of the typology of the documents, journal articles constitute the bulk of the corpus, accompanied by book chapters, conference papers and reviews, all of which reflect evidence of an advanced but evolving body of knowledge that combines empirical, conceptual and review-friendly contributions to the literature on women entrepreneurs in the digital finance field.

Figure 2 evaluates the trend in the scientific production of research on women entrepreneurs within the digital finance era, which shows a definite growth pattern over the 2015–2025 period. Scholarly production was relatively small in the first years of its development, with fewer than 15 articles being published each year since 2015, indicating an increase in the research area. The sharp point of inflection is seen after 2020, as the financial technologies started gaining momentum and people relying on them, with the number of publications more than doubling what it used to be in the years before that.

Figure 3 illustrates the geographical distribution of scientific output by women entrepreneurs. India comes out as the most significant country with a higher frequency of publication than the others. This highlights the high level of academic interest that India has with regard to women’s entrepreneurship and digital financial inclusion. The UK and the USA come second and third, respectively. This can be seen in their contributions towards how well-established research ecosystems and well-developed digital finance infrastructures influence scholarly work. It is worth noticing that the largest portion of contributions is from emerging and developing economies, including Malaysia, Nigeria, Pakistan, South Africa, Bangladesh and Ghana. This signifies that the concern of researchers is tightly focused on the countries

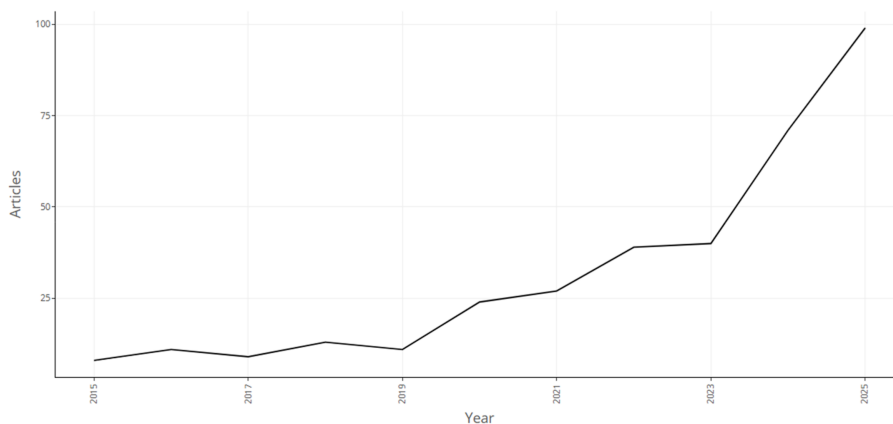


Figure 2. Annual scientific production over the years. Sources: VOSviewer

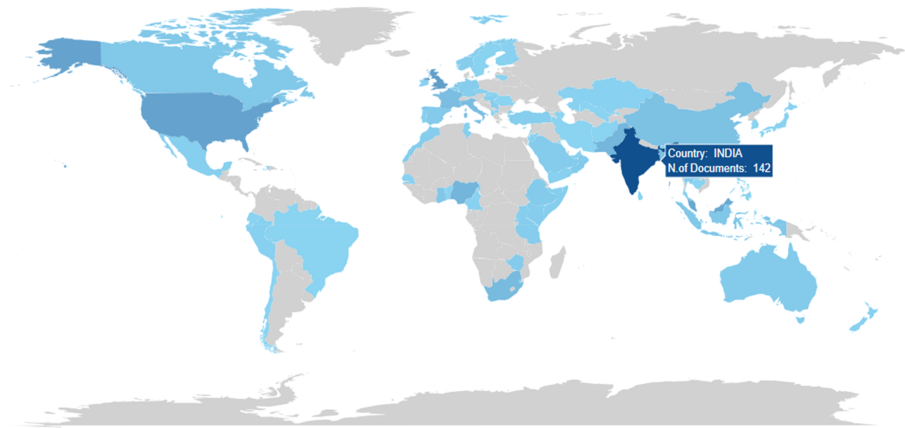


Figure 3. Countries' scientific production

where digital finance has a transformative power for women-led businesses. It can be seen that the developed economies were interested in the region, as indicated by the presence of European countries: Italy, France, the Netherlands, Germany, Spain and Norway. Studies in this area usually center on policy frameworks, innovation and institutional perspectives. Altogether, there is a good representation of both the Global South and classic research centers in the distribution. The implication of this is that the field of knowledge of women digital finance entrepreneurs is spread across the globe.

