
MAPPING THE INTELLECTUAL EVOLUTION OF RESILIENCE RESEARCH IN PUBLIC FINANCE: A BIBLIOMETRIC ANALYSIS

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Abstract:

This paper provides a bibliometric analysis of resilience in the public finance field, covering the period from 2008 to February 2026. Using a sample of 656 papers collected from Scopus database, and following the PRISMA reporting protocol, the study employs Bibliometrix package and VOSviewer as analytical and processing tools to produce a science map of the literature. The analysis examines publication trends, leading authors, institutions, and countries, as well as the thematic evolution over time. Results reveal three distinct phases of development. The first phase (2008-2019) was primarily focused on the theoretical conceptualization of the concept, with the financial vulnerability and the regional urban economic resilience. The second phase (2019-2022) was dominated by research on the COVID-19 shock and its effects on public finance resilience, alongside the emergence of governance as a central theme. The third and recent phase (2023-2026) notes the emergence of new themes, including digital finance, risk management, and artificial intelligence, reflecting a broader and more interdisciplinary analysis of public finance resilience. The study identifies key research gaps, including the geographical concentration of contributions and collaborations, the absence of anticipatory analysis and preventive dimensions of resilience, and the limited cross-country comparative work between highly and low-resilience contexts.

Key words: *Public finance, Resilience, Bibliometric analysis, Science mapping, Scopus.*

1. Introduction

Over the past two decades, the world has been reconfigured by a series of massive financial and economic shocks. First, the 2008 financial crisis revealed serious deficits in the financial and banking systems (Demyanyk & Van Hemert, 2011; Immergluck, 2011; Martin, 2011). Then the COVID-19 pandemic deeply disrupted economies, interrupted activity and

productivity, and weakened resilience (Clemente-Suárez et al., 2021; Debata et al., 2020; Ibn-Mohammed et al., 2021; Naseer et al., 2023; L. Song & Zhou, 2020), nearly paralyzing all sectors, particularly the health system (Islam et al., 2020; Singu et al., 2020), Small and Medium Enterprises (Bartik et al., 2020; Carracedo et al., 2021; Juergensen et al., 2020), and the banking sector (Baicu et al., 2020; Çolak & Öztekin, 2021; Gazi et al., 2022). Third, the Russia–Ukraine conflict has disrupted energy and food supply chains and reflected geopolitical and economic challenges (Akarsu & Gharehgozli, 2024; Ke et al., 2024; Prohorovs, 2022). More recently, macroeconomic trade tensions in international markets have risen, including recent U.S. trade policies against China, Canada, and Mexico, the European Union’s measures against Russia, and other international trading imbalances that have heightened tensions and uncertainty in global markets and financial systems (Potapov, 2025).

The concept of resilience finds its origins in physics and ecology (Entin & Galushko, 2021; Ramon-Muñoz et al., 2024; Y. Song et al., 2024; Voznyak et al., 2023; Xu & Xue, 2017). First introduced through the works of Holling (1973), resilience is defined as *“the ability of a system or an element to return to the equilibrium state after being disturbed by a shock”*. This definition has been adapted to other disciplines such as psychology, technology, management, environmental studies, etc. In the economic and financial themes, scholars define the resilience as *“the ability of an individual, organization, region, sector, territory, community, system or an economy to anticipate (foresee and avoid the effect of shocks), to absorb (withstand and take over the effects), to adapt (adjust strategies and structures to better cope with future shocks) and to recover (return to the former state or restore a higher equilibrium than the initial) from various economic, financial, political and environmental nature shocks”* (Asheim et al., 2020; Dudau et al., 2023; Hariri et al., 2023; Oyetade et al., 2022; Wilczyński & Kołoszycz, 2025).

The analysis of the concept of resilience through bibliometric analysis has been previously conducted in the economic, finance, management, and business disciplines. For example, Silva Santos & Adilson (2022) conducted a bibliometric analysis to map the recent literature and analyze the evolution and advancements of studies on resilience in the business and management disciplines, then, (Mardiansyah et al., 2024) examined the importance of communication in management resilience. Furthermore, multiple bibliometric analysis had interested in the concept of “Entrepreneurial Resilience”, (Aaoud et al., 2025; Candeias Fernandes & Franco, 2022; Fabic et al., 2025; Nautiyal & Pathak, 2024; S. R. Tiwari & Homechaudhuri, 2022), “Organizational Resilience” (Khan et al., 2025; Marquez-Tejon et al., 2021; Mehta et al., 2024; Otolá & Szczepańczyk, 2023), “Supply chain resilience” (Ghouati et al., 2024; Ouarrak & Hmioui, 2024; Syed Jamaludin et al., 2024), “Energy resilience” (Janta et al., 2025; S. Tiwari et al., 2025), “Educational resilience” (Artyukhov et al., 2024), or “Urban flood resilience” (Prashar et al., 2024), and most recently with (Zohar et al., 2026), who conducted a bibliometric study to examine the concept of “Economic resilience”, analyzing the evolution of the measurements methods used by authors from 2008 to 2025, and highlighted key trends, thematic patterns, and proposed a comprehensive overview and routes for future studies.

In the middle of this expanding literature, the analysis addressing the resilience in the public finance theme has been largely ignored. The public finance resilience is defined

as the ability of a government, a state, a public entity, a public sector, and regulatory agencies to anticipate, absorb, adapt, and respond to unexpected events and shocks that impact its financial situation (Batista & da Cruz, 2019; Chugunov, 2024; Du Boys & Tiberghien, 2022; O'Neill & Xiao, 2011). Public finance is a quite wide-reaching concept, and involves many sub-themes and levels. Therefore, a bibliometric analysis is necessary to conduct a science mapping for this theme (Donthu et al., 2021; Wang et al., 2020) and to quantitatively measure the scientific development and trend of the literature (Saleem et al., 2021).

