

COMPORTAMIENTO FINANCIERO: UN ENFOQUE BIBLIOMÉTRICO

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Recibido 6 de julio 2023; aceptado 19 de diciembre 2024

RESUMEN

El objetivo principal de este trabajo es presentar un análisis bibliométrico del comportamiento financiero teniendo en cuenta las actitudes y la autoeficacia. Se analizaron un total de 12.553 artículos desde 1975 hasta diciembre de 2022 dentro de la colección Core de la Web of Science. Junto a los datos fundamentales, un examen exhaustivo de los enlaces y de la fuerza total de enlaces (TLS) ayudó a identificar a los cinco autores principales del campo y otros grupos de información. Por último, esta sección presenta un análisis de la aparición de palabras clave, que revela cómo el término Finanzas interactúa con otros términos como Alfabetización Financiera, Comportamiento Financiero, Conocimiento Financiero y Educación Financiera.

Palabras Clave: Análisis Bibliométrico, Comportamiento Financiero, Acoplamiento, Co-palabra, Co-citación.

Códigos JEL: G4, D14, G53

FINANCIAL BEHAVIOR: A BIBLIOMETRIC APPROACH

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Received July 6th 2023; accepted December 19th 2024

ABSTRACT

The main objective of this paper is to present a bibliometric analysis of financial behavior considering attitudes and self-efficacy. A total of 12.553 papers from 1975 to December 2022 within the Core collection of the Web of Science were analyzed. Alongside fundamental data, a thorough examination of link and Total Link Strength (TLS) helped identify the field's top five authors and other information clusters. Finally, this section presents an analysis of keyword occurrences, revealing how the term Finance interacts with other terms such as Financial Literacy, Financial Behavior, Financial Knowledge, and Financial Education.

Keywords: Bibliometric Analysis, Financial Behavior, Coupling, Co-word, Co-Citation.

JEL Codes: G4, D14, G53

1. INTRODUCTION

The importance of financial education stems from various factors, including its impact on daily decision-making. Siegfried y Rendigs Fels (1979) were among the first to explore this concept through economic testing, and they concluded that women tend to perform worse than men, which in turn affects their decision-making abilities. Likewise, Bernheim (1996) notes that financial education impacts decision-making and behavior, while also enabling individuals to effectively utilize financial technologies and avoid squandering economic opportunities (Greenspan, 2003). Additionally, promoting financial literacy is crucial for achieving good financial health in countries. This is because it enables individuals to pursue well-being by utilizing essential tools and knowledge (Santomero, 2003), while also impacting planning and retirement decisions (Almenberg y SÄve-SÖderbergh, 2011; Anderson et al., 2017; Bernheim, 1996; Boisclair et al., 2017; Bucher-Koenen y Lusardi, 2011; Finke et al., 2017; Hastings y Mitchell, 2020; Lusardi y Mitchell, 2011a, 2007, 2008, 2011b, 2014; Sekita, 2011), their financial behavior (Agarwal et al., 2015; Arrondel, 2013), participation in the stock and investment market (Hassan Al-Tamimi y Annod, 2009; Amari y Jarbouï, 2015; van Rooij et al., 2011), among others.

The rapid expansion of financial literacy research has exposed a multitude of topics, concerns, and variant evaluation methodologies. Therefore, conducting an analysis of the literature that aims to chart, examine, and incorporate current knowledge is crucial (Casprini et al., 2020). Several bibliometric studies have been conducted in this field. Li (2020) reviewed the most common measures used in financial education, and Ouachani et al. (2021) reviewed the methods used to measure financial literacy. Notably, Goyal and Kumar (2021) conducted a bibliometric analysis that focuses on quantitative and qualitative representations of the subject. Recently, Molina et al. (2022) conducted a bibliometric analysis of financial education in SMEs, revealing a variety of topics and theories related to the field. A repeated concept in this literature is financial behavior. Financial behavior is typically understood to be rational within the field of economics, considering the various factors that can influence it, including emotions (Ricciardi, 2005), money management (Xiao, 2008), and available resources (Nababan y Sadalia, 2013).

Consequently, this research aims to analyze financial behavior by considering attitude and self-efficacy to identify trends and structures within the research field. Moreover, this literature review comprehensively analyzes and summarizes essential concepts related to this important societal issue, using an objective and clear language style. The methodology employed here presents a descriptive analysis of co-citation (past), coupling (present), co-word (future), productivity, and performance (H-index). This analysis considers diverse indicators, such as authors, papers, and journals. The dataset used in this study was obtained by performing a search query on Web of Science (WoS) using the terms: "financial literacy" AND "behav*" OR "financial

[https://doi.org/10.56503/CIMBAGE/Vol.1/Nro.27\(2025\)/3281](https://doi.org/10.56503/CIMBAGE/Vol.1/Nro.27(2025)/3281)

attitude*" OR "financial self-efficacy" OR "financial Behav*". The research suggests that Lusardi holds a preeminent and influential position as an author in the field, and the Journal of Consumer Affairs is a significant and vital publication in the area. Research has also delved into topics concerning financial literacy, decision making, financial behavior, gender, and financial well-being. Lastly, a keyword analysis was conducted to measure their frequency and correlation strength.

The paper is structured as follows: Section 2 outlines the bibliometric method used for the study. Section 3 presents the descriptive findings and co-citation analysis. Section 4 discusses the results, and Section 5 presents the conclusions.

2. BIBLIOMETRIC METHOD

Bibliometrics facilitate quantitative analyses of scientific publications in a specific field (Blanco-Mesa et al., 2017). Such analyses enable the demonstration of the quality and performance of scientific publications through bibliometric indicators. According to Blanco-Mesa et al. (2019), these studies provide a comprehensive overview of a specific topic and offer guidance to the academic community on identifying new research gaps to contribute novel approaches. The objective is to examine the generalities and characteristics of co-citation in the past, coupling in the present, and co-word in the future, as well as productivity and performance (H-index), using various indicators such as authors, research, and journals. This study focuses on examining financial behavior (FB) research for a comprehensive overview of the field. To achieve this objective, it is necessary to explore the following inquiry: What are the most significant issues in the analysis of financial behavior? Bibliometric studies employ diverse techniques to identify convergence among research fields, using graphical representations that illustrate the patterns of research topics and their interrelationships. These visual depictions aid in comprehending current hotspots and emerging trends in scientific research. This article focuses on financial education studies that relate to behavior, attitude, and financial knowledge. The studies consider five stages, which are illustrated in Figure 1.

To obtain the data, we utilized the core collection of the Web of Science between 1975 and 2021. The search equation for the data search is determined using the following keywords: "financial literacy" AND "behav*" OR "financial attitude*" OR "financial self-efficacy" OR "financial Behav*". The search resulted in 1533 observations across various categories, such as Economics, Business, Business Finance, Family Studies, Management, Psychology (Multidisciplinary), Education (Educational Research), and Social Sciences (Interdisciplinary). Additionally, the Web of Science indexes various categories, including the Social Sciences Citation Index (SSCI), Emerging Sources Citation Index (ESCI), Science Citation Index Expanded (SCI-EXPANDED), Book Citation Index – Social Sciences y Humanities (BKCI-SSH), Conference Proceedings

Citation Index – Social Science y Humanities (CPCI-SSH), Arts y Humanities Citation Index (AyHCI), and Conference Proceedings Citation Index – Science (CPCI-S).

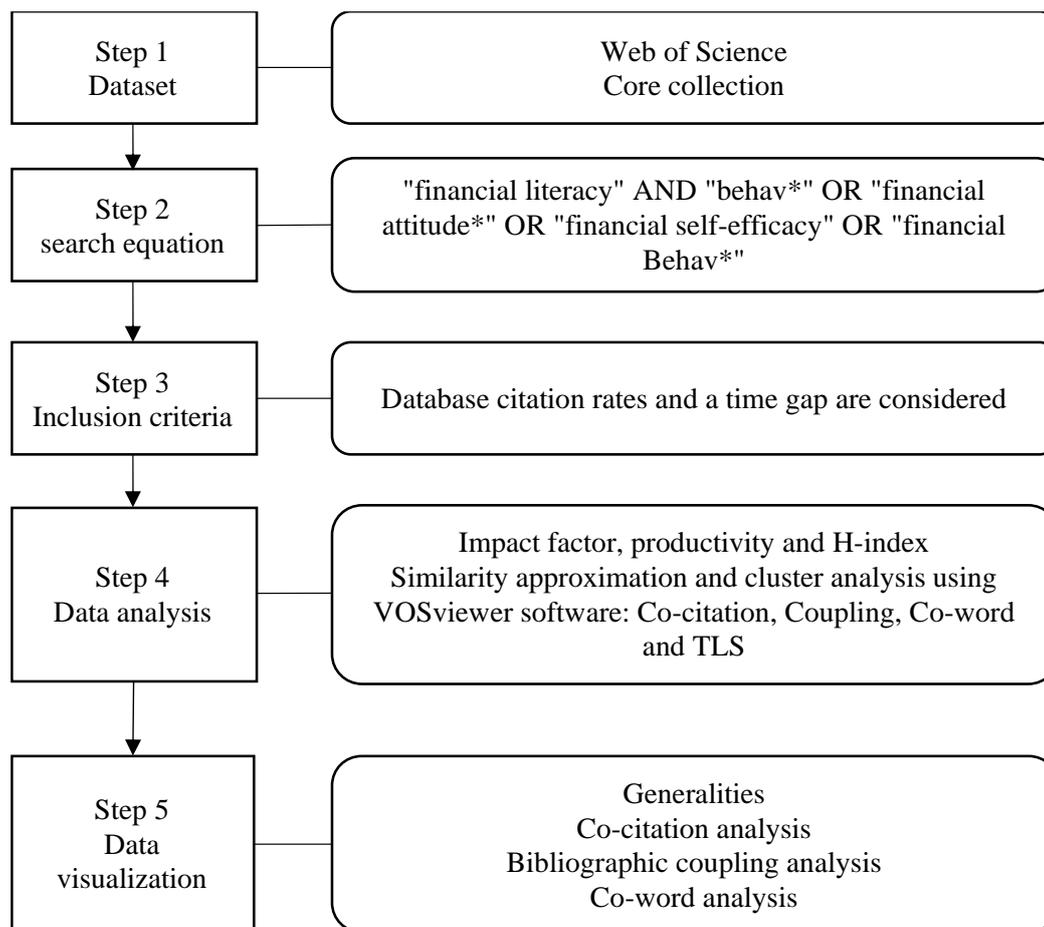


Figure 1. Stages in this bibliometric study

Source: Own elaboration based on (Blanco-Mesa et al., 2023).