Table 2 examines the list of the top-mentioned authors concerning the literature on women entrepreneurs in the digital finance era. Citation distribution reveals that relatively few authors, like Abebe Abraham and Kegne Meketaw, concentrate in the area of women entrepreneurs, in terms of local citation, implying that their works will be a prime benchmark point in preceding research. The high number of citations is also presented by authors such as Akula Suresh Chandra and Singh Pritpal, noting that the authors remain active in their work dealing with the topics of entrepreneurship, financial inclusion and digital innovation. The presence of multiple authors with mid-level citation counts who maintain consistency indicates a diversity of intellectual foundations.

Table 3 highlights the most referenced source in the literature about female entrepreneurs in the digital finance era, which can help to see the intellectual foundations and scholarly trends of the research domain. The popularity of sources like Ahl, Banerjee and Agarwal gives reason to believe the excellent theoretical grounding of the literature on sources in gender studies, development economics and entrepreneurial finance. Very frequently quoted sources like Brush and Al Shami also emphasize the importance of gender-oriented entrepreneurship models. Aldrich, Audretsch and Bruton's research outputs adapt the classical view of entrepreneurship and institutional theory. Furthermore, the visibility of references to the sources related to financial inclusion, behavioral economics and policy-focused studies proves the interdisciplinary nature of the field.

Table 4 shows the international referencing framework of academic publications on women entrepreneurs in the digital age of finance. In the total citations, the United Kingdom has the dominant position in theoretical and empirical arguments in gendered entrepreneurship and financial inclusion. There are also high volumes of citations in India and China. The much larger mean article citations in China indicate that their contribution is less, but they have significant scholarly influence. There are developing and emerging economies, such as Zimbabwe, Cameroon, Ethiopia, Tanzania and Bangladesh, with high average citation rates.

Table 2. Most cited authors

Author	Local citations
Abebe, Abraham	12
Kegne, Meketaw	12
Akula, Suresh Chandra	9
Singh, Pritpal	9
Andriamahery, Anselme	7
Qamruzzaman, Md	7
Al Mamun, Abdullah A	6
Al Shami, Samer Ali	6
Rashid, Nurulizwa Abdul	6
Alene, Endalew Terefe	5
Attanasio, Orazio Pedro	5
Augsburg, Britta	5
De Haas, Ralph T. A	5
Fitzsimons, Emla O. A	5
Harmgart, Heike	5
Adegboye, Folasade Bosede	4
Adetiloye, Kehinde Adekunle	4
Akinjare, Victoria Abosede	4
Al Shami, Mohamed A	4
Bernard, D. T Kingsley	4
Kevin, Low Lock Teng	4
Khin, Aye Aye	4
Adefare, Tomisin	2
Adeola, Ogechi	2
Babajide, Abiola Ayopo	2

Source(s): Biblioshiny

This trend indicates the increasing significance of microcredit and electronic finances in those areas. It is also an indication of the importance of women-led microenterprise to development-based research agendas. The field is also enriched by contributions from advanced economies like the United States of America, Australia and other countries in Europe. These contributions incorporate policy frameworks, institutional perspectives and comparative analyses. The table thus highlights a heterogeneous and interconnected knowledge environment where contributors collaborate in high-output nations, establishing an understanding of women's entrepreneurship in digitalized financial systems.

Table 5 shows the major institutional affiliations providing scholarly output for women's entrepreneurship in the digital finance era. The University of Johannesburg is the most active participant, which indicates a high level of academic interest of the South African people in gender inclusion, access to digital financial resources and entrepreneurial activity. Universiti Teknologi Majlis Amanah Rakyat - People's Trust Council (MARA) shows the emergence of Malaysia in the study of female-based digital businesses. The fact that there are several African and Asian institutions like Jamhuriya University of Science and Technology, Mzumbe University and the University of Calabar with numerous publications of their own shows the urgency regarding digital finance that has to be executed in their economy. Generally, the institutional distribution, as depicted in the table, shows that the production of knowledge on women entrepreneurs in the digital finance age is largely dependent on universities in the regions where digital financial systems are being aggressively used to prevent systemic gender-based entrepreneurship disadvantages.