This bibliometric analysis follows the guidelines of (Donthu et al., 2021; Öztürk et al., 2024; Van Raan, 2014). First, it aims to provide insights into the most cited articles and journals, examine the collaborative research between authors and countries, and indicate the most used keywords. Moreover, it aims to examine the existing literature on the concept of resilience in the public finance field, analyze its structure, and highlight key trends and thematic evolutions of the research on resilience in the public finance field.

2. Methodology

The selection of the database in the analysis is a crucial step that directly influences the quality, scope and replicability of the research (Öztürk et al., 2024). Scopus and Web of Science (WoS) are considered one of the most comprehensive and most used databases in bibliometric analysis, containing the most influential journals and quality academic papers, due to their rigorous quality controls (Bernatović et al., 2022; Merigó & Yang, 2017; Öztürk et al., 2024; Saleem et al., 2021; Wang et al., 2020).

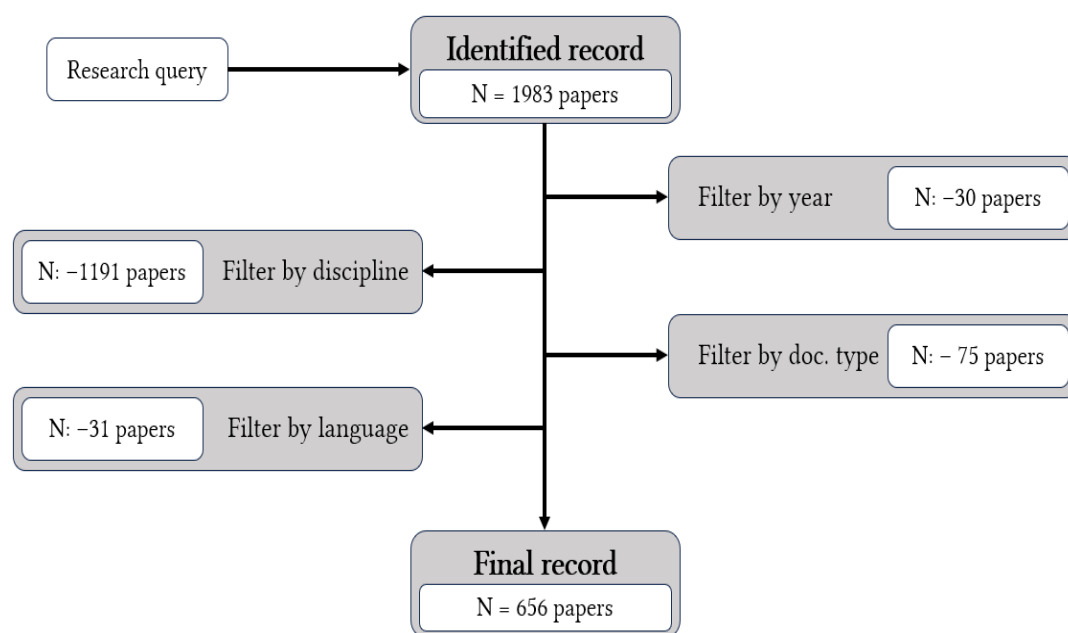
Although Google Scholar is also widely used as a database due to its broad coverage of documents, it is strongly discouraged by many researchers, as it includes a large number of non-peer-reviewed papers, duplicated records, and studies that do not meet academic quality standards (Donthu et al., 2021; G. Guo, 2025; Moral-Muñoz et al., 2020; Öztürk et al., 2024). Therefore, Scopus was selected as the primary data source for this study.

After reviewing the literature to identify relevant terms and conceptual synonyms that accurately describe the scope of the analysis, keywords were searched across the three fields – title, abstract and keywords – using Boolean operators (AND/OR/NOT) to ensure that obtained results specifically targeted resilience within the public finance domain, while excluding, thematically adjacent but distinct fields, such as entrepreneurial resilience, service resilience, supply chain resilience, etc. The query combined resilience-related terms (*“financial resilien*”, “economic resilien*”, “fiscal resilien*”, “financial vulnerability”, “public resilien*”*) and public finance-related terms (*“public finance”, “public sector”, “public debt”, “public budget”, “government”, “national” and “regional”*).

The research query was executed on February 18, 2026, resulting in a total of 1 983 documents. The dataset was next refined through a sequential filtering process, as illustrated in (Figure 1) in accordance with the PRISMA reporting protocol (Page et al., 2021). This dataset was first filtered by publication year to only retain papers that were published between 2008 and 2026. This temporal filter was applied to capture the evolution of resilience-related research during and after economic and financial crises, as they function as strong catalysts for resilience research (Courvisanos et al., 2016; Dudau et al., 2023; Ritahi & Echaoui, 2024), this justifies the selection of 2008 as a starting point to capture the

structural shift in how scholars and policymakers conceptualize fiscal vulnerability and public finance adaptability. Second, it was filtered by subject area to only include economic, finance, business and management disciplines. After that, retracted papers and “articles in press” were excluded to guarantee that all selected papers are peer-reviewed, and meet both academic quality and credibility (Linnenluecke et al., 2020; Van Raan, 2014). Finally, the dataset was restricted to publications in English and French, to ensure proper and accurate reading and interpretation. After applying these criteria, the final record comprised 656 documents. The analysis was conducted using a combination of three main tools. First, the Bibliometrix package in R, used for the performance analysis, such as publication trends, citations, and thematic mapping. Second, VOSviewer was employed for network visualization, such as co-author, co-citation, and co-occurrence analyses. Finally, Microsoft Excel supported data handling, cleaning, and descriptive statistics.

Figure 1: PRISMA flow diagram of the literature selection process



Source: Authors' computations

3. Results/findings

The result section is organized as follows: publication volume, main influential contributors of the literature, and research theme evolution.

