# PARADİGMA

İktisadi ve İdari Arastırmalar Dergisi/Journal of Economics and Management Research **ISSN:** 2822-5570

https://dergipark.org.tr/tr/pub/paradigmaiiad

Basvuru/Received: 14.04.2025 Türü/Type: Arastırma Makalesi/Research Article Kabul/Accepted: 20.05.2025

Cilt/Volume: 14 Sayı/Issue: 1

## **Bibliometric Analysis of Research Trends on Financial Sustainability**

Finansal Sürdürülebilirlik Konusundaki Araştırma Eğilimlerinin Bibliyometrik Analizi

## İbrahim Karaaslan<sup>1</sup>, Ayşegül Karadavut<sup>2</sup>

#### Abstract

Financial sustainability has become a multidimensional concept that has gained importance at academic and corporate levels within companies' capacity to create long-term value and sustain their operations. In this study, the research trends of the existing literature were revealed by analyzing academic publications on financial sustainability according to their number, subject, and citation density. In this study, which was conducted using the bibliometric analysis method, 975 studies published in the Web of Science database between 2001 and 2025 containing the keyword "financial sustainability" were evaluated. VOSviewer software was used in the analysis. According to the findings, the most publications were made in 2021, and the most cited authors were Wai Fong Chua, Roger Simnett, and Ann Vanstraelen (822 citations each). The most frequently used keywords were "financial sustainability" (260 occurrences), "sustainability" (80 occurrences), and "microfinance" (32 occurrences), with the highest number of citations and publications coming from the UK (2.947 citations) and the US (115 publications). Authors such as David C. Wilson, Rodic, and Velis are in central thematic clusters in the bibliographic matching analysis. In contrast, in the inter-institutional analysis, Imperial College London is the structure with the highest scientific connection strength. The study aims to reveal the current state of the literature by analyzing the thematic clusters, geographical distribution, and basic research networks of academic production on financial sustainability in a holistic manner.

Keywords: Financial Sustainability, Bibliometric Analysis, VOSviewer

Jel Codes: G32, M14, O16

#### Özet

Finansal sürdürülebilirlik, şirketlerin uzun vadeli değer yaratma ve faaliyetlerini sürdürebilme kapasiteleri çerçevesinde, günümüzde hem akademik hem de kurumsal düzeyde önem kazanan çok boyutlu bir kavram hâline gelmiştir. Bu çalışmada, finansal sürdürülebilirlik konusundaki akademik yayınların sayı, konu ve atıf yoğunluklarına göre analiz edilerek mevcut literatürün araştırma eğilimleri ortaya konulmuştur. Bibliyometrik analiz yöntemi kullanılarak gerçekleştirilen bu araştırmada, Web of Science veri tabanında 2001–2025 yılları arasında yayımlanmış olan ve "financial sustainability" anahtar sözcüğünü içeren 975 çalışma değerlendirmeye alınmıştır. Analizlerde VOSviewer yazılımı kullanılmıştır. Elde edilen bulgulara göre, en çok yayın 2021 yılında yapılmış; en çok atıf alan yazarlar arasında Wai Fong Chua, Roger Simnett ve Ann Vanstraelen (her biri 822 atıf) yer almıştır. En sık kullanılan anahtar sözcükler "financial sustainability" (260 tekrar), "sustainability" (80 tekrar) ve "microfinance" (32 tekrar) olurken; en yüksek atıf ve yayın sayısı sırasıyla İngiltere (2.947 atıf) ve ABD (115 yayın) tarafından gerçekleştirilmiştir. Bibliyografik eşleşme analizlerinde David C. Wilson, Rodic ve Velis gibi yazarlar merkezî tematik kümelerde yer alırken; kurumlar arası analizde Imperial College London, en yüksek bilimsel bağlantı gücüne sahip yapı olarak öne çıkmıştır. Çalışma, finansal sürdürülebilirliğe ilişkin akademik üretimin tematik kümelerini, coğrafi dağılımını ve temel araştırma ağlarını bütüncül biçimde analiz ederek, literatürün mevcut durumunu ortaya koymayı amaçlamaktadır.