The study examines the impact indicators, specifically the Impact Factor, observed in the journals that publish the articles. (Garfield, 1972); Productivity can be measured by the quantity of published articles and the H index (Hirsch, 2005), This enables us to monitor the efficacy of both researchers (Alonso et al., 2009), countries (Guan y Gao, 2008), universities (Schubert, 2007) and journals (Braun et al., 2006). Using the collected data, computerized scientific mapping tools can be utilized to conduct bibliometric analyses. Cobo et al. (2011) state that scientific mapping enables establishing similarity measures to standardize the relationships among units of analysis, mapping stages, analysis methods, visualization techniques, and the result interpretation. Specialized software is utilized for this process, enabling efficient processing and visualization. Notable software that can be highlighted includes Bibexcel, CiteSpaceII, CoPalRed, IN-SPIRE, Leydesdorff's Software, Network Workbench Tool, Sci2Tool, VantagePoint, Bibliometrix, and VOSViewer. (Blanco-Mesa et al., 2023).

For this study, we utilized VOSviewer software which utilizes the techniques of clustering, natural language processing, and creating bibliometric networks. This

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software allows for processing various database sources, including Web of Science, Scopus, Dimensions, Lens, and PubMed. Additionally, it creates databases from Crossref, Europe PMC, OpenAlex Semantic Scholar, OpenCitations, and WikiData. Lastly, VOSviewer also enables the visualization of bibliometric networks, density maps, and the creation of screenshots (Nees Jan van Eck y Waltman, 2010; Ness Jan Van Eck et al., 2006). Thus, VOSviewer enables the establishment of similarities, allowing for an analysis of the strength of their link attributes (Nees Jan van Eck y Waltman, 2010; Ness Jan Van Eck et al., 2006). Link attributes are referred to as Links (L) and Total Link Strength (TLS). These attributes indicate the number of links that an item has with other items and the total strength of those links (Leiden University, 2015; Nees Jan van Eck y Waltman, 2010). These relationships can be established through citation, co-citation, bibliographic coupling, co-authorship, and co-occurrence, and can be visualized in cluster diagrams.

Likewise, we utilize the VOSviewer tool (Nees Jan van Eck y Waltman, 2010; Ness Jan Van Eck et al., 2006), to identify similarities. This tool analyzes the strength of link attributes to establish connections between different items. Link attributes are referred to as Links (L) and Total Link Strength (TLS). These attributes indicate the number of links that an item has with other items and the total strength of those links (Leiden University, 2015; Nees Jan van Eck y Waltman, 2010). These factors can be determined through citation, co-citation, bibliographic coupling, co-authorship, and co-occurrence, and they can be visualized in cluster diagrams.

3. BIBLIOMETRIC RESULTS

This section presents the bibliometric findings from the dataset analysis. The findings are organized into the following sections: Generalities, Co-citation, Coupling, and Co-word. These sections highlight impact, productivity, and impact indices.

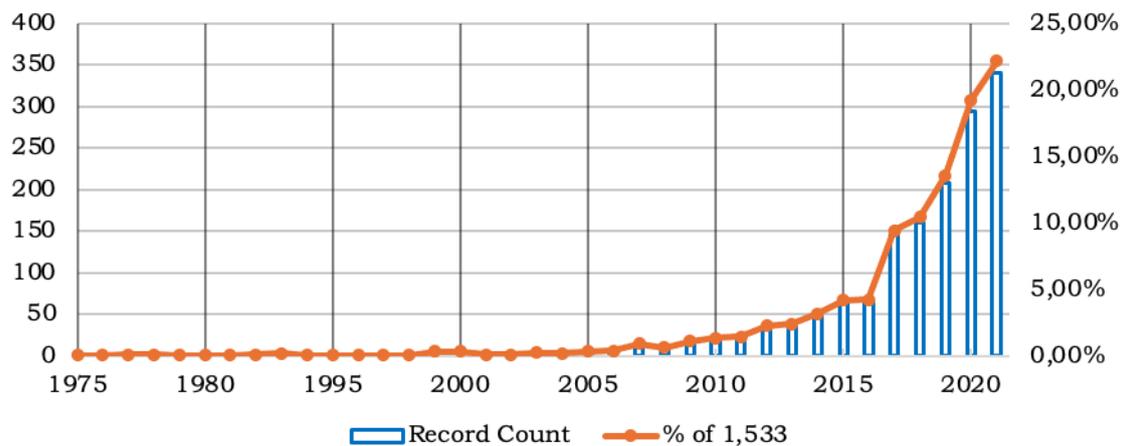
3.1 Generalities

As science progresses, it generates various indicators that enable us to observe its evolution and interest within the academic community. For conducting research on (FB), this article presents an overview of the field, including the evolution of FB, citation structure, articles, authors, and high-performing journals. Additionally, the contributions of various countries are highlighted. Graph 1 displays the progression of publications on FB, indicating a growth over the last five years that accounts for 74.89% of the total publications. This rise demonstrates a distinct fascination with the research field and its potential to make contributions in a variety of thematic areas, which will undoubtedly further its development.

Table 1 displays the citation distribution of articles based on their accumulated citations and percentage. It is noteworthy that a mere 2.09% of articles have more than 100 citations, while 27.92% have citations ranging between 10 and less than 100, and 69.99% have none or only one citation. This table highlights the vast number

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of published articles and how higher-cited ones may serve as reference points for studies in the field of FB.



Graph 1. Evolutionary line of publications on FB

Source: Elaborate based on WoS.

Table 1. Citation structure

Cited references	Total Publications	%
≥ 500 citations	2	0.13%
≥ 300 citations	2	0.13%
≥100 citations	28	1.83%
≥ 50 citations	51	3.33%
≥ 30 citations	71	4.63%
≥10 citations	306	19.96%
≥ 1 citation	733	47.81%
Without citations	340	22.18%
TOTAL	1533	100.0%

Source: Elaborate based on WoS.

Table 2 displays the 30 most frequently cited articles in FB that exceeded 100 citations, with 2.09% identified in the citation structure. Notable among these articles are the works of Lusardi y Mitchell (2007b), Fernandes et al. (2014), Sandra J. Huston (2010) and Puri y Robinson (2007). The first study focuses on a population called the baby boomers, analyzing the levels and patterns of total net worth by dividing them into planners and non-planners. Results reveal a significance in housing wealth dependence, with planners having greater wealth levels and differing savings practices (Lusardi y Mitchell, 2007b). The second study analyzes the relationship between financial literacy, financial education and financial behavior, where financial literacy is strongly associated with financial behavior. It reveals a significant link between financial literacy and financial behavior, which decreases over time and is influenced by psychological factors. Financial education has several important constraints, and a combination of several strategies is needed to improve consumers' financial behavior (Fernandes et al., 2014). The third study analyzes measurement models of financial

literacy, examining definitions and limitations related to standardization and acceptance. Additionally, the study equates financial literacy with financial knowledge (Sandra J. Huston, 2010).

Table 2. The 30 most cited papers on FB

No	AU	TI	J	TC	PY
1	(Lusardi y Mitchell, 2007b)	Baby boomer retirement security: the roles of planning, financial literacy, and housing wealth	Journal of Monetary Economics	725	2007
2	(Fernandes et al., 2014)	Financial literacy, financial education, and downstream financial behaviors	Management Science	550	2014
3	(Sandra J. Huston, 2010)	Measuring financial literacy	Journal of Consumer Affairs	471	2010
4	(Puri y Robinson, 2007)	Optimism and economic choice	Journal of Financial Economics	305	2007
5	(Shim et al., 2010)	Financial socialization of first-year college students: the roles of parents, work, and education	Journal of Youth and Adolescence	260	2010
6	(J. S. Hastings et al., 2013)	Financial literacy, financial education, and economic outcomes	Annual Review of Economics	241	2013
7	(Reimers et al., 2009)	Associations between a one-shot delay discounting measure and age, income, education and real-world impulsive behavior	Personality and Individual Differences	201	2009
8	(Perry y Morris, 2005)	Who is in control? The role of self-perception, knowledge, and income in explaining consumer financial behavior	Journal of Consumer Affairs	199	2005
9	(Suri y Jack, 2016)	The long-run poverty and gender impacts of mobile money	Science	191	2016
10	(Prowse, 1990)	Institutional investment patterns and corporate financial behavior in the	Journal of Financial Economics	189	1990

		united-states and japan			
11	(Willis, 2008)	Against financial-literacy education	IOWA Law Review	179	2008
12	(COLE et al., 2011)	Prices or knowledge? What drives demand for financial services in emerging markets?	Journal of Finance	170	2011
13	(Cronqvist et al., 2012)	Behavioral consistency in corporate finance: CEO personal and corporate leverage	Journal of Financial Economics	164	2012
14	(Brüggen et al., 2017)	Financial well-being: a conceptualization and research agenda	Journal of Business Research	160	2017
15	(Jorgensen y Savla, 2010)	Financial literacy of young adults: the importance of parental socialization	Family Relations	158	2010
16	(Allgood y Walstad, 2016)	The effects of perceived and actual financial literacy on financial behaviors	Economic Inquiry	146	2016
17	(Jing Jian Xiao et al., 2014)	Consumer financial capability and financial satisfaction	Social Indicators Research	139	2014
18	(Brounen et al., 2013)	Energy literacy, awareness, and conservation behavior of residential households	Energy Economics	136	2013
19	(Postmus et al., 2012)	Understanding economic abuse in the lives of survivors	Journal of Interpersonal Violence	133	2012
20	(Kayo y Kimura, 2011)	Hierarchical determinants of capital structure	Journal of Banking and Finance	132	2011
21	(Jing Jian Xiao et al., 2009)	Acting for happiness: financial behavior and life satisfaction of college students	Social Indicators Research	130	2009
22	(Jing Jian Xiao et al., 2011)	Antecedents and consequences of risky credit behavior among college students: application and extension of the theory of planned behavior	Journal of Public Policy and Marketing	129	2011