3.1. Preliminary information

Table 1: Main information

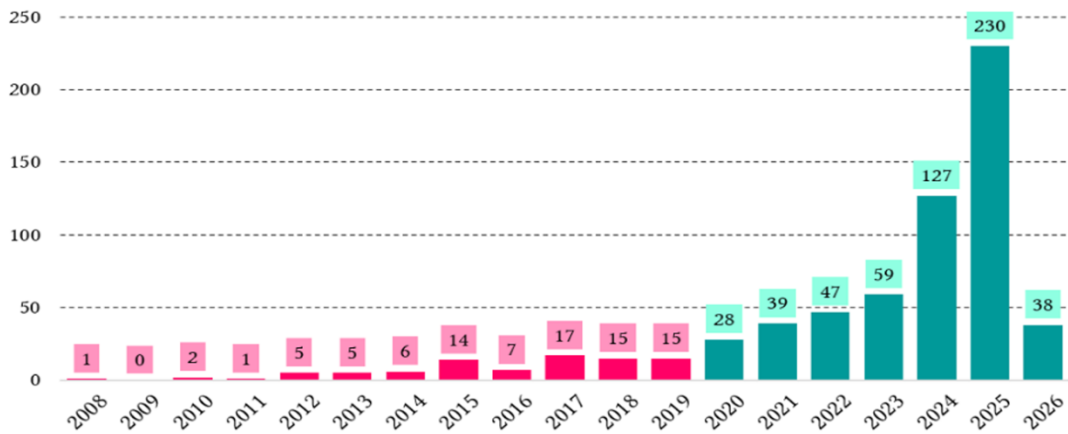
<i>Description</i>	<i>Results</i>
Timespan	2008-2026
Sources (Journals, Books, etc.)	378

Documents	656
Annual growth rate %	22.4
Average citation per document	3.18
References	5 333
Keywords Plus (ID)	1 226
Author's Keywords (DE)	2 101
Document type	
Article	527
Book chapter	103
Conference paper	15
Review	11
Authors	
Authors	1 820
Authors of single-authored documents	102
Author's collaboration	
Single-authored documents	105
Documents per author	0.36
Authors per document	2.7
Co-authors per document	2.95
International co-authorship %	23.17
Collaboration index	3.23

Source: Authors' computations

(Table 1) highlights the preliminary information of the final dataset and offers a first overview of the field. The data comprises 656 documents published between 2008 and 2026, obtained from 376 different sources, which reflects a fragmented research landscape. The annual growth rate of 22.4% signals a significant and rapidly expanding field over time, which can be linked to the succession of different economic and financial crises, including the 2008 global financial crisis, the European sovereign debt crisis of 2010 (Lane, 2012), the COVID-19 pandemic, and the Russia-Ukraine war that created an energy inflation crisis in 2022.

In terms of document types, peer-reviewed articles dominate the corpus (80%), confirming that the field is built on a solid base of peer-reviewed academic work, and offering credibility to the overall quality of the literature base. Finally, in terms of the collaboration patterns, the average of 2.7 authors per document indicates a predominantly international co-authorship rate of 23.17% suggests that while collaboration is common, it remains largely domestic, pointing to a potential for greater cross-border research partnerships in this field.

Figure 2: Annual scientific production

Source: Authors' computation

The (Figure 2) presents the scientific production evolution by year from February 2008 to 2026. The figure highlights a slow and modest start of the field, with a total of 88 published papers between 2008 and 2019, representing only 13,4% of the total corpus, with an average of 7.3 papers per year. This modesty suggests that public finance resilience topic was still relatively marginal during this period. From 2020 onwards, researchers' activity had significantly accelerated. A total of 568 papers were published in this period, with an average of 81.1% papers per year. This acceleration is mainly due to the COVID-19 pandemic, which forced international governments to make rapid and large-scale fiscal decisions and adjustments to cope with crisis effects, pushing researchers to examine how public finances could absorb and recover from such an unprecedented shock. This trend confirms that major crises act as turning points for resilience research, as scholars respond to real-world urgency by intensifying their academic output.

3.2. Main influential contributors

Table 2: Most 10 leading authors

Author	TP	TC	h-index	g-index	m-index
Mulska Olha P.	6	19	3	4	0,6
Martin Ron L.	4	4 228	4	4	0,23
Hu Xiaohui	4	525	4	4	0,4
Barbera Carmela	4	180	4	4	0,57
Steccolini Ileana	4	180	4	4	0,57
Svoboda Ondřej	4	9	1	3	0,07
Bristow Gillian I.	3	401	3	3	0,25
Healy Adrian	3	401	3	3	0,25
Hassink Rrobert	3	303	3	3	0,3
Ferry Laurence	3	193	3	3	0,43

Source: Authors' computation

(Table 2) presents the most influential authors in the public finance resilience literature, ranked primarily by the number of publications (TP), then by the number of citations (TC), along with additional productivity indicators, including h-index, g-index, and m-index. Altogether, these indicators add highlights to the author's productivity and consistency, and allow for distinguishing between authors who publish frequently and those whose work has had a lasting impact on the field.

The table highlights Mulka Olha O. as the leading author in terms of productivity, with six published papers that study different aspects of resilience in the public finance theme, three of which he was the main author. For example, (Mulka et al., 2025) that analyzed the effects of different shocks; the military-political crisis, the full-scale war and the COVID-19 on the "Territory resilience" on the Ukrainian context from 2014 to 2021, and (Mulka et al., 2023) that examined the notion of "Financial resilience" in Ukrainian regions from 2015 to 2021 and its impact on the economic growth.

In terms of the number of citations, Martin Ron L. is the most cited author with a number of 4 228 citations across 4 publications, where he was the first author two of which he was the first author, and the only author in one. For example, (Simmie & Martin, 2010) with 1 295 citations, where they review different definitions of resilience in different theoretical perspectives. And then, (Martin, 2012) with a total number of 1 603 citations, where he explored the concept of "Regional economic resilience", and how far combining this term with hysteresis can improve the ability to capture economic reactions. And most recently, (Martin & Sunley, 2015) with a total number of 1 315 citations, where they again examine the same concept of "Regional economic resilience", highlighting the ambiguity around its definition, determinants and measurement methods.