Anahtar Kelimeler: Finansal Sürdürülebilirlik, Bibliyometrik Analiz, VOSviewer

Jel Kodları: G32, M14, O16

<sup>&</sup>lt;sup>1</sup> Asst. Prof., Gümüşhane University, Department of Aviation Management, Gümüşhane/Türkiye, ibrahimkaraaslan@gumushane.edu.tr, ORCID ID: 0000-0001-9259-4587

<sup>&</sup>lt;sup>2</sup> Master of Science, Gümüşhane University, Gümüşhane/Türkiye, aysegul.karadavutt@gmail.com, ORCID ID: 0000-0002-2598-8129

Attf: Karaaslan, İ., & Karadavut, A. (2025). Bibliometric analysis of research trends on financial sustainability, Paradigma: İktisadi ve İdari Araştırmalar Dergisi, 14(1), 25-36.

## 1. Introduction

Recent financial crises and resource shortages have highlighted the need for companies to strike a delicate balance between short-term profitability targets and the search for long-term financial stability. In this context, "financial sustainability" is a multidimensional structure that goes beyond traditional profitability metrics and allows companies to assess their long-term value creation capacity and operational continuity (Zabolotnyy & Wasilewski, 2019: 2).

Financial sustainability refers to a company's ability to create value for stakeholders and sustain its long-term operations by using its resources effectively. When this concept is evaluated within the risk-return balance framework, indicators such as liquidity, indebtedness level, profitability, operating efficiency, and capital structure are considered together (Zabolotnyy & Wasilewski, 2019: 3). This is because it is vital to achieve high returns and provide the financial foundation to make this return sustainable (Henock, 2019: 2). At this point, ESG (Environmental, Social, Governance) criteria have become integral to financial sustainability. ESG indicators encourage companies to integrate financial decisions with environmental responsibility, social impact, and governance quality and are among the determinants of long-term performance (Soppe, 2004; Fried et al., 2015).

In this context, the findings that companies' integration of environmental and social sustainability into their strategic decision-making processes significantly affects their market capitalization and financial performance are noteworthy. In particular, studies on FTSE 350 companies show that companies that adopt sustainability criteria achieve higher market capitalization (MVA), economic value added (EVA), and resource efficiency in the long run (Gómez-Bezares et al., 2017: 1-3). This suggests that sustainability strategies enhance corporate reputation and improve financial performance.

However, there is still no "closed theory of financial sustainability" in the literature. However, some studies have proposed theoretical frameworks to fill this gap and developed approaches based on the four pillars of financial sustainability: risk management, asset growth, market capitalization, and economic value added (Gómez-Bezares et al., 2017: 2-5). On the other hand, research on microfinance and cooperative institutions, especially in developing countries, reveals that operational efficiency, donations, deposit collection capacity, and debt-to-equity ratios directly affect financial sustainability (Henock, 2019: 6–7).

In this framework, the concept of financial sustainability, which is the focus of this study, has become a research area that has attracted attention in the context of corporate finance and sustainable development policies, especially in recent years. However, in the existing literature, it is observed that bibliometric analyses that holistically address the issue are insufficient. This situation requires a systematic analysis of academic trends, influential authors, collaboration networks, and key themes in the field. Therefore, this study aims to present an overview of the financial sustainability literature and provide theoretical and methodological guidance for future studies. In this framework, the first part of the study offers definitions and explanations of the concept of financial sustainability and its theoretical framework, followed by a literature summary that presents an overview of the studies in the field. In the bibliometric analysis of the survey, which continues with the methodology section, the findings are presented and supported by network maps, and the conclusions obtained at the end of the study are summarized in the conclusion section.

#### 2. Literature

The financial sustainability literature has developed over time with the contribution of different disciplines, and various approaches have been put forward to establish the concept's theoretical framework and application areas. The idea has gained a place in the literature as a multidimensional concept that refers not only to the short-term profitability of companies but also to their capacity to survive economically and create value in the long term. However, it is observed that a singular theoretical framework for this concept has not yet been developed in existing studies. Gleißner, Günther, and Walkshäusl (2022) put forward four basic conditions to make financial sustainability measurable: real growth capacity, survival probability, an acceptable level of profit risk, and an attractive risk-return profile for investors. The empirical test of this structural model shows that firms that meet these conditions generate higher risk-adjusted returns in the capital market. Similarly, Zabolotnyy and Wasilewski (2019) developed a fuzzy logic-based index for a sample of food companies in Northern Europe and examined financial sustainability in terms of both value creation and business continuity. Both studies make theoretical contributions to the literature by creating a structural framework for directly measuring financial sustainability.