23	(Vos et al., 2007)	The happy story of small business financing	Journal of Banking Finance	126	2007
24	(Calcagno y Monticone, 2015)	Financial literacy and the demand for financial advice	Journal of Banking Finance	123	2015
25	(Klapper et al., 2013)	Financial literacy and its consequences: evidence from Russia during the financial crisis	Journal of Banking Finance	122	2013
26	(Gerardi et al., 2013)	Numerical ability predicts mortgage default	Proceedings of the National Academy of Sciences of the United States of America	113	2013
27	(Beshears et al., 2015)	The effect of providing peer information on retirement savings decisions	Journal of Finance	112	2015
28	(Farrell et al., 2016)	The significance of financial self-efficacy in explaining women's personal finance behaviour	Journal of Economic Psychology	109	2016
29	(Servon y Kaestner, 2008)	Consumer financial literacy and the impact of online banking on the financial behavior of lower-income bank customers	Journal of Consumer Affairs	108	2008
30	(Disney y Gathergood, 2013)	Financial literacy and consumer credit portfolios	Journal of Banking Finance	105	2013

Source: Elaborate based on WoS. AU: Authors; TI: Title paper; J: Journal; TC: Total citation; PY: Publication years

Finally, the fourth study aims to develop a measurement model that correlates positive beliefs regarding future economic conditions with the psychometrics of optimism. This link between optimism and various work/life decisions is explored. (Puri y Robinson, 2007). Thus, these articles are essential in advancing the research field. Other articles listed in the Top-30 can also be noteworthy, but due to document length, they cannot receive thorough attention.

Table 3 displays the top ten authors who are both highly productive and best-performing. Xiao J.J. is the most productive and best-performing author, having 23 publications, an H-index of 14, and four in the Top 30. Serido, Shim, and Bennett follow behind with an H-index of 10 and a total of 20 publications, including publications in the Top 30, except for Bennett. In tenth place, Lusardi stands out with nine publications, an H-index of 7, and two publications in the Top 30, where one is the most cited.

Table 3. Top 10 Productivity and Performance Authors on FB

N	Authors	Publications	% of 1,533	H- index	Top-30
1	Xiao J. J.	23	1,5%	14	4
2	Serido J.	20	1,3%	10	1
3	Shim S.	20	1,3%	10	3
4	Bennett D. A.	19	1,2%	10	-
5	Boyle P. A.	19	1,2%	10	-
6	Yu L.	17	1,1%	8	-
7	Kadoya Y.	10	0,7%	7	-
8	Khan M. S. R.	10	0,7%	7	-
9	James B. D.	9	0,6%	7	-
10	Lusardi A.	9	0,6%	7	2

Source: Elaborate based on WoS.

Table 4 displays the most published journals, featuring indicators such as the impact factor, H-index, and quartile rank of these journals. Overall, it is observed that certain journals lack an impact factor and are listed in the Emerging Sources Citation Index (ESCI). Additionally, most journals fall within quartiles Q2 and Q3 and possess an H-index ranging between 4 and 17. Among the 15 journals included, the Journal of Consumer Affairs (JCA) stands out as having published 46 articles on the topic of FB. JCA has an impact factor of 2.131 and an H-index of 17, with quartiles Q2 and Q4. Additionally, JCA has 3 publications in the Top-30 in this field. Furthermore, the International Journal of Consumer Studies (IJCS), the Journal of Family and Economic Issues (JFEI), and the International Journal of Bank Marketing (IJBM) are also prominent in this ranking as they are the top publishers in the field of FB.

Table 4. The 15 most productivity and performance journals on FB

N	J	PFB	% Of 1,533	IF	H-index	Q	Top-30
1	JCA	46	3.001	2.131	17	Q2-Q4	3
2	IJCS	44	2.870	3.864	17	Q3	-
3	JEP	18	1.174	2.073	13	Q2-Q3	1
4	IJBM	41	2.674	4.412	12	Q2	-
5	JEBO	28	1.826	1.635	12	Q3	-
6	JBF	17	1.109	3.07	12	Q1-Q2	-
7	JFEI	44	2.870	-	11	Q1-Q2	-
8	JFCP	38	2.479	ESCI	9	Q2	-
9	JBEF	35	2.283	ESCI	7	Q1	-
10	FPS	26	1.696	2.988	7	Q2	-
11	JBEE	17	1.109	1.382	7	Q3	-
12	JPEF	15	0.978	0.84	7	Q4	-
13	JBF*	14	0.913	1.647	7	Q3	-
14	RBF	14	0.913	ESCI	5	Q3	-
15	SUS	16	1.044	3.251	4	Q2-Q3	-

Source: Own elaboration. J: Journal; PFB: Publications in Financial behavior; IF: Impact factor; Q: Quartile; ESCI: Emerging Sources Citation Index; JCA: Journal Of Consumer Affairs; IJCS: International Journal Of Consumer Studies; JEP: Journal Of Economic Psychology; IJBM: International Journal Of Bank Marketing; JEBO: Journal Of Economic Behavior Organization; JBF: Journal Of Banking Finance; JFEI: Journal Of Family And Economic Issues; JFCP: Journal Of Financial Counseling And Planning; JBEF: Journal Of Behavioral And Experimental Finance; FPS: Frontiers In Psychology; JBEE: Journal Of Behavioral And Experimental Economics; JPEF: Journal Of Pension Economics Finance; JBF*: Journal Of Behavioral Finance; RBF: Review Of Behavioral Finance; SUS: Sustainability.

Graph 2 displays the distribution of publications among various countries. The data reveals that the United States has published 37.6% of the research papers, with the United Kingdom (9.5%), Germany (5.4%), India (5.1%), and Australia (4.8%) following with the highest values. The dominance of the United States in this field is evident, and research is predominantly conducted in Western or Western-influenced countries. The absence of countries including the People's Republic of China and some African nations is notable. The general overview of FB research has been presented descriptively, highlighting relevant publications, authors, journals, countries, and citations to consider.

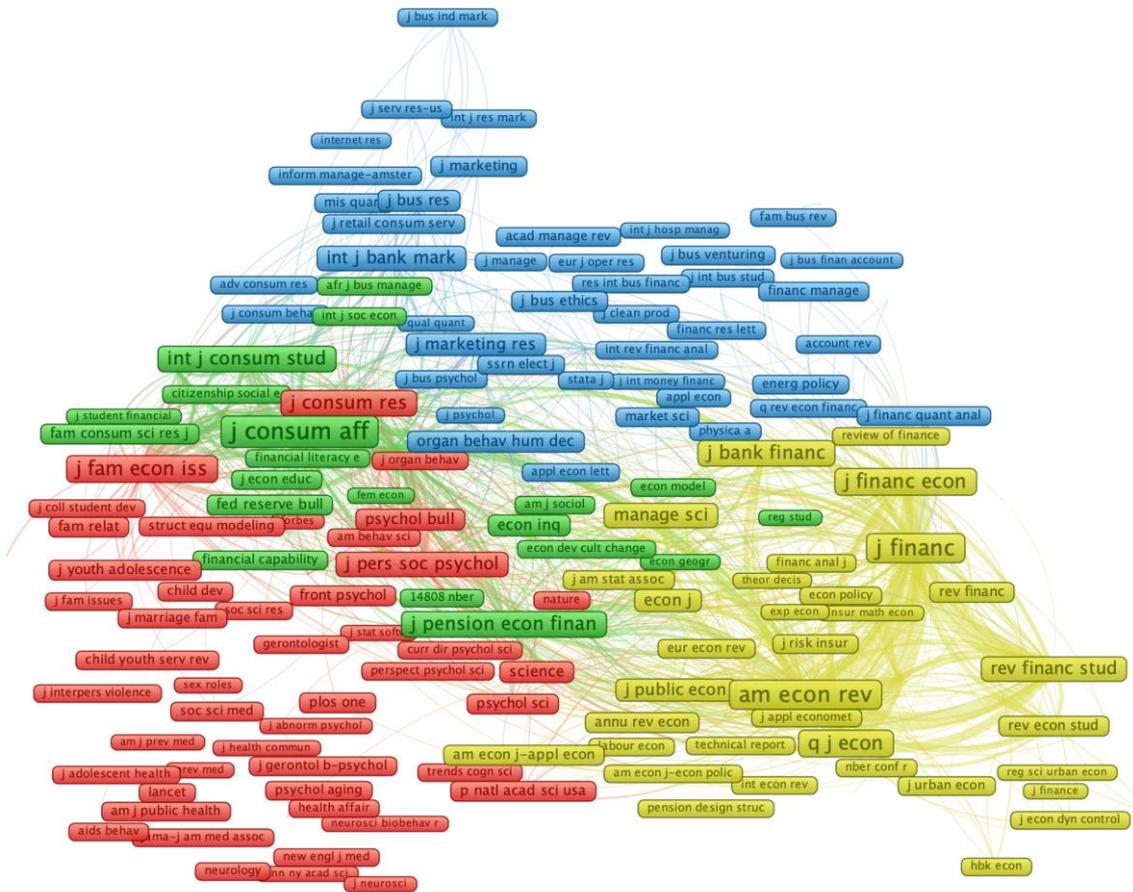


Figure 3.b. Co-citation journals in FB

Source: Own elaboration based on VOSviewer. Graphics analyzed 20 citations.