Table 3: Most 10 leading countries

Country	TP	TC	SCP
China	399	1940	95
USA	133	544	26
United Kingdom	108	5160	22
Ukraine	108	11	6
Indonesia	105	33	12
Italy	77	885	18
India	73	175	18
Malaysia	59	34	11
Australia	47	207	11
Germany	42	192	4

Source: Authors' computation

From a geographical perspective, (Table 3) represents the most influential countries, ranking them by total production (TP), then by total citations (TC), and by the Single-Country Production (SCP); the number of publications written by authors from the same country. According to this table, China was the most productive country with a total of 399 papers with the second highest total citations (1940), followed by the USA, which was the second most productive with 133 papers and fourth highest total citations (544). The United Kingdom

is ranked third with 108 papers alongside Ukraine, and the highest cited country with a total of 5 160 citations, mainly due to the works of Martin Ron L. that represents 83,1% of the citations volume, as highlighted in (Table 2). The table also highlights the domestic research importance, ranking China first with a total of 95 publications, the USA second with 26 publications, and the United Kingdom third with 22 publications, which shows the shift towards international co-authorship, suggesting the universality, complexity, and multidimensionality of public finance resilience.

Table 4: Most 10 leading journals

Journal	h-index	TP	TC	PY-start
Finance Research Letters	6	24	171	2023
International Review of Economics and Finance	6	13	123	2019
Journal of Risk and Financial Management	4	12	62	2024
Humanities and social sciences communications	8	11	364	2020
Journal of Public Budgeting, Accounting and Financial Management	5	11	24	2024
Cities	9	10	721	2020
Applied Economics	5	8	111	2014
Regional Studies, Regional Science	5	7	146	2018
Resources Policy	4	7	154	2015
Cogent Economics and Finance	6	6	95	2022

Source: Authors' computation

(Table 4) presents the most influential journals in the public finance resilience literature. According to the table, the journal of “Finance Research Letters” leads the ranking with 24 publications and 171 citations. This dominance reflects the journal’s broad scope in applied finance research, which makes it an outlet for studies that are interested in the intersection of fiscal policies, financial vulnerabilities, and resilience frameworks. The “International Review of Economics and Finance” ranks second with 13 publications and 123 citations. This confirms that public finance resilience is increasingly treated as a quantitative and empirical research question, consistent with the editorial orientation of this journal towards rigorous econometric and financial analysis.

Moreover, despite having started publishing theme-related papers just in 2024, the “Journal of Risk and Financial Management” and the “Journal of Public Budgeting, Accounting and Financial Management” are ranked respectively third and fifth as most influential journals on public finance resilience. Their rapid rise in visibility and impact suggests that public finance resilience is gaining traction as a distinct research agenda within these more specialized outlets. This also indicates that the field may be gradually moving toward more specialized and dedicated publication channels, rather than remaining scattered across general finance and economics journals.

Table 5: Most 10 leading affiliations

Affiliations	Country	TP
The university of Opole	Poland	13
The university of Essex	United Kingdom	12
The university of Yanshan	China	12
The university of Putra	Malaysia	9
The Northwest Normal university	China	8
The university of Alexandru Ioan Cuza	Romania	8
The university of Yunnan	China	8
The university of Zhejiang	China	8
The university of Huaqiao	China	7
The Chinese Academy of Sciences	China	7

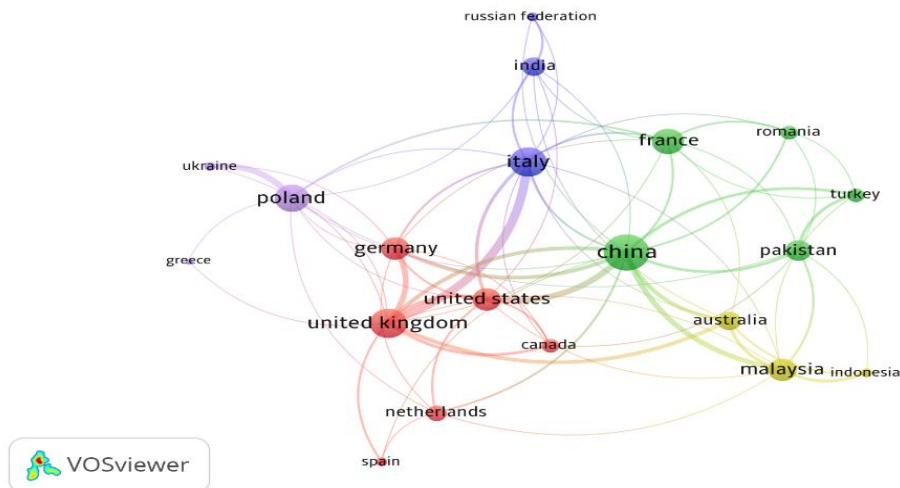
Source: Authors' computation

(Table 5) highlights the most contributing universities in the theme of public finance resilience. The University of Opole (Poland) leads with 13 publications representing almost 42% of the total production of the whole country of Poland, indicating a strong institutional concentration of research activity within a single university, rather than being distributed across multiple institutions. This level of concentration within a single institution suggests that research activity in Poland is driven by a specific academic community rather than being spread across the country's higher education system. While this reflects a strong and focused research group, it also points to a lack of institutional diversity within the national landscape. The University of Essex and the University of Yanshan are ranked second, each with a total of 12 productions.

The most revealing finding on this table is that six out of the ten leading affiliations are all Chinese universities. This indicates a strong institutional dominance that goes beyond what was already observed at the country level of production in (Table 3), and confirms that China's strong publication output is not concentrated in a few institutions, but is instead spread across multiple and different universities. This multiplicity of contributing universities suggests that public finance resilience has become a main research topic within Chinese academia, supported by a broad institutional base rather than isolated research efforts.

3.3. Collaboration pattern

(Figure 3) illustrates the international collaboration network in public finance resilience research, comprising countries from four continents (Asia, Europe, North America, and Oceania). The size of each node reflects the volume of collaborative output, and the links between nodes represent active research partnerships. The network is clearly structured around a small group of dominant countries, which suggests that international collaboration in this field is concentrated rather than open and inclusive.

