**ISSN** 2409-2665
**Journal of Logistics, Informatics and Service Science**
Vol. 12 (2025) No. 6, pp. 239-261
**DOI:10.33168/JLISS.2025.0613**

# Mapping Economic Policy Uncertainty and Stock Market Research through Bibliometric Informatics: Evidence from Scopus

Junxiao Gui[1,2,*], Nathee Naktnasukanjn[1], Xi Yu[2], Siva Shankar Ramasamy[1]

[1]International College of Digital Innovation, Chiang Mai University, Chiang Mai 50200, Thailand

[2]Overseas Education College, Chengdu University, Chengdu 61000, Sichuan, China

*guijunxiao@cdu.edu.cn (Corresponding author), nathee@cmuic.net, yuxi@cdu.edu.cn, sivashankar@cmuic.net*

**Abstract:** This study employs bibliometric informatics tools (VOSviewer and CiteSpace) to map the intellectual landscape of research on economic policy uncertainty (EPU) and stock markets. By analyzing 546 publications from the Scopus database, we identify influential authors, institutions, journals, and research themes, providing service science perspectives for researchers and policymakers to better understand knowledge flows and decision-support mechanisms in financial informatics. Results reveal significant geographical concentration in China (37.64% of publications) and methodological evolution from basic EPU measurement to complex behavioral finance integration. Baker et al.'s EPU measurement framework remains the foundational work, while emerging themes include COVID-19 impacts, high-frequency data analysis, and informatics-driven prediction models. The analysis identifies critical research gaps in cross-cultural policy transmission mechanisms and real-time uncertainty measurement, providing a theoretical foundation for future investigations in financial informatics and economic policy uncertainty modeling.

**Keywords:** Economic Policy Uncertainty (EPU); Stock Market; Research Trends; Bibliometric Analysis

# 1. Introduction

The world economy entered the 2020s with two key challenges: unresolved issues from the 2008 financial crisis and new policy uncertainties caused by the pandemic. Both are linked by economic policy uncertainty (EPU). When the IMF (2012 World Economic Outlook) labeled EPU as a major obstacle to global recovery, it mainly referred to traditional macroeconomic risks like fiscal cliffs and debt disputes. A decade later, EPU now includes climate policies, crypto regulation, sanctions, and AI governance. Since these policies are often labeled "work in progress," they create unstable expectations. This uncertainty spreads rapidly through digital channels, increasing asset-price volatility (Baker, Bloom & Davis, 2016). Understanding how EPU affects stock markets is no longer a niche topic—it is essential for macro-financial monitoring and building resilient systems that turn data into decisions.

The monthly index by Baker et al. (2016) has been expanded by real-time textual indicators from news, social media, and regulatory reports. For example, Li et al. (2020) shows that news-based EPU raises crash risk, while Renault (2017) and Behrendt & Schmidt (2018) use Twitter data to reveal volatility patterns around policy announcements. Caporin & Poli (2017) and Zhang et al. (2021) confirm that text-based EPU forecasts outperform traditional methods, setting a new analytical standard. Narrative reviews by Thaqeb & Algharabali (2019), Castelnuovo & Pellegrino (2017), and Haq et al. (2021) offer valuable insights but lack quantitative structure. Meanwhile, research output has surged: 426 of 546 Scopus-indexed papers on "EPU and stock market" were published between 2020 and 2023. Without a systematic overview, researchers risk duplication, policymakers face overload, and the field lose clarity—exactly the coordination issues service science aims to solve (Maglio & Spohrer, 2008; Alter, 2012).

We treat the literature as a knowledge-service system, where academic outputs (papers, citations, keywords) feed into practical decision-making (portfolio design, risk control, policy timing). From this perspective, bibliometric analysis is not just descriptive—it is diagnostic, identifying gaps and emerging trends. This paper addresses three questions: What is the intellectual foundation of the EPU–stock market field—its key papers, journals, authors, institutions, and countries? How has this foundation evolved since 2008, and which areas are gaining the most attention? Where are the under-researched areas—gaps in citation or keyword networks that point to future research and policy needs?
By answering these, we offer two outcomes. For scholars, a data-driven overview to position their work. For practitioners, a near-real-time dashboard showing "who knows what" and "what remains unknown," similar to financial informatics tools that use news-mined EPU in trading algorithms (Jegadeesh & Wu, 2013; Rekabsaz et al., 2017).