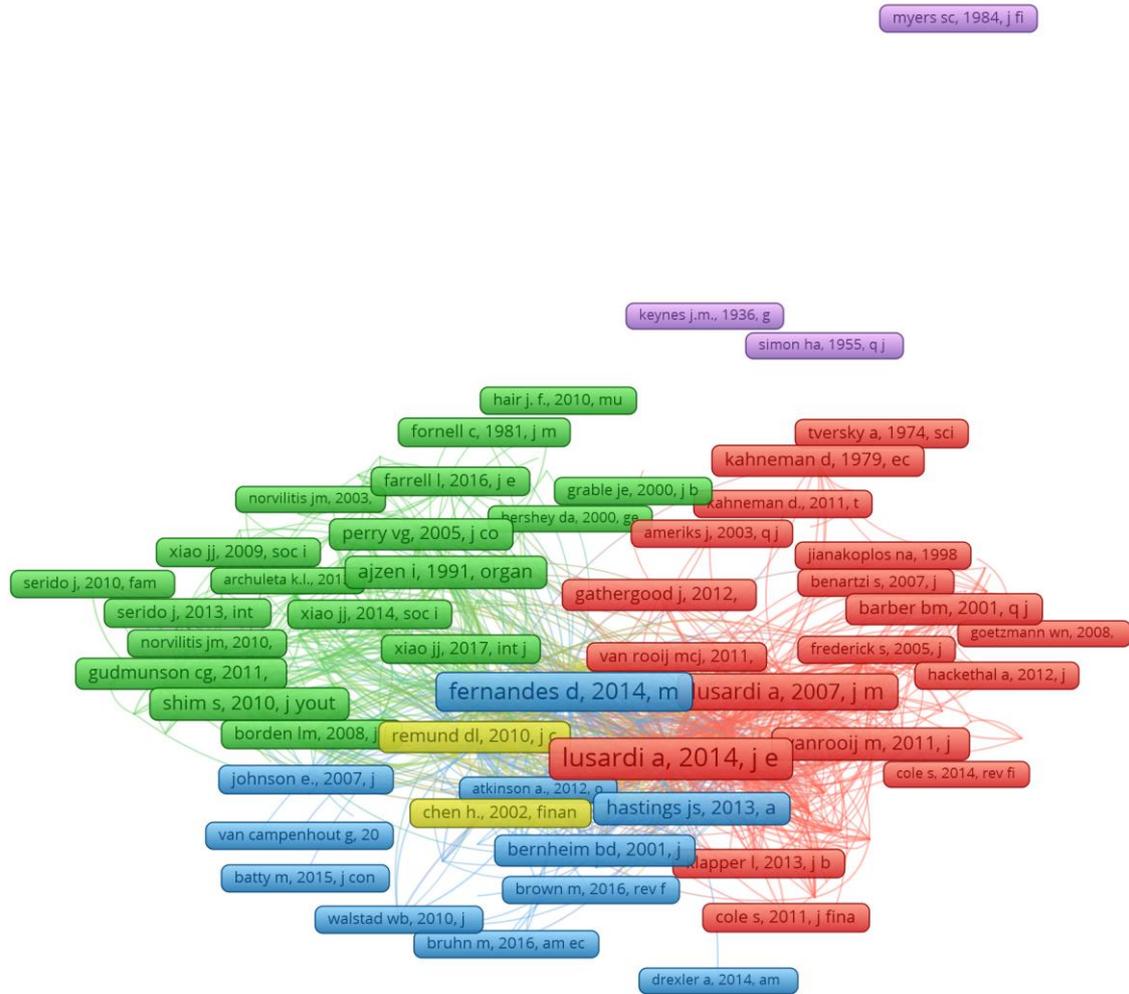


Figure 3.c. Co-citation references in FB

Source: Own elaboration based on VOSviewer. Graphics analyzed 20 citations.

Table 5. The Top 20 TLS by Co-citation as Cited by Authors, Journals, and References in FB

	Authors			Journals			cited reference		
	Name	C	TLS	Name	C	TLS	Name	C	TLS
1	Lusardi, A	2219	11649	J Financ	1413	35282	(Lusardi y Mitchell, 2014)	323	1156
2	Xiao, JJ	561	4484	Am Econ Rev	1535	34529	(Fernandes et al., 2014)	223	727
3	OECD	309	2367	J Consum Aff	1860	24434	(Lusardi y Mitchell, 2007b)	201	704
4	Shim, S	288	2184	Rev Financ Stud	557	21929	Lusardi A, 2010	183	680

5	Mandell, L	206	1833	Q J Econ	881	21711	Lusardi A, 2008	152	662
6	Campbell, JY	188	1814	J Financ Econ	878	21122	(Sandra J. Huston, 2010)	163	657
7	Huston, SJ	199	1805	J Econ Psychol	1289	17620	Hilgert M.A., 2003	170	614
8	Agarwal, S	207	1800	J Bank Financ	665	12691	(Lusardi et al., 2011)	158	608
9	Fernandes, D	227	1773	J Polit Econ	432	12684	(van Rooij et al., 2011)	147	567
10	Van Rooij, MCJ	197	1688	J Pension Econ Finan	838	12662	(Lusardi y Mitchell, 2007a)	145	545
11	Hilgert, MA	191	1683	J Fam Econ Iss	901	11728	Van Rooij MCJ, 2012	128	540
12	Robb, CA	204	1638	Int J Consum Stud	717	11160	(Lusardi et al., 2011)	102	448
13	Atkinson, A	178	1616	J Consum Res	718	10338	(J. S. Hastings et al., 2013)	96	438
14	Ajzen, I	262	1594	Manage Sci	530	10114	(Lusardi y Tufano, 2015)	92	425
15	Bernheim, BD	170	1542	Econometrica	397	9830	Campbell JY, 2006	108	377
16	Bandura, A	272	1491	J Econ Lit	529	9174	(Remund, 2010)	85	372
17	Guiso, L	215	1479	J Pers Soc Psychol	552	9150	Vanrooij M, 2011	98	364
18	Thaler, Rh	213	1452	J Financ Couns Plan	631	8892	(Shim et al., 2010)	112	358
19	Kahneman, D	243	1277	Int J Bank Mark	480	7862	(Ajzen, 1991)	111	335
20	Barber, BM	183	1067	Financial Services R	485	7450	Shim S, 2009	82	299

Source: Elaborate based on VOSviewer. C: Citations; TLS: Total Link Strength.

Continuing the cluster analysis, Table 6 exhibits the structure of node-link strength among authors, papers, and journals. In this analysis, we identified 5 nodes with their respective centroids. Node 1 consists of 256 L, 99 I, and 4114 TLS. The centroid emphasizes the work of Lusardi A. and Mitchell O. (2014) named "*The Economic Importance of Financial Literacy*" Theory and evidence center on the theoretical framework of financial education, its measurement, and significance, the breakdown of its components, and the effects of the programs used in the United States.

Node 2 comprises 243 L, 97 I and 1480 TLS and the centroid highlights the work of Ajzen, Icek (1991) entitled "*The Theory of Planned Behavior*" It focuses on how behaviors can be predicted considering attitudes, subjective norms, and behavioral control and how these relate to behavioral, normative and control beliefs.

Node 3 includes 256 L, 37 I, and 2959 TLS, and the centroid highlights the work of Fernandes, D., Lynch, J.G., and Netemeyer, R.G. (2014) titled "*Financial literacy, financial education, and downstream financial behaviors*," which shows that financial education research has limitations, and that training must be done in real time and linked to the behaviors it is intended to help.

Table 6. Structure of Node Link Strength by Authors, Papers, and Journal in FB

C	Nodes				Centroid		
	Co	L	I	TLS	Authors	Paper	Journal
1	Red	256	99	4114	Lusardi A and Mitchell, O., 2014	The economic importance of financial literacy: Theory and evidence	Journal of Economic Literature
2	Green	243	97	1480	Ajzen, Icek, 1991	The theory of planned behavior	Organizational Behavior and Human Decision Processes
3	Blue	256	37	2959	Fernandes, D., Lynch, J. G. Netemeyer, R. G. 2014	Financial literacy, financial education, and downstream financial behaviors	Management Science
4	Yellow	250	24	2412	Huston, Sandra J. 2010	Measuring Financial Literacy	Journal of Consumer Affairs
5	Purple	112	5	172	Keynes, J. M. 1936	The general theory of employment, interest, and money	Book

Source: Elaborate based on VOSviewer. C: Cluster; Co:Colour; L: Links; I: Items; TLS:

Total Link Strength.

Node 4 comprises 250 L, 24 I and 2412 TLS and the centroid highlights the work of Huston, Sandra J. (2010) entitled "*Measuring Financial Literacy*" which focuses on the

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various methods of measuring financial literacy and shows the limitations in the definition of the concept and the use of various related terms, but with different constructs.