Figure 3: International collaboration network

Source: Authors' computation

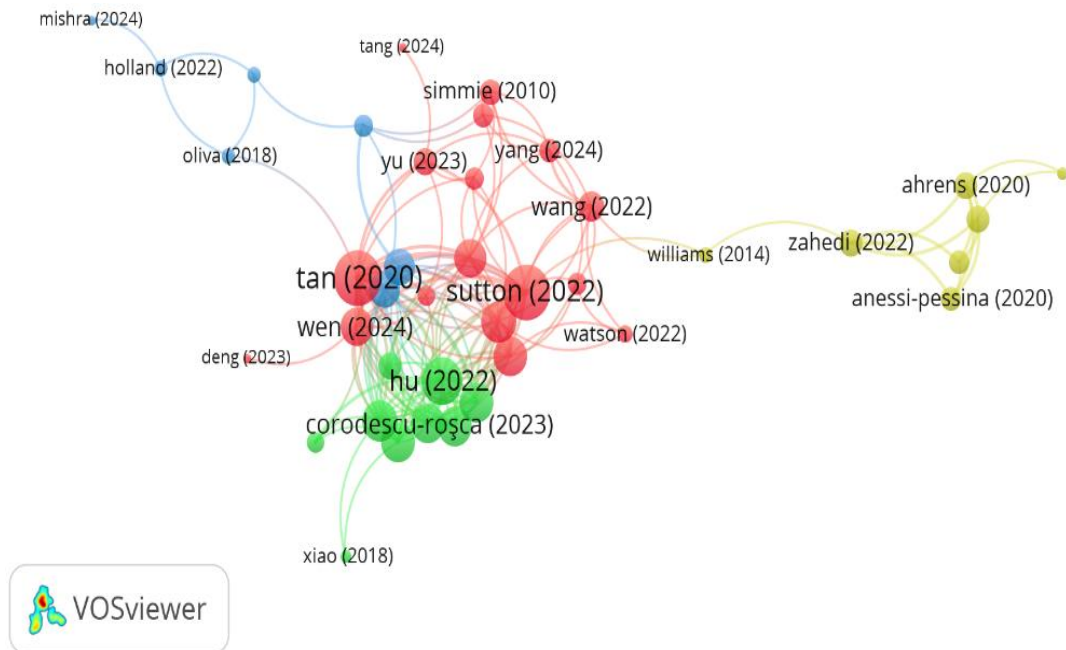
China leads the network with 136 documents and 29 research partners, leading the highest Total Link Strength (TLS) of 58. This dominance is consistent with China's broader rise in global academic output over the past decade, and reflects the growing attention Chinese researchers have given to questions of fiscal resilience, particularly in the context of rapid urbanization, local government debt, and economic transitions.

The United Kingdom is ranked second, with 62 documents, and a (TLS) of 47. This position is largely driven by economic geography scholars whose theoretical frameworks have been widely adopted in the public finance resilience literature. Italy and the USA are ranked third and fourth, with a (TLS) of 37 and 29, respectively. The presence of these countries reflects two different traditions; Italy's focus tends to be in the fiscal governance and regional and subnational level public finance, while American contributions are more oriented towards macroeconomic resilience frameworks and federal fiscal policies.

The concentration of collaboration around these four countries points to a significant imbalance in the global research map. Regions such as Africa and the Middle East, which are arguably among the most exposed to fiscal shocks (IMF, 2015), are largely absent from the collaboration network.

(Figure 4) shows four bibliographic coupling clusters. Node sizes reflect the number of shared references the author has with others. The central red cluster is the largest, with publications from 2010 to 2025. The article with the highest (TLS) is (Tan et al., 2020), which analyzes the determinants of the "Economic regional resilience" in the Chinese resource-based cities. The research paper with the second highest (TLS) of this cluster is (Sutton & Arku, 2022), proposing a new system-based framework to understand the regional economic resilience. This cluster includes other articles, such as (Pontarollo & Serpieri, 2020) that suggest composite indicators to measure "Regional economic resilience" after the financial crisis of 2008, and (Wen et al., 2024) that analyzes the impact of infrastructures on the "Urban economic resilience" in China from 2003 to 2021.