Figure 4 shows the distribution of the respective authors involved in the research on women entrepreneurs in the digital age across countries. The evidence indicates that India is the most

Table 3. Most cited sources

Sources	Articles
Ahl	36
Banerjee	34
Agarwal	30
Brush	24
Al Shami	20
Ali	19
Aterido	19
Anderson	18
Simplice	17
Aldrich	14
Alsos	14
Asiedu	14
Alesina	13
Abebe	12
Adom	12
Ajzen	12
Allen	12
Amine	12
Beck	12
Al-Dajani	11
Audretsch	11
Bruton	11
Akula	10
Chatterjee	10

Source(s): Biblioshiny

productive contributor since it has the highest number of articles (39, 11.08%) and mostly single-country publications, which means that the domestic focus of research is enabled. Contrary to this trend, the United Kingdom produces a lower volume of articles but shows a significantly stronger degree of global interaction, with its share of Multiple-Country Publications (MCP%) in the majority of cases, reflecting its position as a knowledge center of interaction in the world. Italy, France and Spain are examples of European nations that have a moderate distribution of both national and international research activities, indicating the moderate involvement of cross-border scholarly networks. A few developing and emerging economies, such as South Africa, Nigeria, Indonesia and Pakistan, show high volumes of research at comparably lower MCPs. Importantly, high percentages of MCP are witnessed in countries such as Bangladesh, Australia, the Netherlands and Japan, which are indicative of the high degree of reliance on international cooperation, even with relatively low rates of publication.

Figure 5 shows the distributions of citations for documents in the research area. As presented in the table, among 352 retrieved documents, 103 publications have a minimum citation threshold of 10, which means that there is a moderately concentrated but influential body of literature. There are a limited number of highly referenced articles, most prominently those by [Carter et al. \(2015\)](#), [Attanasio et al. \(2015\)](#) and [Berge et al. \(2015\)](#), who represent a central influence in influencing theoretical and empirical discourses regarding female entrepreneurship, financial involvement and economic development. Later articles like [Pham and Talavera \(2018\)](#), [Andriamahery and Qamruzzaman \(2022\)](#) and [Gichuki and Mulu-Mutuku \(2018\)](#) show how the focus is also on digital finance mechanisms, entrepreneurial capabilities and inclusive development results. The distorted citation curve is an indication that older seminal works are still holding onto the literature, but that newer works are now becoming more visible.

Table 4. Most cited countries

Country	Total citations (TC)	Average article citations
United Kingdom	687	29.9
India	330	8.5
China	275	45.8
Italy	189	14.5
Ethiopia	151	30.2
Pakistan	148	18.5
Spain	143	28.6
Bangladesh	139	27.8
Zimbabwe	130	65.0
USA	108	13.5
Tanzania	99	33.0
Malaysia	79	9.9
Australia	68	22.7
France	64	10.7
Belgium	60	20.0
South Africa	59	4.9
Nigeria	55	6.1
Netherlands	51	17.0
Saudi Arabia	46	15.3
Cameroon	41	41.0
Cyprus	38	12.7
New Zealand	38	38.0
Norway	35	35.0
United Arab Emirates	35	17.5
Japan	30	15.0

Source(s): Biblioshiny

Figure 6 shows the network of co-occurrence of index keywords of women entrepreneurs in digital finance, which demonstrates the conceptual framework and prevailing research themes. Using a minimum of 5 instances of keywords, 20 keywords out of 462 were found, implying that the knowledge base is focused and interconnected at the same time. The prevalence of microfinance (23 instances; accumulated link strength 65) and women entrepreneurs (26 instances; accumulated link strength 51) highlights how influential the two topics are within the research context. The themes that are closely related, like *the position of women in society*, *entrepreneurship* and *finance*, portray the multidimensional aspect of women's entrepreneurship: a combination of socio-economic attributes and access to financial means and the development of the enterprise. Keywords such as *financial inclusion*, *credit provision*, *banking and small and medium enterprise undertaking* are an indication of the institutional and policy-based themes. At the same time, the presence of *gender*, *gender disparity*, *gender equality and empowerment* depicts the normative and developmental attitudes incorporated in this research finding.