Node 5 contains 112 L, 5 I and 172 TLS and the centroid highlights the work of Keynes, J.M. (1936) entitled "*The General Theory of Employment, Interest and Money*" points out the relationship between employment, money and interest rates, having two postulates, the first that the marginal product of labor is equal to wages, and the second that the marginal disutility of employment is equal to the utility of wages for an amount of work.

3.3 Bibliographic coupling analysis in FB

Bibliographic coupling analysis (BCA) enables the observation of a relationship between two items that reference the same document. This can be demonstrated through the number of cited references shared between two publications or the number of co-authored publications between two researchers (Leiden University, 2015; Nees Jan van Eck y Waltman, 2010). BCA, using bibliographic data, enables the analysis of documents, sources, authors, organizations, and countries. Figures 4a, 4b, 4c, 4d and 4e illustrates the clusters of each item, which display the links in the FB field from 2016-2021. It can be observed that four nodes were formed by the generated links among authors. Notably, the authors Lusardi, Gathergood, Tang, and Grable were prominent in 2016, while Kumar, De Witte, Schelfhout, Kayoda, and Puthinun were prominent in 2021. The journals display diverse nodes, with Journal of Consumer Affairs standing out. In the field of research, recent publications include Emerging Adulthood, International Journal of Environment, Journal of Risk and Financial, Journal Asian Finance Econo, Review of Behavioral Finance, Finance Research Letters, and Sustainability. The USA is the leading contributor in the field, with recent entry by China, Colombia, United Arab Emirates, Indonesia, Lithuania, Japan, Pakistan, Czech Republic, and Vietnam. With respect to universities, the majority come from the USA, though links are not highly concentrated within this group. Finally, among recent publications, the research conducted by Goyal (2021), Feng (2019), Montalto (2019), Kuran (2018), and Grohmann (2015) is noteworthy. To comprehend the distinct connections formed within each cluster and its nodes, analysis of Documents, Citations, and TLS has been performed.

Table 7 displays the top 20 strongest connections among authors, journals, countries, papers, and universities based on Coupling analysis. The three authors with the strongest connection are, firstly, David A. Bennet, a professor of neurological sciences at Rush University known for his studies on neurological and behavioral economics, decision-making, and well-being.

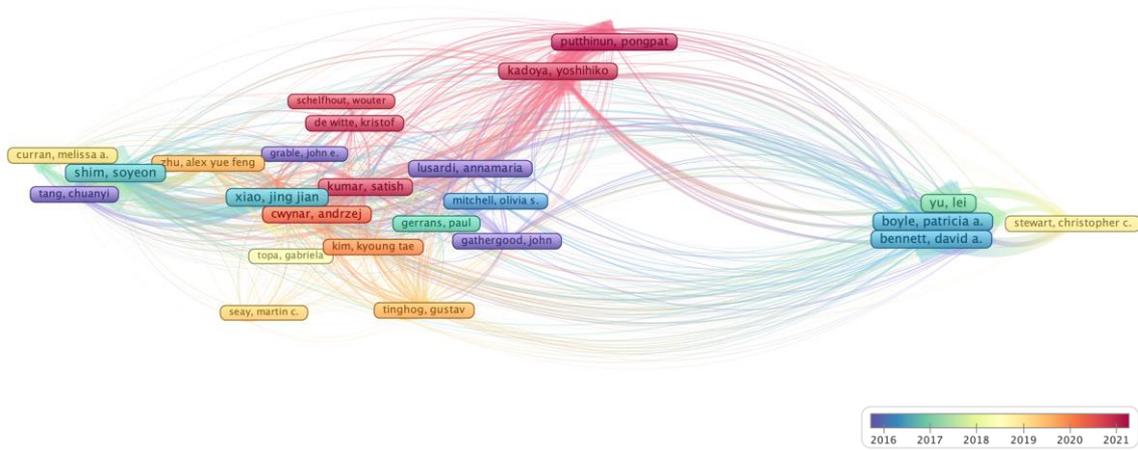


Figure 4.a. Coupling authors. Graphic analyzed 5 documents and 5 citations with authors (TLS and average publication years).
Source: Own elaboration based on VOSviewer.

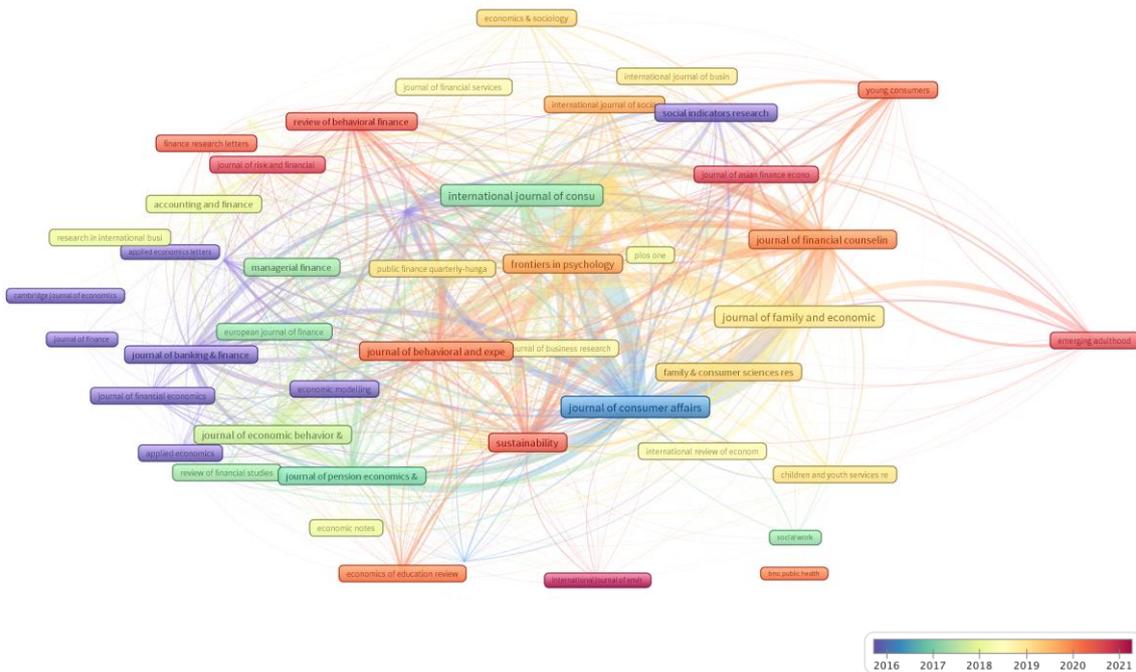


Figure 4.b. Coupling journals. Graphic analyzed 5 documents and 5 citations with journals (TLS and average publication years).
Source: Own elaboration based on VOSviewer

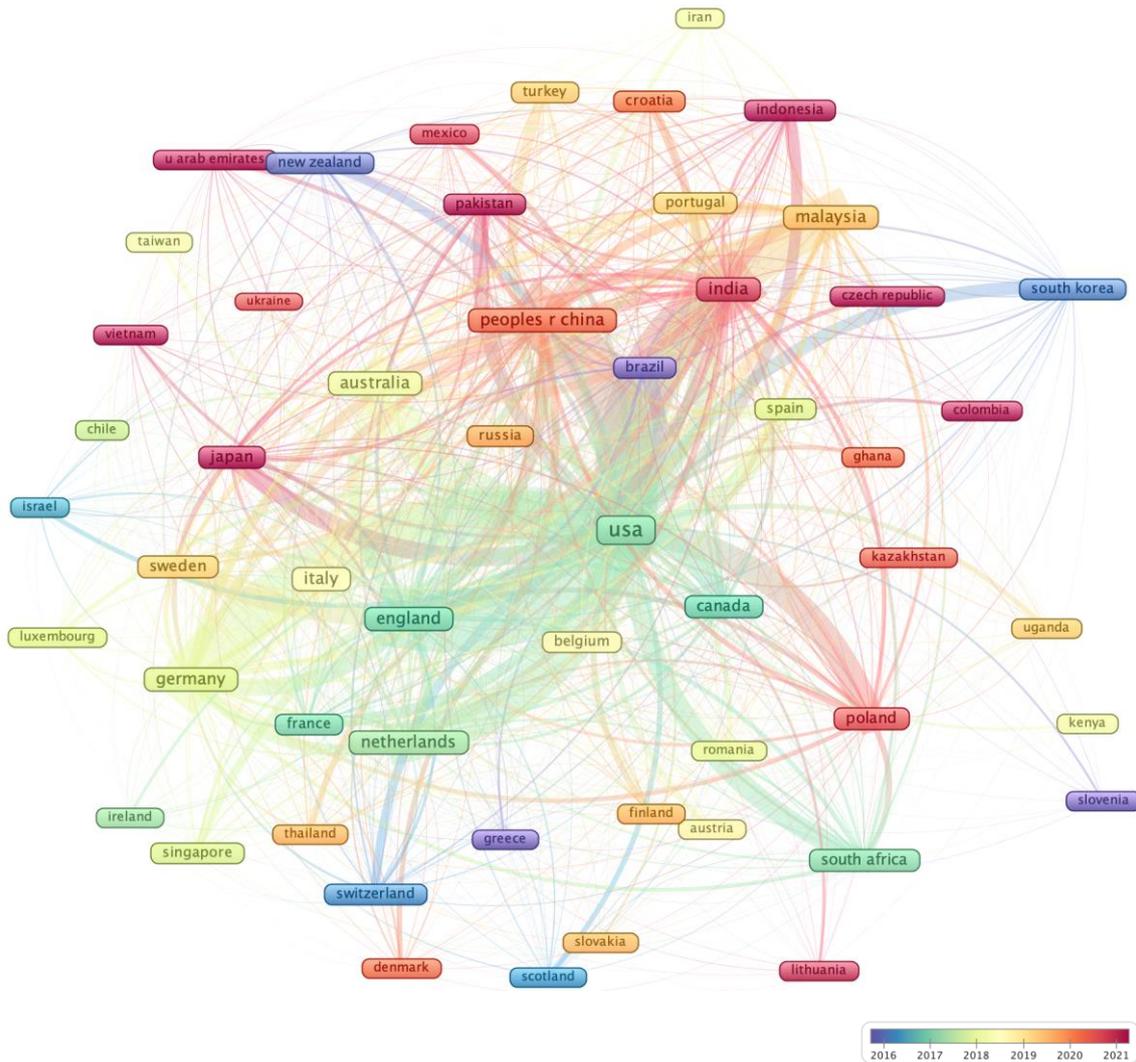


Figure 4.d. Coupling countries. Graphics analyzed 5 documents and 5 citations with countries (TLS and average publication years).
Source: Own elaboration based on VOSviewer.