The remains as follows: Section 2 reviews the existing literature on EPU and stock markets; Section 3 outlines the methodology and literature selection process; Section 4 presents and analyzes the findings from the bibliometric analysis; and the final section summarizes the conclusions and identifies emerging research trends.

# 2. Related Work

Gentzkow et al. (2019) described EPU as the uncertainty individuals have regarding future policy changes and the effects of current government policies. Traditional methods quantify EPU by analyzing market indicators like the VIX market volatility index or the variance risk premium. This gauges investors' risk aversion and creates an uncertainty index using the unpredictable conditional volatility of numerous economic variables. According to Jurado et al. (2015), these measurement methods have limitations due to the short duration of market variables, low frequency, and the inability to compare indicators across different countries. The EPU index serves as a valuable gauge of EPU. Baker et al. (2013, 2016) utilized news articles from different countries to create the EPU index, showcasing the progression of big data research. Consequently, researchers have extensively explored the associations between EPU and diverse factors, employing EPU index of Baker et al. (2016) as a key metric.

Substantial research has specifically examined its relationship with stock markets, building on this foundational framework.

Brogaard and Detzel (2015) investigated the correlation between EPU and the American monthly CRSP value-weighted index. They found a negative relationship between fluctuations in EPU and stock returns during that time. It is a crucial element in forecasting fluctuations in stock market returns. EPU simultaneously increase the risk premium in the cross-section of US equity returns over time. Based on Ko and Lee (2015), Das and Kumar (2018) found that the stock market returns of emerging markets are affected by the changes of domestic EPU and are relatively less susceptible to the impact of international EPU shocks, while the stock market returns of European countries are more sensitive to the policy shocks triggered by the United States. In addition to traditional econometric approaches, informatics-based methods have become increasingly instrumental in decoding the relationship between economic policy uncertainty (EPU) and financial markets. Nassirtoussi et al. (2014, 2015) systematically review and empirically validate text-mining techniques for both macroeconomic and micro-market forecasting. Obaid & Pukthuanthong (2022) integrate news photographs and textual data within deep neural networks to enhance the precision of EPU sentiment measurement. Early studies by Antweiler & Frank (2004) and Bollen et al. (2011) demonstrate that sentiment extracted from message boards and Twitter significantly explains abnormal equity returns. Gui et al. (2022) leverage the ERNIE language model to extract EPU sentiment from ChiNext forum posts, identifying a five-minute transmission horizon to transaction prices. Wu et al. (2022) propose an S-I-LSTM architecture, while Zhang et al. (2018) apply social-network analysis; both approaches exhibit superior performance in capturing cross-market contagion pathways compared to standard VAR models. Christou et al. (2017) found a notable inverse relationship between stock market returns in Australia, Canada, China, Japan, and South Korea and the EPU shock in the United States. EPU in the United States has a substantial spillover effect. Tsai (2017) found that China's EPU propagates systemic risks, while European EPU is more likely to spread volatility risks. Both discovered a strong correlation between volatility risks and EPU in their markets, with China's EPU having the most significant influence. Das and Kumar (2018) revealed that European and U.S. EPU generates spillover effects on global economies. Debata and Mahakud (2018) revealed that in a regular market environment, the impact of EPU on stock market liquidity is relatively mild; however, during the turbulent period of a financial crisis, this impact will be significantly magnified, and the shock caused by EPU will have a more severe effect on stock market liquidity. Their analysis further highlighted investor sentiment as a key mediating factor in liquidity shifts amid economic turmoil. On top of it, Jing et al. (2019) found that EPU has an increased role in raising firm's vulnerability to stock market crashes, Luo and Zhang (2020) obtained a result that the more the earnings were impacted by EPU, the greater impacts on stock price decline caused by EPU variation, and Dash et al. (2021) observed a direct relationship between EPU and stock market liquidity. Wang et al. (2022) have discovered that good information disclosure helps reduce the negative impact of high EPU on stock liquidity.Jing et al. (2023) investigated the impact of EPU on the risk of stock price crashes, and the result showed that high EPU is associated with low stock price crash risk. Wang et al. (2023) identified that the EPU can suppress the risk of stock price crash, which is quite different from Du et al. (2023), who determined that EPU positively drives the probability that stock prices crash. Zhang et al.(2023) indeed replicated this pro-positive relation at market level, attributing a high EPU to an increased risk of stock market crashes. In their case, low stock liquidity proves more relevant for firms with low transparency, poor attention by investors and poor risk-management i.e., conditions where stock liquidity shortfalls increase vulnerability during market stress. Mbanyele (2023) discovered that EPU has strong implications to stock liquidity, most importantly to highrisk and small firms, competitive-market firms.