Figure 4: Bibliographic coupling



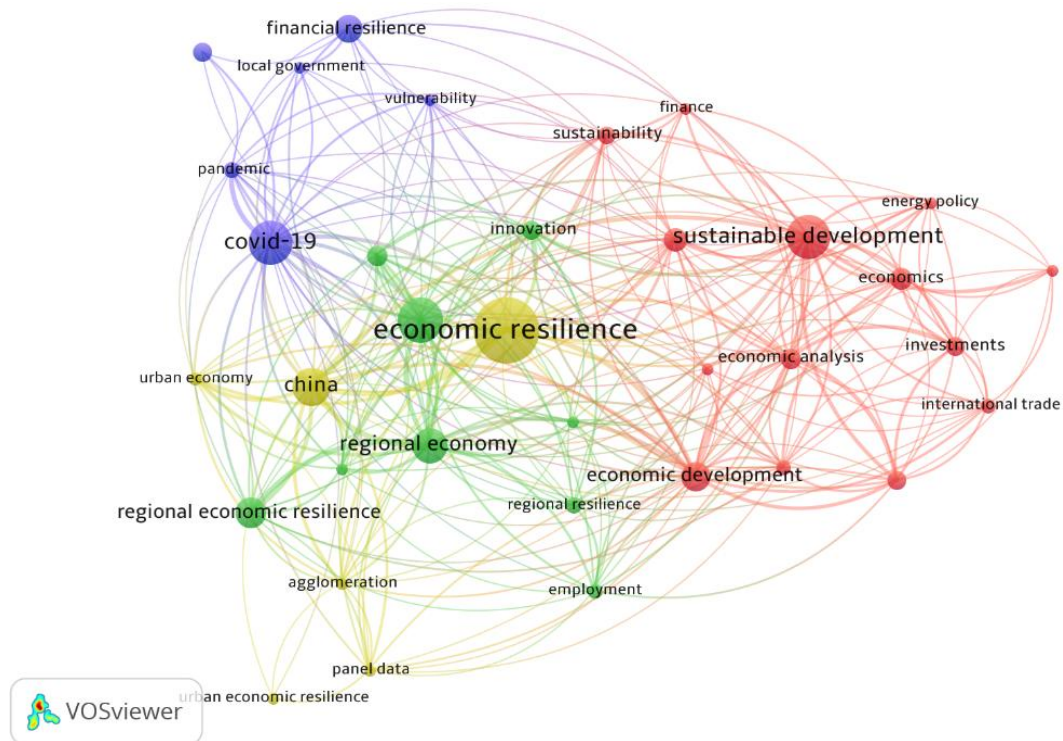
Source: Authors' computation

The green cluster is the second-largest cluster. It includes articles such as (Hu et al., 2022) of a (TLS) of 22, analyzing the concept of regional economic resilience in China in the middle of Covid-19 area. (Rocchetta et al., 2022) with a (TLS) of 26 identifying the technology as a determinant of the regional economic resilience, and (Corodescu-Roșca et al., 2023) with a (TLS) of 22, analyzing the regional economic resilience and the role of innovations in reinforcing this resilience.

The blue and yellow clusters on the left and right sides of the figure remain relatively limited. The most cited papers of the blue cluster are (Pudelko et al., 2018a) investigating the economic resilience of Germany in the times of the 2008 financial crisis, taking into consideration the regional agglomeration, and (Di Pietro et al., 2021) analyzing the regional economic resilience in the European union, formulating all, vulnerability, resistance, the ability to absorb and to recover after the shock. In terms of the yellow cluster, the most cited documents are (Zahedi et al., 2022) with a (TLS) of 9, that aims to identify regional dimension and social support from the government's side among other factors as determinants of the financial resilience, (Ahrens & Ferry, 2020) exploring the situation of the financial resilience of English local government after the COVID-19 pandemic, and also (Anessi-Pessina et al., 2020) that provides valuable insights and recommendations to governmental budgeting to overcome COVID-19 effects.

3.4. Keyword analysis

Figure 5: Co-occurrence analysis



Source: Authors' computation

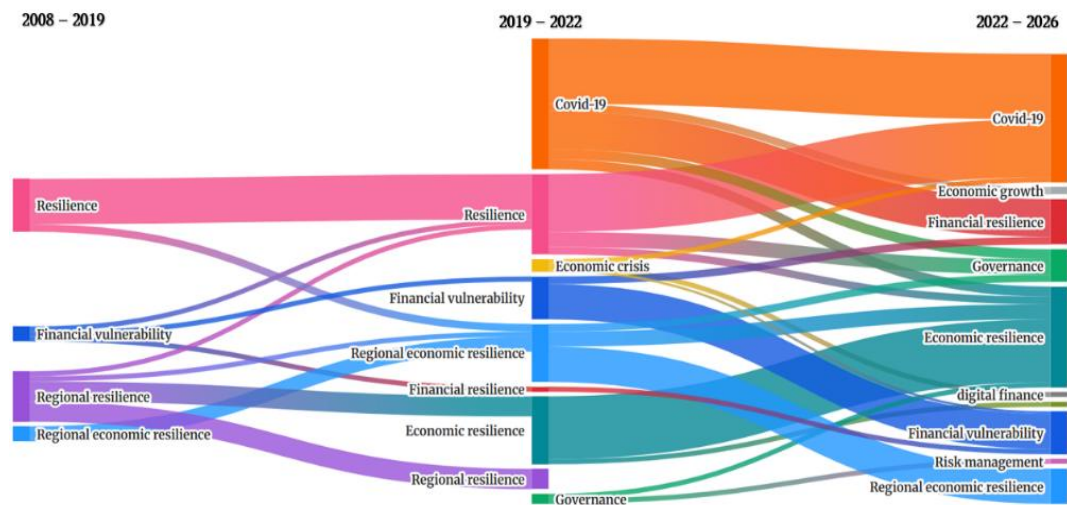
(Figure 5) presents the co-occurrence analysis of authors' keywords. The size of the node indicates the keywords' frequency. The dominant keyword with the highest frequency is "Economic resilience" (92), linked to multiple nodes and clusters. The green cluster regroups keywords such as "resilience" with a frequency of 58, "regional economy" (42), "regional economic resilience" (35), suggesting the first theme of the selected research papers, that is to say "Regional resilience"; The majority of the selected papers addressed the resilience on a regional level, analyzing the determinants, different methods and empirical techniques to measure it, such as Ordinary Least Squares (OLS) (Bastanifar & Shirkhani, 2025; Pudenko et al., 2018b), the Vector Auto-regressive (VAR)-type models (T. Guo et al., 2025; Ouyang et al., 2025) and other econometric models such as ARDL, VECM, etc. (Tekin, 2024). The second cluster in yellow regroups terms such as "urban economy" (12), "agglomeration" (10), "urban economic resilience" (10) and "panel data" (11), suggesting the theme of the "Urban economic resilience", taking into consideration the agglomeration of regions and urban economies, tending to empirically use panel data as an analysis tool. This cluster includes the keyword "China", strongly linked to the keyword "COVID-19" in the blue cluster. This cluster regroups the keywords "pandemic" (16), "local government" (10), "financial resilience" (30), and "vulnerability" (11), suggesting the interest

of many scholars in analyzing the vulnerability of enterprises, individuals, regions, urban economies, and local governments in the era of the COVID-19 pandemic.

The red cluster highlights another theme studied by scholars in the resilience of the public finance field. It includes terms economic-related such as “economic analysis” (21), “economics” (22), “economic development” (33), related to financial and economic sustainability such as “sustainable development” (54), and “energy policy” (10), “sustainability” (17) and other finance-related terms such as “finance” (11), “investments” (26), and “international trade” (13). This suggests a significant diversity of the literature on public finance resilience; it indicates that researchers tend to examine resilience as a long-term governmental and regional reaction to shocks and a developmental framework. It also indicates that it is examined within open economies, suggesting countries’ exposure, external demand shocks, different supply chain disruptions, trade dependencies, and importation and exportation concentrations all can determine the level of different types of public finance resilience.