In the sustainability-oriented corporate social responsibility (CSR) literature, financial performance is generally considered to be the outcome of CSR activities (dependent variable). Although the three-dimensional theoretical model (economic, legal, ethical, and voluntary responsibilities) developed by Carroll (1979) includes the philosophy of social response and related subject areas, this model does not directly cover financial sustainability. Meta-analysis studies (Orlitzky et al., 2003; Margolis et al., 2009; Lu & Taylor, 2016) also analyzed financial outcomes due to CSR but did not consider sustainability as an independent dimension. Gregory et al. (2014) analyzed five sub-dimensions of CSR (community, environment, employees, diversity, product) on S&P 500 and Russell 3000 firms. They found a positive

impact of CSR on long-term firm value but limited short-term profitability impact. Gómez-Bezares et al. (2017), in their empirical study on FTSE 350 companies, find that sustainability practices increase market capitalization but have more complex implications for economic value added (EVA) generation. Similarly, Ng and Rezaee (2015) examine the effects of firms' financial (ECON) and environmental, social, and governance (ESG) sustainability performance on the cost of equity capital and find that growth opportunities and R&D activities reduce cost, while operational efficiency can increase it. Environmental and governance performances were found to have a negative impact on the ESG dimension. In contrast, the positive impact of the ECON dimension on costs was shown to be stronger for firms with higher ESG levels. These findings suggest that sustainability performance can have complex but strategic effects on financial costs and value creation. On the other hand, Simnett, Vanstraelen, and Chua (2009) examined the decision processes and determinants of decision-making regarding the assurance of sustainability reports and found that firms that receive assurance services tend to strengthen both stakeholder trust and long-term corporate stability by increasing their level of corporate transparency. The study reveals that the quality and reliability of sustainability reporting can indirectly contribute to financial sustainability.

Financial sustainability has been examined in the microfinance literature mostly through the balance of operational efficiency, outreach, and financial self-efficacy. Hermes and Lensink (2007) focus on the capacity of group-based microfinance practices to reduce information asymmetries; however, they argue that commercial sustainability can create "mission drift" by limiting access to the poorest. Ahlin, Lin, and Maio (2011) link the performance of MFIs operating in 74 countries with macroeconomic variables and find that economic growth positively affects sustainability by reducing borrowing costs. Bogan (2012) analyzes the role of the composition of financing sources on sustainability and finds that high equity and grant ratios have an adverse effect, while asset size has a positive effect. Similarly, Ayayi and Sene (2010) show that loan portfolio quality, interest rates, and staff efficiency are the strongest determinants of sustainability. In a two-stage bootstrap DEA analysis in Sri Lanka, Wijesiri, Viganò, and Meoli (2015) find that MFIs generally underperform in financial and social efficiency and that high profitability is achieved at the expense of social efficiency. Henock (2019), in his study on SACCOs in Ethiopia, finds that donations, return on equity, and operational efficiency increase financial sustainability, while indebtedness and low deposit capacity have a negative impact.

The relationship between financial sustainability, digitalization, and inclusion has also become an increasingly important area of research. Ozili (2018) argues that digital finance can increase financial inclusion, especially in developing countries, but this effect is limited by infrastructure, user confidence, and income inequality. In a panel data analysis conducted by Le, Chuc, and Taghizadeh-Hesary (2019) in Asian countries, it is concluded that financial inclusion positively affects sustainability but negatively affects efficiency. This effect is attributed to increased transaction costs and information asymmetries due to the inclusion of low-income groups in the financial system.

In the dimension of environmental sustainability and climate risk, Wan, Cao, and Xu (2025), using data on 71 rural commercial banks in China, show that extreme rainfall reduces the profitability and technical efficiency of these banks; this effect is more pronounced in regions with intensive grain production and high digitalization. The impact of extreme weather events on financial sustainability weakens asset quality and reduces the resilience of rural banks, particularly through contraction in deposit and loan volumes. Similarly, in the study conducted by the World Bank (2020) in the case of Constanța Municipality in Romania, the financial sustainability of local governments was assessed with the MFSA methodology; financial resilience after COVID-19 was analyzed through criteria such as budget balance, revenue diversity, and investment capacity.

Corporate governance practices are also among the determinants of financial sustainability. Cao et al. (2024) emphasize the negative impact of earnings management on sustainability but empirically show that external blockholders and institutional investors can offset this effect. These findings support the compelling monitoring hypothesis and reveal the protective role of institutional ownership structure against managerial manipulation. Ali et al. (2024) argue that indebtedness, liquidity, and default risks negatively affect sustainability in the Iraqi banking sector; however, management structures with financial expertise can limit these effects. Rating analyses using CRITIC and RAFSI multi-criteria decision-making methods have produced sustainability scores to guide policymakers and investors.