Figure 7 illustrates the linear and non-linear growth of the life cycle of annual publications. Based on the figure, it is visible that in the pre-2015 phase, there was a constant growth in the number of publications that occurred less than 20 times annually. After 2016, the number of publications grew at an astonishing pace. The inflection point in the research life cycle is demonstrated by the logistic model, which indicates that the highest productivity, 300 plus annually, that will be reached in 2031.

Figure 8 discusses the most common keywords that appeared during the bibliometric analysis study. The occurrence of *microfinance*, *female entrepreneurs* and *financial inclusion*

Table 5. Most relevant affiliations

Affiliation	Articles
University of Johannesburg	6
Universiti Teknologi MARA	5
Jamhuriya University of Science and Technology	4
Mzumbe University	4
Universiti Teknikal Malaysia Melaka	4
University of Calabar	4
Assosa University	3
Birmingham City Business School	3
Haramaya University	3
Hungarian University of Agriculture and Life Sciences	3
Manipal University Jaipur	3
Phuket Rajabhat University	3
Shyam Lal College	3
The Islamia University of Bahawalpur	3
Universidad Rey Juan Carlos	3
Universiti Malaya	3
University of London	3
University of Nicosia	3
University of Nigeria	3
University of South Africa	3
Université de Sousse	3
Amity University	2
Amrita University	2
Beijing University of Technology	2
Bindura University of Science Education	2
Dr B. R. Ambedkar University	2
Eastern Mediterranean University	2
FACT	2
Goa Institute of Management	2

Source(s): Biblioshiny

emphasizes the central role of inclusive financial mechanisms in facilitating the roles of women as entrepreneurs. Terms like “*entrepreneurship*,” “*women’s entrepreneurship*,” “*female entrepreneurship*” and “*entrepreneur*” suggest that a solid conceptual structuring exists regarding gendered entrepreneurial research, whereas the use of such words as “*gender*,” “*gender equality*” and “*female status*” suggests the presence of a long-term scholarly interest in structural and social-cultural aspects of women. The most common keywords such as *access to finance*, *financial literacy*, *microcredit* and *banking* emphasize the value of financial capabilities and institutional access to promote entrepreneurial results. At the same time, the existence of *women’s empowerment*, *social capital* and *expanded developmental* and *social lenses* suggests a wider area of focus in which entrepreneurship can be discussed for the transformation of societies. Lastly, we can discuss modern themes like COVID-19, sustainability and microenterprise as indicators of a changing research agenda.

Discussion

The results illustrate that there has been a sharp increase in the number of studies on women entrepreneurship in the digital era of finance, especially since 2020, due to the high pace of digitalization and financial inclusion as a policy priority. Nonetheless, this expansion seems to be more quantitative than analytical and lacks theoretical depth. Although the literature has focused on financial inclusion and microfinance, as is in line with financial inclusion theory,