3.5. Research themes

Figure 6: Thematic evolution



Source: Authors’ computation

(Figure 6) traces the evolution of research themes in the public finance resilience literature from 2008 to 2026, revealing a field that has progressively grown in complexity and scope. During the initial period from 2008 to 2019, the literature was built around three main concepts: “resilience”, “regional resilience”, and “financial vulnerability”. The narrow thematic focus of this period reflects the early stage of the field, where scholars were primarily concerned with defining and measuring resilience in the aftermath of the 2008 financial crisis, mostly through a regional and geographic lens borrowed from economic geography.

Between 2019 and 2022, the COVID-19 pandemic acted as a major turning point. New themes emerged in this period, such as “governance”, “financial resilience”, and “economic crisis”, while “COVID-19” itself became the dominant research theme. This shift

is significant because it marks the moment where public finance resilience moved from a largely theoretical and regional concept to an urgent policy question. The fragmentation of previous themes like "regional resilience" and "financial vulnerability" into a broader set of concepts reflects the growing recognition that resilience in public finances cannot be reduced to a single dimension; it requires simultaneously addressing institutional capacity, crisis management, and fiscal sustainability. In this period, governments worldwide were forced to mobilize unprecedented levels of public spending in a very short period of time, while simultaneously facing sharp drops in tax revenues. This combination of rising expenditure and collapsing income put public finances under extreme pressure, making resilience an immediate and unavoidable research priority.

This shift is also significant from a conceptual standpoint; Before 2020, resilience in public finance was largely discussed in theoretical terms, explaining the main different aspects of resistance, vulnerability, adaptation, rebound, or anticipation, mainly through regional finances and economics and geographic studies. The COVID-19 pandemic changed this scholar's standpoint and shifted the debate toward more concrete and policy-oriented questions; for example, how should governments structure their budgets to withstand and resist sudden shocks, and what are the determinants that reinforce these capacities? What institutional arrangements make public finances more adaptive? How can fiscal policy support recovery without compromising long-term debt sustainability? This shift brought the "Governance" into the center of the resilience debate, as scholars began to recognize that the capacity of public finances to absorb and recover from crises depends not only on available fiscal space, but also on the quality of public institutions, the transparency of budget processes, and the effectiveness of government decision-making under uncertainty. The fragmentation of earlier themes like "regional resilience" and "financial vulnerability" into this broader set of concepts further reflects the growing complexity of the field.

Finally, the most recent period from 2022 to 2026 shows a further evolution of public finance resilience, showing the scholars' interest shift. The emergence of "digital finance", "risk management" and "economic growth" as new dominant themes, alongside prior focus on "economic and financial resilience" and "governance". The rise of digital finance as a research theme reflects a growing awareness that technological and digital transformation is defining the way governments manage their finances nowadays. These tools and technologies are increasingly used in the public finances to strengthen fiscal systems, and improve tax collection efficiency and efficacy, build more flexible budgets and fraud detection and supervising systems. Scholars highlight the importance of these digital tools and show that governments that have better real-time visibility over their fiscal position are inherently better equipped to detect vulnerabilities early and respond to shocks before they become unmanageable.

The emergence of the risk management field signals another important shift in the literature. Previous research tends to analyze resilience in a retrospective way, analyzing how public finances recovered after different crises. The new increasing focus on risk management in the public finance resilience field suggests that researchers and policymakers are more interested in the anticipatory and preventive dimension of resilience;

how can governments identify the different fiscal risks? And how can they assess and overcome these risks before they materialize into a full crisis?

Finally, the emergence of economic growth as a central theme reflects a deeper reconceptualization of what public finance is ultimately for; instead of simply measuring the ability of government to withstand and overcome shocks, the scholars examine how public finance can support sustained and inclusive economic development in the long run, introducing the notion of the durability of public finances. This shift suggests that the public finance resilience theme is converting towards a more sustainable public finance.

4. Discussions

This study presented the publications volume and evolution, the most contributors to the aforementioned literature, and research thematic trends using articles from the Scopus database. Aligning with the previous bibliometric analysis on economic and financial themes related to the concept of resilience, this paper analyzes the concept of resilience in the public finance theme, using a sample of 656 papers. The production volume trend suggests the nature of the resilience literature, mainly triggered by financial crisis and pandemics (Horák & Špaček, 2025; Sakhapova, 2022; Sanusi et al., 2023).

The literature evolution can be divided into three periods: (2008-2019), (2019-2022), and (2022-2026). During the first period, researchers' main attention was devoted to the analysis of the resilience and its determinants on a regional and urban level, starting with the first paper (Treado & Giarratani, 2008), which identifies export income from national and international markets as a determinant of regional economic resilience, through the steel industry in Petersburg, USA. More research examined the regional economic and financial resilience determinants through other social perspectives (Bhargava et al., 2018; Sabatino, 2019; Svoboda & Klementova, 2014), arguing that the role of human and social capital is a significant determinant of the regional economic resilience. Additionally, due to the nature of the 2008 crisis, (Venardos, 2010) analyzes the potential of Islamic banking and its ability to withstand the crisis effects, suggesting it as a financing source that can boost global and regional finances.

The second period is marked by the emergence of the concept of COVID-19 through many works that addressed its effects on all different levels. This period is marked by the emergence of the concept of governance, through the works of (Tateishi et al., 2021) analyzing the governance system model, and its role to assist policymakers in post-crisis urban effects. The concept of governance is again pointed out by (Anessi-Pessina et al., 2020; Saliterer et al., 2021), providing insights to governmental re-budgeting to withstand the COVID-19 effects, suggesting stronger emphasis on anticipatory roles on governmental budgeting, reducing its vulnerability and exposure to shocks, and supporting governmental resilience, and through (Upadhaya et al., 2020) examining short and long-term responses of the south-Asian countries' governments in the period of COVID-19.