The reviewed studies show that financial sustainability is addressed at different levels (firm, sector, country, local government) and from different perspectives (microfinance, corporate performance, digitalization, climate risk, governance). The literature has a limited number of theoretical models that directly measure financial sustainability, and most studies analyze this concept through indirect determinants (profitability, efficiency, risk, access). Studies on microfinance applications, especially in developing countries, clearly reveal the tension between financial sustainability and social goals. In addition, corporate social responsibility, governance quality, and climate-based risks also have significant effects on sustainability. In this context, financial sustainability, as a multidimensional and context-sensitive concept, requires the development of more holistic measurement approaches and interdisciplinary analyses in future studies.

## 3. Method

This section of the study includes the purpose of the research, the analyses, and the findings.

## 3.1. Purpose of the study

In line with the results of the bibliometric analyses conducted on the concept of financial sustainability based on quantitative data and numerical measurement indicators, the aim is to examine the academic research conducted on this concept from a comprehensive and holistic perspective and to present the obtained findings to researchers in a clear and systematic manner. In this context, the aim is to evaluate the scientific literature in the field of financial sustainability in a way that will shed light on the development trends, focal points, and future development of the field.

#### 3.2. Data and analysis

This study used the Web of Science (WoS) database developed by Clarivate Analytics for bibliometric data. WoS stands out as a comprehensive scientific information platform for interdisciplinary data-intensive research beyond just a literature review tool. As stated in the study by Li, Rollins, and Yan (2018), it is emphasized that WoS has been used as a reference source and analysis object in thousands of academic studies in many fields in the last 20 years. In this respect, WoS plays an important role as a data provider and research object, contributing to the quantitative analysis of scientific publishing.

The search conducted in the WoS database on 10.01.2025 by selecting "all fields" with the keyword "financial sustainability" yielded 2954 results. Afterward, the study's field limitation was made, and 975 publications were examined.

When the Web of Science category distribution of these publications is examined, Table 1 shows that the highest number of publications is in the "Economics" category, with 435; this was followed by "Environmental Sciences" with 352 publications, "Environmental Studies" with 307 publications, "Green Sustainable Science Technology" with 225 publications, and "Business Finance" with 169 publications.

Tuble II () to of Science Curegories and Tublearion (amore)		
Field (Web of Science Categories)	Record Count	
Economics	435	
Environmental Sciences	352	
Environmental Studies	307	
Green Sustainable Science Technology	225	
Business Finance	169	

Table 1. Web of Science Categories and Publication Numbers

Graph 1 shows the distribution of publications over the years. It was determined that the highest number of publications occurred in 2021, with 99 publications, followed by 2019, with 90 publications; 2024, with 89 publications; 2020, with 86 publications; and 2022, with 84 publications, respectively. There was a low appearance in the number of publications between 2001 and 2006, with only 28 publications.



Graph 1. Distribution of Web of Science Publications Over Time

When the types of publications are examined, it is determined that the majority are articles, with 842 publications, followed by conference proceedings, with 94 publications; book chapters, with 51 publications; and review articles, with 25 publications. The relevant information is presented in Graph 2 below.



Graph 2. Distribution of Publications by Document Types (Web of Science)

The VOSviewer program was used in the analysis of this study. VOSviewer is a software developed to create and visualize bibliometric maps related to scientific fields. It is beneficial in presenting large-scale maps in an easily interpretable manner (Van Eck & Waltman, 2010: 524).

#### 3.3. Findigs

In this section, the findings obtained from the bibliometric analysis are reported in detail. The analysis outputs are structured and presented under various subheadings. In this context, the subheadings in the study are determined as "Author Co-authorship Analysis", "Citation Analysis of Authors", "Co-occurrence Analysis of All Keywords", "Citation Analysis by Coganization", "Bibliographic Coupling of Documents" and "Bibliographic Coupling of Authors", respectively.

#### 3.3.1. Author co-authorship analysis

In the co-authorship analysis carried out by determining at least one publication and at least one citation criterion, a network map was created to identify the authors who collaborated and established connections the most. As a result of the analysis, it was seen that 17 authors gathered in a single cluster had a total of 136 connections. Each of these authors has a total connection strength of 16 units, and their collaboration levels are close to each other. However, the most cited authors-Wai Fong Chua (822 citations), Roger Simnett (822 citations), Ann Vanstraelen (822 citations), David C. Wilson (675 citations), and Ljiljana Rodic (590 citations)-are not among the most connected authors. Similarly, it was observed that the authors with the most publications are not among the most connected names in the network. This suggests that academic productivity, citation count, and collaboration density do not always have a direct relationship.