## 3. Methodology and Data

Liu et al. (2014) define bibliometric as a research approach or methodology that uses analysing temporal

patterns in specific areas of research as well as the role of literature to deliver a snapshot of research landscapes and also to provide new frontiers and structure of knowledge evolution in an empirical, systematic manner (Costa et al. 2019). By analyzing the patterns in a pool of academic publications, these kinds of methods help researchers in tracing the state of current researches in a field, reconstructing the narrative of development, or proposing the future directions of development (Lu et al., 2019). We used data-driven bibliometric methods—like co-citation analysis, bibliographic coupling, and keyword co-occurrence mapping—to pull out useful knowledge patterns from the research on EPU and stock markets. These methods act like knowledge discovery tools that help researchers and policymakers spot hidden research groups, follow how topics have changed over time, and make better use of research resources. All the analysis was done with VOSviewer 1.6.15 and CiteSpace 6.0, and the settings were adjusted to make the visualizations more useful for service-related studies (for example, setting the modularity threshold to 0.4 and the minimum cluster size to 5).

We used the SCOPUS in our analysis to review publications from academia on relationship between EPU and stock market. SCOPUS is a multidisciplinary database that contains strictly peer-reviewed research documents including articles, booklets, and conference papers from over 11,000 publishers worldwide. SCOPUS is almost 99.11 per cent covered by the journals in WOS while only 33 per cent of SCOPUS documents are present in WOS (Singh et al., 2021). The one-way inclusion reflects SCOPUS's better intra-disciplinary coverage in that it includes 66.07% of papers published in WOS exclusively available journals; such values make it the most appropriate source for multi-domain literature review needs with full coverage requirements.

We finalized data acquisition on December 31, 2023, covering all peer-reviewed studies examining EPU and stock markets available through that date. Through Boolean operator techniques, we systematically explored SCOPUS databases using the combined search parameters "economic policy uncertainty" (appearing in title/abstract/keywords) paired with "stock market" or "equities" within identical metadata fields. To maintain methodological rigor, the search protocol exclusively targeted English-language papers while remaining inclusive regarding publication timelines (from earliest available records), research methodologies, regional emphases, and publication venues - adhering to established bibliometric standards (Williams & Bornmann, 2016). Initial SCOPUS database queries generated 556 potential papers, which underwent sequential refinement: 8 non-English entries and 9 non-article formats (including conference papers and book sections) were excluded, yielding 549 qualified papers. Subsequent quality assurance procedures eliminated redundant and non-conforming records, culminating in 546 rigorously vetted articles constituting the core analytical corpus. The document selection workflow appears diagrammatically in Figure 1.