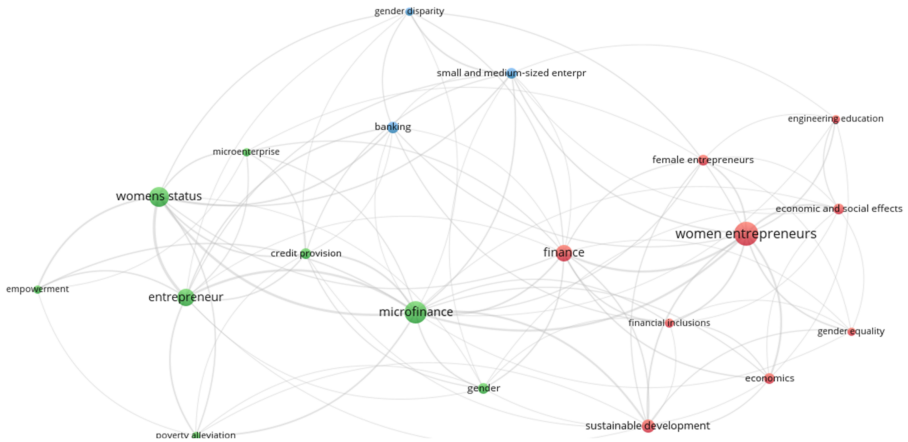


Figure 6. Co-occurrence network – index keywords. Sources: VOSviewer

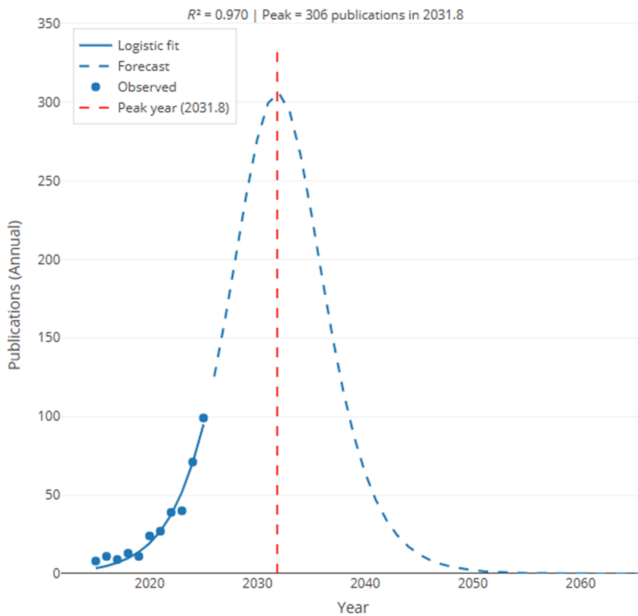


Figure 7. Life cycle of annual productions. Sources: Biblioshiny

not addressed new issues, such as sustainability and institutional structures, which suggest an expansion of scope.

Geographically, a two-fold trend can be traced: developing countries provide the most significant research work, and developed nations are the leaders in the citation factor and international partnerships. Digitally, this imbalance implies inequity in access to knowledge networks and constrained diversity of context. The study also provides insights into critical



Figure 8. Word cloud. Sources: VOSviewer

gaps, including the lack of attention towards developing capabilities, intersectionality and the long-term sustainability of women-led businesses.

On the whole, the study highlights that more critical, theory-based and context-sensitive research is necessary. Policy efforts must shift towards access to capability building, institutional support and inclusive entrepreneurial ecosystems to ensure that digital finance will result in substantive empowerment.

Limitations

Although the current research provides an extensive bibliometric review of the literature addressing women entrepreneurs in the digital finance age, it has certain drawbacks. To begin with, it analyses only the Scopus database. Though Scopus is a high-quality database, sources such as Web of Science, Google Scholar, regional databases and other policy reports have been overlooked. Second, the research is restricted to English-language publications. This selection can underrepresent academic output in non-English-speaking areas, in particular Latin America, Francophone Africa and some of Asia. Third, the bibliometric methods are concerned with quantitative trends in knowledge creation and citation, which fail to reflect the substantive quality, the contextual richness or the methodological rigor of individual studies. More recent publications might also receive a disadvantage regarding citation-based indicators because of time-lag effects. Lastly, thematic analyses that are based on keywords are dependent on pre-set, author-assigned terms and indexing practices, which could be false due to underlying conceptual associations.

Conclusion

This research is an evidence-based, systematic bibliometric review of academic literature of research on women entrepreneurs in the digital finance domain in the period between 2015 and 2025. The findings show that this field has developed rapidly, with rising publication and citation rates reflecting growing recognition of digital finance as a key enabler of women's entrepreneurial entry into business. The analysis indicates that the global knowledge terrain is spread irregularly. Emerging economies are contributing to empirical research studies, with

developed economies exercising intellectual power with a contribution that is highly cited in terms of theoretical and policy contributions. The study also reflected the global imbalance in the production of knowledge on women entrepreneurship in a digital ecosystem. This imbalance implies unequal access to knowledge networks and restrains contextual diversity.

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Corresponding author

Ann Baby can be contacted at: ann@rajagiri.edu