Mugabowindekwe Maurice, Kagoyire Clarisse, Alexandridis Thomas, and Meta Vivianne, who are at the center of the network, stand out among the authors with the most intense collaborations due to their high number of connections and spatial centrality. These authors connect to many network parts, acting as collaborative bridges. In addition, authors such as Castillo Jesus Ortuno, Amponsah Mary, Mensah Foster, and Garba Issa support the integrity of the research group thanks to the strong relationships they have established with both the periphery and the center.

Paradigma, 2025, 14(1)



Figure 1. Co-Author Ties Showing Collaboration Between Authors

#### 3.3.2. Citation analysis of authors

Based on the criteria of at least one publication and one citation, a collaboration network consisting of 24 authors and a total of 136 connections was revealed in the co-authorship analysis. As a result of the study, it was determined that each of the 17 authors gathered in a single cluster had a total connection power of 16 units. When the created network map was examined, it was seen that names such as David C. Wilson (141 connection power, 6 publications, 675 citations), Robert Lensink (52 connection power, 3 publications, 256 citations), MD Aslam Mia (54 connection power, 5 publications, 66 citations) and Brian Dollery (17 connection power, 10 publications, 130 citations) were at the center of the network and established a high level of co-authorship relationship. In contrast, the leading authors in terms of number of citations, such as Wai Fong Chua (822 citations), Roger Simnett (822 citations), and Ann Vanstraelen (822 citations), have only 1 unit of link strength and are located at the edges of the network. This suggests that authors with high citation counts are not always central in collaboration. Similarly, it is observed that the authors despite having high link strength. Overall, this analysis reveals that there is not always a direct and parallel relationship between academic productivity (number of publications), impact (number of citations), and collaboration density (link strength).



**Figure 2. Citation Ties of Authors** 

#### 3.3.3. Co-occurrence analysis of all keywords

The co-occurrence analysis of keywords revealed a very dense bibliometric structure with 2,712 keywords, 10,364 links, and 10,810 units of total link strength. The study was based on a minimum of 10 occurrences, and it was seen that the most prominent term among the keywords above this threshold was "financial sustainability". This concept had the highest appearance by being repeated 260 times. It also played a central role in its relationship with other keywords, with a connection strength of 1,190. The term "financial sustainability" is followed by "sustainability" (80 occurrences, 368 connection strength), "microfinance" (32 occurrences, 152 connection strength), "local government" (20 occurrences, 82 connection strength), and "COVID-19" (19 occurrences, 101 connection strength), respectively. When the cluster structure of the keywords is examined, it is understood that 131 different clusters are formed, which shows that the analyzed literature has interdisciplinary and thematic diversity. These results reveal that concepts such as sustainability, microfinance, public administration, and financial performance are intensively discussed in the academic literature; strong thematic ties are established between these topics.



Figure 3. Most Frequently Used Keyword Ties

#### 3.3.4. Citation analysis by country

In the citation analysis conducted by country, 77 countries, 356 connections, and 733 units were evaluated based on total connection power. Along with the countries' publication and citation numbers, the scientific collaboration ties established between these countries were also examined. In the visual VOSviewer network map, countries were clustered according to their work; 13 different thematic clusters were created, separated by colors.

According to the data, the UK (85 publications, 2,947 citations) is the country with the highest number of citations, followed by the US (115 publications, 2,479 citations), the Netherlands (36 publications, 2,419 citations) and China (89 publications, 848 citations). China, in particular, ranks second in the number of publications and has a central position on the map. This shows that China is active in productivity and global research collaborations. The cluster that includes China has intense connections with many Asia-Pacific countries, especially Malaysia, Pakistan, India, and Australia. In the network map, it is seen that countries such as the USA (154), the UK (117), and Australia (106) are at the center of the network with their high connection power. These countries stand out not only with their number of citations but also with their high levels of international cooperation. China, on the other hand, has strong and effective connections with 57 units of connection power but is positioned more within the Asian network compared to the Anglo-Saxon networks in the center. Türkiye is included in the analysis with 14 publications and 231 citations per publication is approximately 16.5, and although it is similar to some European countries in this respect, the cooperation density remains limited. The 13 cluster structures created as a result of the analysis clearly reveal thematic similarities, regional collaborations, and intensities of scientific interaction between countries.