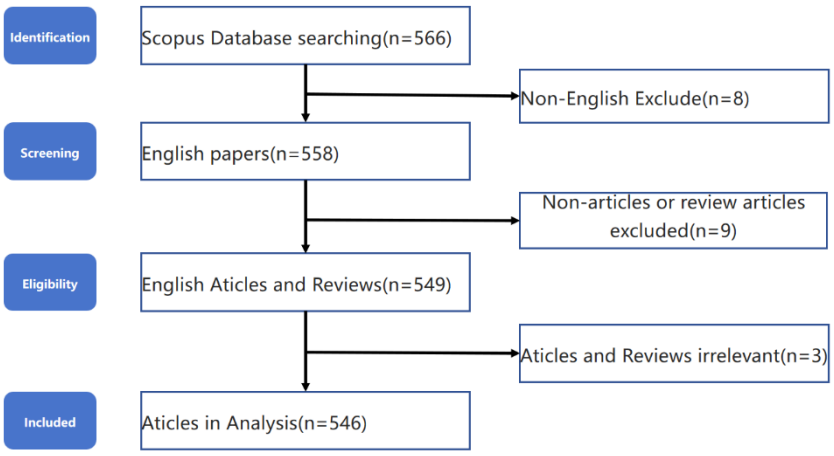


Fig.1: The search and selection methodology employed in conducting the bibliometric analysis.

# 4. Results and Discuss

## 4.1 Analysis of Publications

Analyzing the temporal distribution of publications offers critical insights into the evolution of research on EPU and stock markets. From 2012 to 2023, academic exploration around the interdependent relationship has shown a rapid growth trend. This phenomenon is largely attributed to the pioneering research conducted by Baker et al. (2013). As members of the research teams from the University of Chicago and Stanford University, they constructed a sophisticated text mining framework using news media datasets and thereby calculated a series of exclusive EPU indices for different countries. This groundbreaking achievement has completely revolutionized the measurement of EPU and laid a solid foundation for subsequent research. This methodological breakthrough laid the groundwork for subsequent empirical investigations. As illustrated in Figure 2, publication output demonstrates a two-phase growth trajectory: a steady accumulation of 120 articles from 2012 to 2020, followed by a surge of 426 publications in the 2020–2023 period—a three-and-a-half-fold increase. This acceleration coincides with global events such as the COVID-19 pandemic, geopolitical tensions, and monetary policy shifts, which amplified real-world relevance of EPU–stock market dynamics. The data not only reflect heightened academic engagement but also signal growing policy urgency to address uncertainty-driven market vulnerabilities.

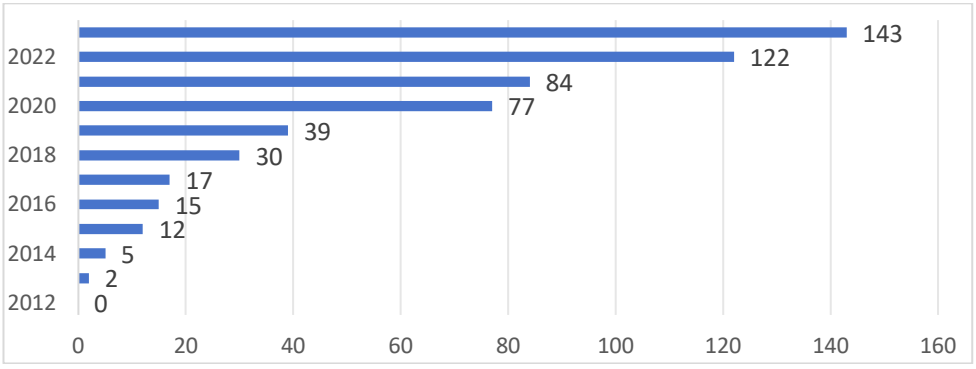


Fig.2: The annual number of papers published in SCOPUS database between 2012 and 2023

Regarding the distribution across subject area, the primary subject areas are Economics, Econometrics, and Finance (accounting for 51.56%), with Business, Management, and Accounting following closely at 15.14%. This pattern is not surprising, as it aligns with the inherently financial-economic characteristics of EPU–stock market relationships, which predominantly fall within these disciplinary frameworks.

Furthermore, studies in Mathematics (accounting for 5.29%), Decision Sciences (accounting for 5.17%), and Computer Science (accounting for 4.93%) highlight the increasing adoption of artificial intelligence and data mining methodologies in analyzing EPU-related datasets. Contributions from Engineering (accounting for 2.28%), Multidisciplinary Studies (accounting for 2.04%), and Physics & Astronomy (accounting for 1.80%) demonstrate the role of mathematical modeling and advanced statistical approaches in addressing complex market dynamics. Additionally, 1.79% of works in diverse fields—such as social sciences and behavioral finance—explore human-oriented factors, including social interactions and investor psychology, which mediate the affect of EPU on stock markets. For a comprehensive overview, refer to Figure 3.