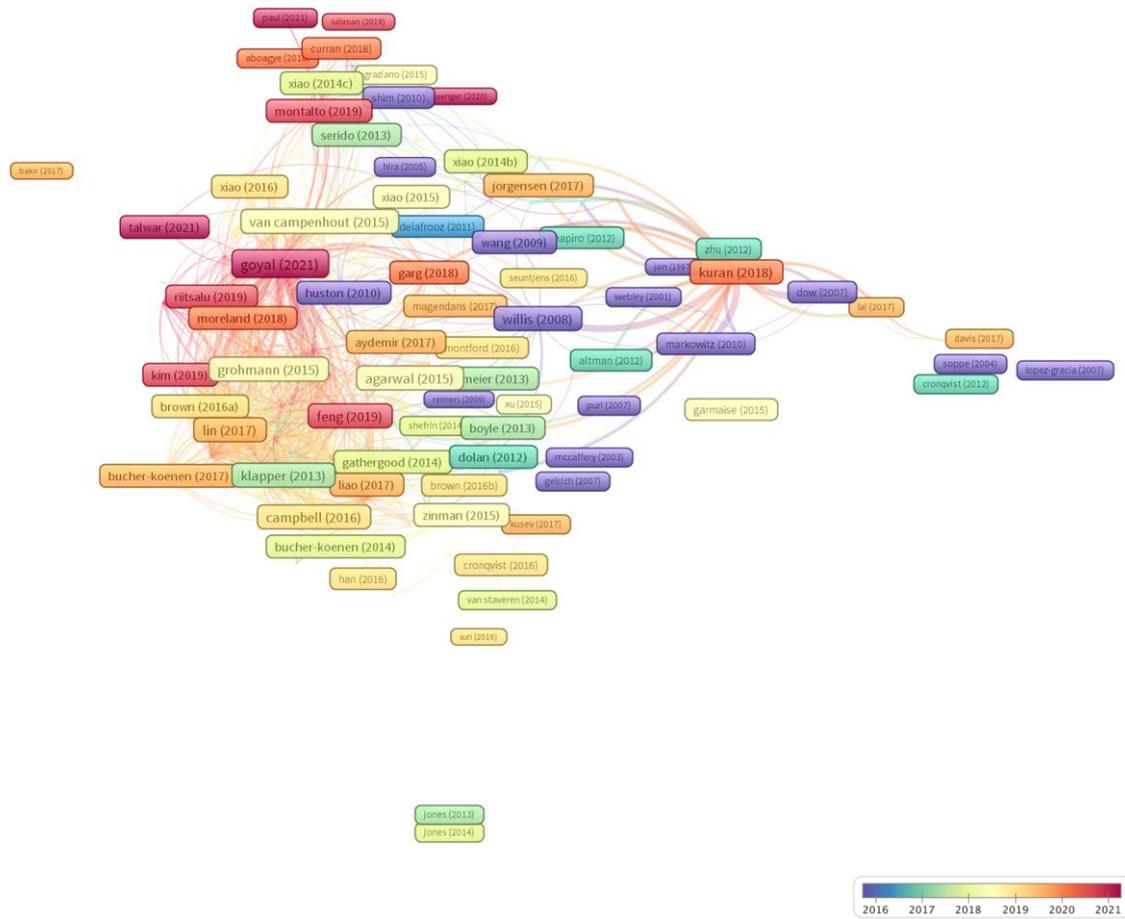


Figure 4.e. Coupling papers. Graphics analyzed 5 documents and 5 citations with papers (TLS and publication years)
 Source: Own elaboration based on VOSviewer

Table 7. The top 20 links by coupling authors, journals, countries, papers, and universities (cont.)

	Authors				Countries				Journals				Universities				Papers		
	Name	D	C	TLS	Name	D	C	TLS	Name	D	C	TLS	Name	D	C	TLS	Name	C	TLS
1	Bennett, David A.	19	135	10827	USA	574	32	267848	JCA	46	30	21295	UW	28	55	10437	Goyal (2021)	23	274
2	Boyle, Patricia A.	19	39	10827	ENG	123	316	85743	IJCS	44	88	20504	URI	24	527	9940	Grohmann (2015)	21	180
3	Yu, Lei	17	103	9986	GER	82	30	74980	JFAI	44	17	20248	UM	20	14	8158	Lin (2017)	46	179
4	Kadoya, Yoshihiko	10	134	7175	PRC	99	1348	74944	IJBM	41	35	19407	UA	18	160	7919	Hastings (2013)	39	178
5	Khan, M. S. R.	10	55	7175	IND	78	43	73055	JFCP	38	59	15073	UMI	20	782	4818	Klapper (2013)	31	170
6	Xiao, Jing Jian	21	103	6663	AUS	74	891	58159	JBEF	35	23	13794	UAL	15	834	4586	Grohmann (2018)	20	168
7	Shim, Soyeon	21	88	6271	MAL	64	1732	57627	JEBO	28	90	10415	MU	16	43	4348	French (2016)	157	164
8	James, Bryan D.	9	39	6082	NTL	70	198	57342	SUS	16	34	8839	UG	21	432	4252	Lusardi (2015)	24	156
9	Serido, J.	20	200	6011	ITA	68	10	55152	FPS	26	27	8766	UP	17	217	4137	Kaiser (2017)	29	150
10	Wilson, Robert S.	7	208	4982	POL	32	50	35211	JBF	17	11	7331	UEI	9	19	4033	Deuflhard (2019)	47	146
11	Putthinun, P.	6	36	4629	CAN	48	119	28426	JPEF	15	140	7047	OSU	27	82	3923	Kadoya (2020)	49	141

Table 7. The top 20 links by coupling authors, journals, countries, papers, and universities.

	Authors				Countries				Journals				Universities				Papers		
	Name	D	C	TLS	Name	D	C	TLS	Name	D	C	TLS	Name	D	C	TLS	Name	C	TLS
12	Watanap. S.	6	63	4629	SOA	29	582	27648	JBEE	17	22	6769	MNIT	7	37	3522	Lusardi (2017)	29	136
13	Han, S. Duke	6	130	4207	JAP	25	42	26759	JOE	18	53	6617	GWU	9	46	3515	Bannier (2018)	20	135
14	Kumar, Satish	8	34	3667	SWE	28	86	26595	RBF	14	24	5385	KUL	12	117	3363	Feng (2019)	125	132
15	Cwynar, Andrzej	8	374	3641	SPA	41	36	26146	MF	7	408	3911	SUT	5	325	3311	Van C. (2015)	29	126
16	Stewart, Christopher	5	93	3356	PAK	25	254	23248	FCSRJ	7	45	3795	HIU	9	42	3277	Allgood (2016)	40	125
17	Cwynar, Wiktor	6	22	3048	BRA	21	39	20310	SIR	8	929	3708	UOX	13	98	3193	Campbell (2016)	27	124
18	Fan, Lu	9	374	2912	POR	19	158	19162	AF	9	117	3570	MOU	14	27	3072	Sayinzoga (2016)	93	122
19	Lusardi, Annamaria	9	29	2727	FRA	26	543	17912	IREE	5	17	3405	GUF	8	13	2999	Xiao (2017)	36	91
20	Porto, N.	6	35	2491	IND	26	43	16593	JBEF	14	67	3373	Nber	15	20	2653	Kuran (2018)	54	1

Source: Own elaboration based on VOSviewer. D: Documents; C: Citations; TLS: Total Link Strength; N: Name; JCA: Journal of Consumer Affairs; IJCS: International Journal of Consumer Studies; JFAI: Journal Of Family and Economic Issues; IJBM: International Journal of Bank Marketing; JFCP: Journal Of Financial Counseling and Planning; JBEF: Journal Of Behavioral and Experimental Finance; JEBO: Journal Of Economic Behavior y Organization; SUS: Sustainability; FPS: Frontiers In Psychology; JBF: Journal Of Banking y Finance; JPEF: Journal Of Pension Economics y Finance; JBEE: Journal Of Behavioral and Experimental Economics; JEP: Journal Of Economic Psychology; RBF: Review Of Behavioral Finance; MF: Managerial Finance; FCSRJ: Family y Consumer Sciences Research Journal; SIR: Social Indicators Research; AF: Accounting and Finance; IREE: International Review of Economics Education; JBEF: Journal of Behavioral Finance; USA: United States of America; ENG: England; GER: Germany; PRC: Peoples R China; IND: India; AUS: Australia; MAL: Malaysia; NTL: Netherlands; ITA: Italy; POL: Poland; CAN: Canada; SOA: South Africa; JAO: Japan; SWE: Sweden; SPA: Spain; PAK: Pakistan; BRA: Brazil; POR: Portugal; FRA: France; IND: Indonesia; UW: Univ Wisconsin; URI: Univ Rhode Island; UM: Univ Minnesota; UA: Univ Arizona; UMI: Univ Missouri; UAL: Univ Alabama; MU: Maastricht Univ; UG: Univ Georgia; UP: Univ Pennsylvania; UEI: Univ Economic y Innovation; OSU: Ohio State Univ; MNIT: Malaviya Natl Inst Technol; GWU: George Washington Univ; KUL: Katholieke Univ Leuven; SUT: Swinburne Univ Technol; HIU: Hiroshima Univ; UOX: Univ Oxford; MOU: Monash Univ; GUF: Goethe Univ Frankfurt.