**Figure 4. Citation Ties of Countries** 

## 3.3.5. Citation analysis by organization

In the citation analysis conducted according to institutions, 294 institutions were evaluated with 1,048 connections and 1,273 units of total connection power. The scientific publication production of the institutions and the citations they received were analyzed; scientific collaboration networks between institutions were visualized. In the network map created with VOSviewer, institutions were clustered based on joint publication production and positioned close to or far from each other according to their connection frequencies. Institutions that stand out in terms of number of citations include Maastricht University (894 citations, 3 publications), University of Antwerp (837 citations, 2 publications), and University of New South Wales (822 citations, 3 publications). However, the structure with the strongest institutional connections in the network center is formed around Imperial College London; this institution shows high scientific impact and a high level of international collaboration with 619 citations, 7 publications, and 75 units of connection power. This institution, located in the green cluster in the visual, has direct connections to many other institutions. In the network map, it is seen that universities based in Malaysia (for example, Universiti Sains Malaysia, Universiti Kebangsaan Malaysia, and Universiti Putra Malaysia) form a distinct cluster and integrate into global academic networks by establishing connections with institutions such as Harvard, Tsinghua, and Oxford. This structure reflects Southeast Asia's recent increase in academic influence and collaboration tendency. In addition, institutions such as the University of New England, the University of Calabria, and the University of Palermo are represented on the right side of the image with certain clusters of connections. This situation shows that the institutions form a multi-centered network structure with collaborations that differ geographically and thematically.

In general, it is understood that the 294 institutions analyzed are divided into 23 clusters; these clusters are shaped mainly based on regional and thematic proximity. The evaluation of the number of citations and the strength of connections together reveals that institutional academic impact is strengthened by productivity and international interaction.



Figure 5. Citation Ties of Institutions

#### 3.3.6. Bibliographic coupling of documents

In the bibliographic coupling analysis, 594 documents were evaluated based on 5,082 links and 11,700 units of total link strength. This analysis measures documents' content and thematic closeness based on familiar reference sources. The results obtained observed that certain studies in the literature were clustered based on their bibliographic similarities and that research trends were gathered around certain centers of attraction.

Although Simnett (2009) is one of the most influential texts in the literature, with 822 citations, it has a relatively low bibliographic coupling density with 18 units of link strength. In contrast, Quayes (2012) is the study that reached the highest bibliographic link strength with 173 units of link strength despite receiving 154 citations. Similarly, Hermes (2007) has 90 units of link strength with 193 citations, and Ahlin (2011) has 46 units among the studies that provide strong matching in the network. These findings show no direct relationship between the number of citations a study receives and its bibliographic matching power and that some studies, even if they receive few citations, can play a central role in content proximity.

When the network map is examined, it is seen that the documents are divided into 16 different clusters. Studies such as Simnett (2009), Ahlin (2011), McIntosh (2011), Hermes (2007), and Quayes (2012) are studies that are located close to the center of the network thanks to their dense connections and bridge clusters of different colors. On the other hand, some studies, such as Gu (2019), are located in more peripheral (edge) areas of the map due to their low number of connections. This situation shows that the relevant study may belong to an original field or have limited resource commonality with other literature.



Figure 6. Bibliographic Matching Ties of Works

#### 3.3.7. Bibliographic coupling of authors

In the bibliographic matching analysis of the authors, 1,708 authors, 44,263 connections, and 308,034 units of total connection power were evaluated. This analysis assumes content and thematic closeness between the authors who cite the same sources, revealing similarities in research lines. In the visual network map created by VOSviewer, the authors are positioned together according to their density of referencing and divided into 54 different clusters.

According to the analysis results, the author with the highest bibliographic matching power is David C. Wilson, a productive and central network figure with 6 publications, 675 citations, and 2,108 units of connection power. This is followed by Rodic, Ljiljana (3 publications, 590 citations, 1,280 link strength), Velis, Costas A. (4 publications, 504 citations, 1,584 link strength), and Scheinberg, Anne (3 publications, 469 citations, 1,371 link strength). The fact that these authors have high citation counts and bibliographic matching power indicates that their works are produced on similar themes regarding common reference structures and content focuses.