The exponential growth in EPU-stock market research post-2020 reflects a knowledge service response to global policy shocks. This trend suggests that academic systems are functioning as real-time policy intelligence providers, where research production acts as a service input for financial risk platforms, central bank dashboards, and regulatory logistics systems. Future service systems could operationalize this bibliographic trajectory as a leading indicator for research-policy alignment, enabling proactive decision support during crisis periods.

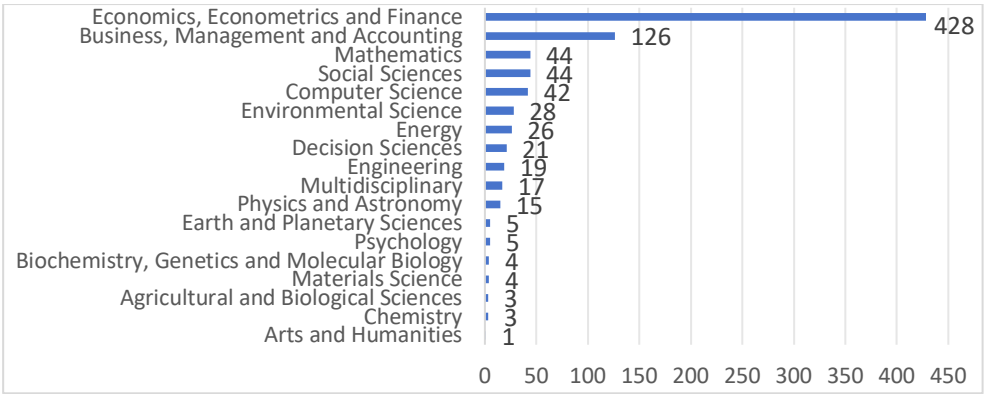


Fig.3: Papers categorized by subject area in SCOPUS database between 2012 and 2023

## 4.2. Analysis of Citation Structure

Analyzing the citation structure enables researchers to identify influential authors and seminal publications that have shaped scholarly investigations into EPU and equity market dynamics.

Table 1. The top 20 most cited research articles on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023

| Rank | Article Title | Publish Year | Total Citations | Citations per year | Journal | Author |
|---|---|---|---|---|---|---|
| 1 | Measuring economic policy uncertainty | 2016 | 4559 | 569.88 | Quarterly Journal of Economics | Baker et al. (2016). |
| 2 | The Asset-Pricing Implications of Government Economic Policy Uncertainty | 2015 | 746 | 82.89 | Management Science | Brogaard & Detzel (2015). |
| 3 | COVID-19 pandemic, oil prices, stock market, geopolitical risk and policy uncertainty nexus in the US economy: Fresh evidence from the wavelet-based approach | 2020 | 882 | 220.50 | International Review of Financial Analysis | Sharif et al. (2020). |
| 4 | Oil shocks, policy uncertainty and stock market return | 2013 | 348 | 31.64 | Journal of International Financial Markets, | Kang & Ratti (2013). |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | Institutions and Money | |
| 5 | Economic policy uncertainty and stock market volatility | 2015 | 339 | 37.67 | Finance Research Letters | Liu & Zhang (2015). |
| 6 | Do global factors impact BRICS stock markets? A quantile regression approach | 2014 | 331 | 33.10 | Emerging Markets Review | Mensi et al. (2014). |
| 7 | Economic policy uncertainty and firm-level investment | 2014 | 319 | 31.90 | Journal of Macroeconomics | Kang et al. (2014). |
| 8 | Economic policy uncertainty and stock markets: Long-run evidence from the US | 2016 | 271 | 33.88 | Finance Research Letters | Arouri et al. (2016). |
| 9 | The effect of economic policy uncertainty on investor information asymmetry and management disclosures | 2019 | 243 | 48.60 | Journal of Accounting and Economics | Nagar et al. (2019). |
| 10 | Economic policy uncertainty: A literature review | 2019 | 231 | 46.20 | Journal of Economic Asymmetries | Al-Thaqeb & Algharabali (2019). |
| 11 | The role of news-based uncertainty indices in predicting oil markets: a hybrid nonparametric quantile causality method | 2017 | 221 | 31.57 | Empirical Economics | Balcilar et al. (2017). |