The last period 2023-2026 marks the reinforcement of the governance, economic, and financial resilience themes of interest, the persistence of the COVID-19 themes, and the emergence of new themes. First, the "digital finance", through research papers such as (Wen et al., 2024), examining the regional and urban economic resilience, argues that introducing the "Next generation information technology" can enhance economic resilience

through the promotion of digital and green innovation. Additionally, (Cao et al., 2025) explore the relation between the application of artificial intelligence and financial resilience, arguing that the effects of AI applications and financial resilience on rural revitalization exhibit significant geographical differences.

The analysis of the most influential research papers shows that resilience is understood as a multidimensional, complex, and evolving concept that still requires deeper theoretical and empirical exploration. The concept has moved beyond its early interpretation toward a broader framework that encompasses both personal and contextual dimensions (Martin & Sunley, 2015).

Co-occurrence analysis had identified three main pillars of the scientific contributions of the field. The works relevant to the analysis of the economic and financial resilience on a regional and urban level, taking into consideration the agglomeration effect. The works related to the analysis of resilience during and after different financial and economic crises and pandemics, and research papers focusing on the financial and economic sustainability and durability of public finance.

These findings depict resilience as a multidimensional construct that has progressively evolved. Whereas earlier papers studied the economic and financial regional resilience, recent studies include machine learning, artificial intelligence, and sustainability into the analysis, reflecting a new expansion in the literature of public finance research.

These three pillars reveal important research gaps that the existing literature hasn't yet fully been addressed. First, while the regional and urban resilience has been extensively studied both on an economic and a financial level, the literature remains limited on cross-country comparative analyses, which could allow for more generalizable results and conclusions about factors that make public finance resilient across different institutions and economic contexts. In particular, (Briguglio, 2016) constructed an index of economic resilience across 87 countries and classified countries according to two dimensions: their level of vulnerability and their level of resilience. This framework is relevant in this context, as it suggests that countries positioned in weaker resilience zones have much to learn from those that have successfully built fiscal resistance and adaptive capacities and reinforced their resilience in the face of economic and financial shocks. Cross-country comparative analyses allow vulnerable and low-resilience economies the knowledge transfer and policy learning between these groups (IMF, 2015). These comparisons would also allow researchers to draw more lessons for different governments seeking to strengthen their resilience.

Moreover, the dominance of crisis-driven research means that one of the dimensions of resilience is still neglected; resilience is defined across scholars as the ability to anticipate, absorb, adapt, and bounce back or bounce forward after a crisis. This dominance means that resilience is still largely studied as a reactive phenomenon, and that the anticipatory, proactive, and preventive dimensions are significantly unexplored. This means that critical questions are yet to be addressed: how can governments detect early warning signals of fiscal fragility before crises occur? And what are the determinants and mechanisms that allow governments to build a genuine shock-absorbing capacity in times of stability? And how can fiscal policies be readjusted and redesigned to be more adaptive, rather than simply being reactive? These questions require a fundamental shift in research perspectives and

in the ways research on public finance resilience is initiated, moving from the actual model where crises act as the primary trigger for academic research towards more anticipatory research that does not require shocks to occur before analyzing the public finance resilience.

Furthermore, the emerging themes of digital finance and artificial intelligence open entirely new research frontiers. The implications of technological and digital transformation in public finance remain largely unexplored. While recent studies have begun to examine how digital tools and AI applications can enhance resilience at the regional level (Cao et al., 2025), fundamental questions emerge and remain unanalyzed. First, how can these technologies strengthen public finance resilience, and to what extent can Artificial Intelligence improve the ability to anticipate and detect fiscal risks before crises occur?

From a theoretical point, this study confirms that public finance resilience research has not yet developed a unified conceptual framework of its own; theoretical ground still relies on the main concepts developed from regional economics. Therefore, future research should consider a more specific framework for the institutional or governmental dimension of resilience.

5. Conclusion

This study's findings contribute to the existing body of research literature by mapping the thematic evolution process, identifying the most influential sources, and providing insights into the collaboration patterns across different institutions and countries.

The steady rise in publications from 2008, and the very sharp acceleration from 2020 onwards confirms that resilience has become an increasingly central concern in the public finance field, mainly driven by the succession of global financial, economic, and even geopolitical crises, which have tested the adaptive capacity of worldwide governments. Alongside the documentation of this growth, this study reveals that the research field has significantly evolved, moving from a regionally focused literature towards a broader and more interdisciplinary and wider research theme, that incorporates governance, digital finance, and artificial intelligence as key dimensions of public finance resilience.

However, the study also identifies several significant gaps in the current literature. First, the geographical distribution of research contribution remains extremely uneven; research output is heavily focused in China, the United Kingdom, the USA, and Italy, while the African continent and Arab economies remain largely unexplored and underrepresented, despite being the most vulnerable and facing the most pressing challenges (IMF, 2015). Future research should therefore prioritize these underrepresented contexts, both to fill this gap and to ensure that the literature reflects a more inclusive understanding of public finance resilience.

Moreover, this paper recommends that future studies focus on comparative analysis between highly resilient and non-resilient countries, drawing on the frameworks such as the one constructed by (Briguglio, 2016), vulnerability-resilience classification. Such comparisons would allow scholars to move beyond the context findings and be able to generate more transferable results. This paper also recommends that the regression models proposed in the existing literature be empirically tested in the non-resilient or low and middle-income contexts.

Finally, we recommend that future bibliometric studies on this topic expand their data collection beyond Scopus to include other major databases such as Web of Science, in order to capture a broader range of publications and ensure more comprehensive mapping of the public finance literature. Additionally, a systematic literature review of the most influential works identified in this study would represent a valuable and natural next step, allowing for a deeper qualitative synthesis of the existing findings, a more thorough identification of research gaps, and a more structured agenda for future research in the field of public finance resilience.

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