On the other hand, authors such as Chua, Wai Fong, Simnett, Roger, Vanstraelen, and Ann are among the most cited authors, with 822 citations each, but they only have 144 units of link strength. This suggests that although these authors have received many citations in the literature, their use of familiar sources with other authors is relatively limited, and they are associated with different literature clusters.

When the VOSviewer network is examined, authors such as Brian Dollery, Roy Mersland, and Beata Gavurova are in the central position, establishing connections with various clusters and being in thematic transition areas. In addition, the fact that some authors (such as Graham Currie, Usama Asif, and Hasan Dinçer) are positioned in more peripheral

parts of the network shows that the topics they work on are based on more original or different source structures than the literature of other authors.

	currie, graham			
	ahaus, kees gogishvili, di wilson, dollery, t ghouse, ghui gavurova, beata akram, muhan dincer, hasan	banerje aral, re vid david c. ope, r. Drian I, roy am	e, anyana al baskaran, gracelin n, jyun-long chuenchum, pav berne, carmen r	hnan, m. isorn alexandridis, thomas
🍂 VOSviewer			asif, usama	

Figure 7. Bibliographic Matching Ties of Authors

#### 4. Conclusion

Financial sustainability has become a fundamental conceptual framework for assessing companies' long-term value creation capacity on a global scale, their resistance to risks, and their compliance with stakeholder expectations. This study aims to systematically evaluate the field's conceptual development, research orientations, and interactional network structure by analyzing academic production on financial sustainability using the bibliometric method. Within the scope of the study, 975 academic publications published in the Web of Science database between 2001 and 2025 were analyzed using VOSviewer software. In this context, comprehensive analyses were conducted on authors, countries, institutions, keywords, and bibliographic structures.

In light of the findings, it was determined that financial sustainability research has both increased temporally and diversified thematically. There has been a significant concentration in the literature, especially since 2021; topics such as integrating ESG (environmental, social, governance) elements into corporate decision-making processes, microfinance applications, and digital financial inclusion have come to the fore. In the author's analysis, it was determined that there was no direct correlation between academic impact (number of citations), productivity (number of publications), and collaboration density (connection strength). While authors such as Wai Fong Chua, Roger Simnett, and Ann Vanstraelen stand out with their high citation numbers, names such as Mugabowindekwe Maurice and Kagoyire Clarisse are central actors in terms of collaboration level. This situation shows that financial sustainability is addressed with multi-centered and different epistemological approaches.

In the keyword association analysis, it was determined that terms such as "financial sustainability", "sustainability", "microfinance", "local government" and "COVID-19" have high frequency of repetition and connection strength in the literature. These concepts show that financial sustainability is addressed at the firm level and at the level of public administration, social crises, and development policies. The country-based analysis determined that the UK had the highest number of citations (2,947), and the USA had the highest number of publications (115). China is active in publication production and regional cooperation but differs thematically from the Anglo-Saxon literature clusters. Türkiye is included in the analysis with 14 publications and 231 citations but is in a peripheral position in the research network due to its low connectivity.

In the institutional analysis, Imperial College London has a leading position in terms of high publication, citation numbers, and connectivity. However, institutions based in Southeast Asia and Europe show significant clustering tendencies and shape regional research agendas. Bibliographical matching analyses reveal the thematic centrality of authors such as David C. Wilson, Rodic, and Velis in the literature, while works such as Simnett, Ahlin, Quayes, and Hermes are among the texts that create high contextual proximity in terms of reference structure. This situation shows that the financial sustainability literature is shaped around clusters based on specific texts, theoretically and methodologically.

The general results of the study reveal that the concept of financial sustainability should be evaluated not only with accounting and finance performance indicators but also with ESG integration, governance quality, social inclusion, climate risks, and sustainable growth parameters. The expanding multidisciplinary nature of the literature shows that financial sustainability is not a concept limited to financial institutions or companies but is also directly related to areas such as development economics, public finance, environmental policies, and social justice. In this context, measurement tools suitable for the holistic and interactive structure of the field need to be developed.

However, the study has some limitations. The analysis was limited to publications indexed only in the Web of Science Core Collection database. Therefore, national databases such as TÜBİTAK Ulakbim and YÖK Thesis Archive in Türkiye and important academic resources such as Scopus, SSRN, ProQuest, and PubMed on the international scale were excluded. In addition, excluding studies with limited online access or not included in open access systems may have prevented the holistic representation of the literature. In line with this limitation, three leading suggestions for future research stand out: (1) increasing micro-level empirical analyses focusing on sub-dimensions of financial sustainability such as ESG impacts, sustainable value chains, and green financial products; (2) conducting comprehensive studies on the integration of financial sustainability indicators with social development goals in developing countries and (3) performing bibliometric and content-based evaluations with broader representation and higher analysis power by integrating multiple data sources.