[https://doi.org/10.56503/CIMBAGE/Vol.1/Nro.27\(2025\)/3281](https://doi.org/10.56503/CIMBAGE/Vol.1/Nro.27(2025)/3281)

Secondly, Patricia A. Boyle, a professor of behavioral sciences at Rush University, whose research examines the relationship between age and decision-making regarding financial, health, and psychological well-being. Lastly, Lei Yu, a professor of chemical and biomolecular engineering at the University of Connecticut, whose work focuses on medicine, the environment, and food and agriculture. For academic journals in the field, the most significant is the Journal of Consumer Affairs with a total TLS of 21.295, highlighted by the number of publications on financial education, followed by the International Journal of Consumer Studies with a TLS of 20.504 and the Journal of Family and Economic Issues with a TLS of 20.248. The United States leads in contributing to the field, with a TLS of 267.848, followed by England with a TLS of 85.743 and Germany with a TLS of 74.980. Most of the universities mentioned are in the United States, with the University of Wisconsin having the highest TLS score of 10.437, followed by the University of Rhode Island with a score of 9.940, and the University of Minnesota with a score of 8,158. In terms of noteworthy papers, Goyal's (2021) systematic review and bibliometric analysis of financial education stands out with a TLS score of 274, followed by Grohmann's (2015) investigation into the positive effects of family and school on financial literacy among adults.

3.4 Co-word analysis in FB

The co-word analysis is performed by constructing a network of co-occurrence links between terms using the text data (Leiden University, 2015; Nees Jan van Eck y Waltman, 2010). Figures 5a, 5b and 5c display three co-occurrence maps that differentiate between A) all keywords, B) keywords utilized by authors, and C) keywords from the WoS classification. For instance, A demonstrates four clusters, B shows eight, and C reveals three.

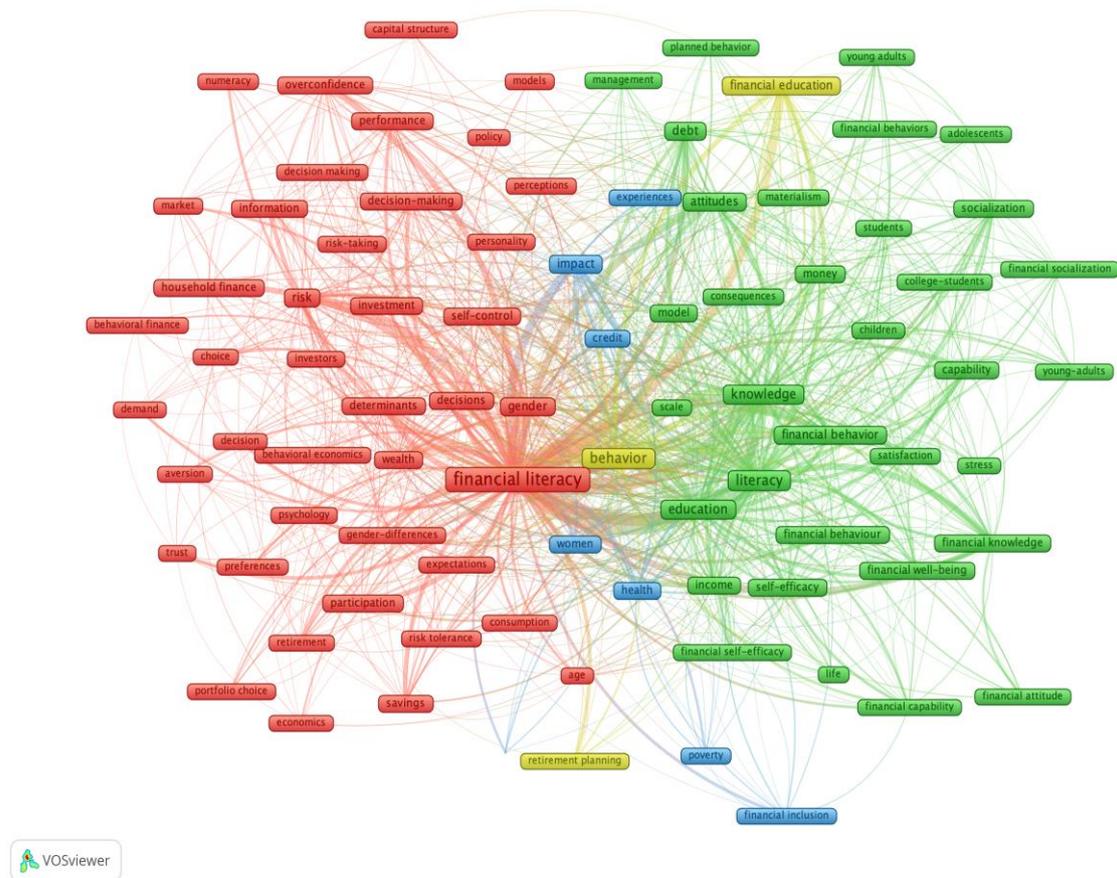


Figure 5.a. Keywords co-occurrence analysis. All keywords used at least 20 times.
 Source: Own elaboration based on VOSviewer.

Table 8 displays the top ten most frequent keywords. Financial Literacy is the most commonly co-occurring term, followed by Financial Behavior, Behavior, Education, and Knowledge. Additionally, combined terms like Financial Capability, Financial Attitude, Financial Self-Efficacy, Household Finance, Financial Well-Being, Financial Education, and Financial Knowledge contribute to the field-specific terminology. These terms help define the research field's focus.

Table 8. The 10 keywords with the highest occurrences in All, Authors and Plus

	All		Authors		Plus	
	Keywords	Occurrences	Keyword	Occurrences	Keyword	Occurrences
1	Financial Literacy	642	Financial Literacy	464	Behavior	281
2	Behavior	285	Financial Behavior	126	Literacy	229
3	Literacy	239	Financial Knowledge	80	Education	195
4	Education	205	Financial Education	84	Knowledge	155
5	Knowledge	163	Financial Behaviour	51	Financial Literacy	216
6	Financial Behavior	129	Financial Well-Being	47	Impact	111
7	Impact	112	Financial Capability	37	Attitudes	85
8	Attitudes	92	Financial Attitude	22	Risk	100
9	Financial Education	90	Household Finance	46	Debt	75
10	Debt	93	Financial Self-Efficacy	38	Income	68

Source: Own elaboration based on VOSviewer.

To perform a more detailed analysis of these co-occurrences, we outline the strength structure of the node links for each classification of the keywords (A, B, and C). This enables us to identify patterns of coincidence and determine potential future research directions. Tables 9, 10, and 11 illustrate the configuration of each cluster and its nodes, highlighting the number of linked items and keywords, occurrences, links, and TLS. For instance, Table 9 reveals noteworthy results concerning the occurrences, links, and TLS associated with keywords like *Financial literacy*, *Risk*, *Literacy*, *Education*, *Impact*, and *Behavior*. Additionally, it is imperative to consider that keywords such as Gender, Decision-making, and financial behavior are linked in different nodes with widespread use.

Table 9. Node link strength structure by All keywords

Cluster	Color	Items	Nodes			
			keyword	Occurrences	links	TLS
1	Red	42	Financial literacy	642	85	2213
			Risk	237	77	389
			Determinants	76	74	238
			Gender*	40-98*	61-77*	206-412*
			Decision making**	22-63**	41-70**	80-273**
2	Green	34	Literacy	239	83	1103
			Education	205	84	976
			Knowledge	163	81	818
			Financial behavior***	21-129***	33-77***	66-506***
3	Blue	8	Impact	112	80	450
			Health	73	70	290
			Credit	54	60	198
			Women	48	58	195
			Financial inclusion	32	37	121
			Personal finance	30	57	122
			Poverty	28	40	111
			Experiences	20	48	90
4	Yellow	3	Behavior	285	84	1281
			Financial education	90	64	350
			Retirement planned	32	51	131

Source: Own elaboration based on VOSviewer. *This term has two different nodes which can a keyword widely used. ** This term has four different nodes which can a keyword widely used. *** This term has three different nodes which can a keyword widely used. Additionally, it has close relationship with aspects of planned behavior, such as: financial attitude, financial capability, financial knowledge, financial self-efficacy, financial socialization, financial well-being.

Table 10 illustrates a greater diversity of nodes and clusters. Central keywords include *Behavioral finance*, *financial literacy*, *Gender*, *Financial well-being*, *financial behavior*, *Personal finance*, *Financial self-efficacy*, and *Self-control*. Among this array of keywords, certain aspects of individual finance can be identified. Additionally, recurring keywords from the previous table are evident. The table displays the keywords utilized by the researchers, indicating the development of topics on FB and the direction they may take.