Statement on Research and Publication Ethics	This study does not require approval from an ethics committee.
Author Contributions	All authors contributed equally to this work.
Conflict of Interest Statement	The authors declare no potential conflicts of interest related to this study.

#### Kaynakça

- Ahlin, C., Lin, J., & Maio, M. (2011). Where does microfinance flourish? Microfinance institution performance in macroeconomic context. *Journal of Development Economics*, 95(2), 105–120.
- Ali, J., Hussain, K. N., Alnoor, A., Muhsen, Y. R., & Atiyah, A. G. (2024). Benchmarking methodology of banks based on financial sustainability using CRITIC and RAFSI techniques. *Decision Making: Applications in Management and Engineering*, 7(1), 315–341.
- Ayayi, A. G., & Sene, M. (2010). What drives microfinance institution's financial sustainability. *The Journal of Developing Areas*, 44(1), 303–324.
- Bogan, V. L. (2012). Capital structure and sustainability: An empirical study of microfinance institutions. *The Review of Economics and Statistics*, *94*(4), 1045–1058.
- Cao, Y., Alfadhli, A. M. H., Jaradat, M., Lile, R., Gadoiu, M., Banuta, M., ... & Shabbir, M. S. (2024). The impact of accounting practices on financial sustainability: A study of external block-holders and institutional ownership. *Review of Managerial Science*, 18(7), 1945–1961.
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233.
- Gleißner, W., Günther, T., & Walkshäusl, C. (2022). Financial sustainability: Measurement and empirical evidence. *Journal of Business Economics*, 92(3), 467–516.
- Gómez-Bezares, F., Przychodzen, W., & Przychodzen, J. (2017). Bridging the gap: How sustainable development can help companies create shareholder value and improve financial performance. *Business Ethics: A European Review, 26*(1), 1–17.
- Gregory, A., Tharyan, R., & Whittaker, J. (2014). Corporate social responsibility and firm value: Disaggregating the effects on cash flow, risk and growth. *Journal of Business Ethics*, 124(4), 633–657.
- Henock, M. S. (2019). Financial sustainability and outreach performance of saving and credit cooperatives: The case of Eastern Ethiopia. *Asia Pacific Management Review*, 24(1), 1–9.
- Le, T.-H., Chuc, A. T., & Taghizadeh-Hesary, F. (2019). Financial inclusion and its impact on financial efficiency and sustainability: Empirical evidence from Asia. *Borsa Istanbul Review*, *19*(4), 310–322.
- Li, K., Rollins, J., & Yan, E. (2018). Web of Science use in published research and review papers 1997–2017: A selective, dynamic, cross-domain, content-based analysis. *Scientometrics*, 115(1), 1–20.
- Lu, W., & Taylor, M. E. (2016). Which factors moderate the relationship between sustainability performance and financial performance? A meta-analysis study. *Journal of International Accounting Research*, 15(1), 1–15.
- Margolis, J. D., Elfenbein, H. A., & Walsh, J. P. (2009). Does it pay to be good... and does it matter? A meta-analysis of the relationship between corporate social and financial performance. *Working Paper*, Harvard University.
- Ng, A. C., & Rezaee, Z. (2015). Business sustainability performance and cost of equity capital. *Journal of Corporate Finance, 34*, 128–149.
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, 24(3), 403–441.

- Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review*, 84(3), 937–967.
- Soppe, A. (2004). Sustainable corporate finance. Journal of Business Ethics, 53(1-2), 213-224.
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- Wan, K., Cao, L., & Xu, Q. (2025). Extreme weather and the financial sustainability of rural commercial banks: Evidence from China. *Applied Economics*, 1–16.
- Wijesiri, M., Viganò, L., & Meoli, M. (2015). Efficiency of microfinance institutions in Sri Lanka: A two-stage double bootstrap DEA approach. *Economic Modelling*, 47, 74–83.
- World Bank. (2020). *Financial sustainability: Capital investment planning and management Output 4.1.1*. International Bank for Reconstruction and Development.
- Zabolotnyy, S., & Wasilewski, M. (2019). The concept of financial sustainability measurement: A case of food companies from Northern Europe. *Sustainability*, *11*(18), 5139.