Table 10. Node link strength structure by Authors keywords

Cluster	Color	Items	Nodes			
			keyword	Occurrences	links	TLS
1	Red	16	Behavioral finance	26	18	30
			Saving	18-24*	17-20*	29-34*
			Decision-making	11-22*	9-14*	9-21*
			Retirement	20	15	22
2	Green	11	Financial literacy	464	61	544
			Financial education	84	39	153
			Household finance	46	23	61
			Retirement planned	32	20	38
3	Blue	10	Gender	34	26	49
			College students	17	15	27
			Financial stress	15	17	36
4	Yellow	9	Financial well-being	47	24	73
			Financial capability	37	19	64
			Financial inclusion	32	17	53
			Young adults	28	20	46
			Financial behavior	21	19	26
5	Purple	8	Financial behavior	51-126*	29-47*	90-219*
			Financial attitude	15-22*	12-17*	35-62*
			Financial knowledge	80	37	168
			Financial socialization	32	21	49
6	Turquoise blue	5	Personal finance	25	23	39
			Financial satisfaction	18	15	30
			Financial planning	15	16	26
			Behavioural finance	14	6	10
			Trust	14	12	19
7	Orange	3	Financial self-efficacy	38	24	55
			Adolescents	11	10	20
			Risk preference	10	5	11
8	Pink		Self-control	13	9	21

Source: Own elaboration based on VOSviewer. *This term has two different nodes which can a keyword widely used.

Table 11 highlights Plus (WoS category) keywords that produce optimal results for occurrences, links, and TLS, such as *Financial Literacy*, *Risk*, *Determinants*, *Gender*,

Decision Making, Behavior, Literacy, Education, Credit, and Women. These WoS classifications provides general and specific direction to identifying study topics within FB. As shown in the two preceding tables, there are overlaps in the keywords including *financial literacy, risk, gender, literacy, education, decision-making, and behavior.*

The previous maps and tables reveal a wide range of potential avenues for exploring financial behavior. A close analysis finds *financial literacy, decision-making, financial knowledge, financial behavior, gender, and financial well-being* to be the most commonly recurring terms among different specifications. Below, we provide a more comprehensive description of these terms and their respective approaches and scopes in financial behavior research.

Table 11. Node link strength structure by Keywords Plus

Cluster	Color	Items	Nodes			
			keyword	Occurrences	links	TLS
1	Red	62	Financial literacy	216	58	566
			Risk	100	57	278
			Determinants	75	55	222
			Gender	40–67*	45–52*	148–191*
			Decision-making	25–63**	41–50**	105–198**
			Wealth	63	55	217
			Performance	60	46	160
2	Green	25	Information	60	43	144
			Behavior	281	60	861
			Literacy	229	58	681
			Education	195	61	635
			Knowledge	155	60	517
			Impact	111	58	321
3	Blue	7	Attitudes	85	58	300
			Credit	46	41	120
			Women	43	37	110

Source: Own elaboration based on VOSviewer. * This term has two different nodes which can a keyword widely used. ** This term has three different nodes which can a keyword widely used.

4. DISCUSSION

Financial education is defined as the ability to manage and use money (Noctor et al., 1992) and acquire the minimum knowledge required to make economic decisions (Jacob et al., 2000; Kim et al., 2001; Moore, 2003). The concept developed by the OECD (2005) is widely accepted. It emphasizes improving consumers' understanding

of financial concepts and products through information and skill acquisition. This generates better decision-making and enhances their financial well-being. Lusardi y Mitchell (2014) defines financial literacy as the knowledge and skills required to make informed decisions regarding wealth management, debt, pensions, and financial planning, based on economic information.

Several bibliometric studies have examined financial education and its impact on financial behavior. These studies reveal convergent and differentiating aspects among their main findings. Specifically, common themes are financial decision making, financial digitalization, gender, and financial inclusion. For effective financial decision-making, it is crucial to assume responsibility and evaluate potential outcomes and ramifications (Abad-Segura y Gonzalez-Zamar, 2019). Factors to be considered include consumption, savings, credit, insurance, and retirement planning investments (Ingale y Paluri, 2022), as well as digital literacy, financial competency, understanding digital financial services, awareness of risks associated with digital finance, and proficiency in digital finance risk management (Antolin y Marban, 2021; Zaimovic et al., 2023). Financial digitization entails the capacity to solve technology-enabled problems which is necessary for using digital financial services (Zaimovic et al., 2023). This includes digitization, fintech, crowdfunding, and other technological breakthroughs which represent an economic model where individuals create new businesses (Abad-Segura y Gonzalez-Zamar, 2019). The analysis examines gender-based disparities in financial literacy levels, with a focus on constraints imposed by social norms that limit women's participation in economic decision-making (Goyal y Kumar, 2021). Additionally, access to the labor market has a more extensive influence on this gap (Zaimovic et al., 2023). Financial inclusion is an essential aspect of financial capability, as emphasized by Goyal y Kumar (2021). To comprehend intricate financial products and the use of formal and informal financial products Zaimovic et al. (2023) underlined the significance of this component.

Thus, the study emphasizes three main areas: financial knowledge, financial behavior, and financial wellness as categories that encompass a range of approaches to behavioral finance education. Financial literacy is a frequently used term in both education and financial behavior. According to one of the initial definitions, it refers to the capability of utilizing funds in day-to-day life (Mandell, 1997). It is also considered the fundamental basis for making economic decisions (Bowen, 2002; Jacob et al., 2000; I. E., 2001; Kim et al., 2001; Moore, 2003; Nguyen et al., 2017). Financial management involves handling income, savings, and expenses that result from a person's intellectual capital gained through experience (Potrich et al., 2015). Various authors regard it as an essential component of financial education to ensure responsible budgeting and decision-making (OECD, 2013; Atkinson y Messy, 2012; Hung et al., 2009; Huston, 2010; Lusardi et al., 2017; Remund, 2010; Romero-Muñoz et al., 2021; Son y Park, 2019).

Financial behavior is defined as the rational comprehension of individuals within the economic domain, considering their emotions (Ricciardi, 2005). Additionally, it can be described as human behavior for managing finances (Xiao, 2008) and their association with accessible resources (Nababan y Sadalia, 2013). Behavior covers important topics including shopping, timely bill payments, financial awareness, goal setting, budgeting, responsibility, savings, and selecting products and loans (OECD, 2013; Atkinson y Messy, 2012). Similarly, personal credit usage, financial planning, investments, savings, and bill and loan payments are addressed (Chen y Volpe, 1998; Johnson, E. and Sherraden, 2007; Shockey, 2002).

Finally, financial well-being can be defined in various ways. The first definition postulates that higher income leads to greater happiness (Caputo, 1998; Easterlin et al., 1990). Additionally, there has been a shift towards the perception that people desire financial freedom to maintain their living standard (Brüggen et al., 2017). Similarly, it has been found that individuals' fiscal outlook has an impact on their current happiness (Iannello et al., 2021; Sorgente y Lanz, 2019). Moreover, maintaining a balance between expenses and savings can lead to enduring financial well-being (van Praag et al., 2003). Prominent themes and clusters of research include conceptualization and background, young adults, the correlation between financial education and fiscal wellness, and resulting outcomes (Singh y Malik, 2022).

5. CONCLUSIONS

This study analyzes the components of financial literacy to generate future discussion on the most significant keywords in this field. The findings indicate a significant increase in publications since 2005. Furthermore, the three most cited articles in this field are Lusardi y Mitchell (2007b), Fernandes et al. (2014), and Sandra J Huston (2010). If we examine the most productive authors in terms of published articles, the top three are Xiao J. J., Serido J., and Shim S. Regarding the journals that publish papers related to the subject, the three most significant are the Journal of Consumer Affairs, the International Journal of Consumer Studies, and the Journal of Economic Psychology. On the flip side, the United States holds the largest percentage of articles at 37.6%, significantly surpassing the United Kingdom in second place with only 9.5%. Another interesting finding emerges from the analysis of the TLS. It is evident from the authors' inquiries that A. Lusardi's work possesses a robust TLS. Despite not being amongst the most productive authors, her research is associated with diverse authors, highlighting its significance in the field. The Journal of Finance has the highest TLS among journals, followed by the American Economic Review. Despite not being among the most productive, the American Economic Review holds significant influence according to its TLS.

Based on the data provided by VOSviewer, this study identifies five key authors whose collaborative work generates innovative research outcomes. These authors are Lusardi

A and Mitchell, O. (2014), Ajzen, Icek (1991), Fernandes, D., Lynch, J. G. Netemeyer, R. G. (2014), Huston, Sandra J. (2010), and Keynes, J. M. (1936). Analyzing the flow of ideas amongst these researchers is essential to understanding the trends within the field and the influence they have on the work of other scholars. Finally, Table 8 displays the presence of various keywords, revealing the connection between finances and specific terms. This visualization helps students identify which finance concepts to focus on, be it for personal or corporate finances.

One limitation to consider is the database selection, as certain indexing restrictions prevent multiple studies from being linked, which would permit a broader perspective on financial behavior. An area of focus for researching financial behavior is to comprehend rationality considering emotions, with an emphasis on aspects such as purchase decision-making, timely fulfillment of financial obligations, financial prudence, savings, and the selection of financial products and loans. Furthermore, an interrelated subject is financial literacy, which pertains to utilizing money considering earnings, expenses, savings, and investments, and can be facilitated by personal experience and advancements in technology, allowing for increased utilization of banking applications. Another area worth exploring is financial well-being, which can be associated with financial freedom and happiness, as well as financial solvency, work-life balance, and the use of technology for generating new income sources. Thus, future research will seek to produce targeted works in the various areas identified for local contexts, considering the arguments presented in this study. This statement aims to foster a comprehensive understanding of finance, promoting a robust financial culture and education. Such an approach is invaluable not only for organizations but also for our everyday lives.

Acknowledge

This research was funded by Universidad Pedagógica y Tecnológica de Colombia, grant number SGI 3134 and Chilean Government through FONDECYT initiation, grant number 11190056". Research supported by Red Sistemas Inteligentes y Expertos Modelos Computacionales Iberoamericanos (SIEMCI), project number 522RT0130 in Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo (CYTED)

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