| | | | | | | |
|---|---|---|---|---|---|---|
| 12 | International economic policy uncertainty and stock prices: Wavelet approach | 2015 | 219 | 24.33 | Economics Letters | Ko and Lee (2015). |
| 13 | Oil price shocks, economic policy uncertainty and industry stock returns in China: Asymmetric effects with quantile regression | 2017 | 219 | 31.29 | Energy Economics | You et al. (2017). |
| 14 | Economic policy uncertainty in the US and China and their impact on the global markets. | 2019 | 184 | 36.80 | Economic Modelling | Zhang et al. (2019). |
| 15 | Oil price shocks, policy uncertainty, and stock returns of oil and gas corporations | 2017 | 176 | 25.14 | Journal of International Money and Finance | Kang et al. (2017). |
| 16 | Can economic policy uncertainty predict stock returns? Global evidence | 2018 | 163 | 27.17 | Journal of International Financial Markets, Institutions and Money | Phan et al. (2018). |
| 17 | Economic policy uncertainty, financial markets and probability of US recessions | 2014 | 161 | 16.10 | Economics Letters | Karnizova & Li (2014). |
| 18 | Economic policy uncertainty and stock market returns in PacificRim countries: Evidence | 2017 | 146 | 20.86 | Journal of Multinational Financial Management | Christou et al. (2017). |

| | | | | | | |
|---|---|---|---|---|---|---|
| | based on a Bayesian panel VAR model | | | | | |
| 19 | Economic policy uncertainty in China and stock market expected returns | 2017 | 145 | 20.71 | Accounting and Finance | Chen et al. (2017). |
| 20 | The causal relationship between economic policy uncertainty and stock returns in China and India: Evidence from a bootstrap rolling window approach. | 2016 | 143 | 17.88 | Emerging Markets Finance and Trade | Li et al. (2016). |

Table 1 lists top 20 cited papers related to EPU on equity markets between 2012 and 2023. Baker et al. (2016) created an original EPU measure from news reports and also that index becomes the most widely used measure for researchers.Brogaard, D. and Detzel, P. (2015) is the second most-cited article, which used rigorous analytical approaches to measure economic policy uncertainty to ascertain it as a significant factor that helps determine capital markets' stability. Meanwhile, the third most-cited paper from Sharif, M. A., Hasan, S., Haque, A. A., Ahmed, H. S. K., Shang, H., and Hasan, B. N. (2020) examined near-term effects caused by disruptions of the pandemic and energy markets on geopolitics shocks, economic policy shocks, and equities markets.Fourth place research of Kang and Ratti (2013) investigated the relationship between crude oil price changes with and policy uncertainty, and they found they have a negative impact on investment earnings. The work in the fifth place by Liu and Zhang (2015) investigates the impacts of policy uncertainty on the market; results showed that increased level of uncertainty played a great role in amplifying the volatility trends. Among other highly referred study which included more than 100 reference were Liu et al.Cai et al.(2017) employed multifractal analysis tools to examine the impact of economic policy uncertainty on future market volatility. They empirically document that there exists a significant positive link between present policy uncertainty and future market volatility, implying that increased EPU would lead to increased future market volatility.

Moreover, based on our quantitative analysis and citation period-based classification in Table 2, it is clear that very highly cited articles tend to be published between the years 2016 and 2022. Based on our statistical analysis, 2 percent of the publications have reached more than $200$ citations and 5 percent of them have reached more than $100$ citations.Even more impressive is the fact that 42% of papers have been cited at least 10 times, and more than 87% of the papers that study EPU-stock returns relationship have been cited at least once. This shows not only that there is a continued interest and participation in this line of research but there is growing interest to study intricate interplays between EPU and various characteristics of stock markets.Moreover, our finding suggests that much of the cited

works contain discussions about the short-run impact of EPU on stock price movements, focusing on the importance of EPU and factbased evidence testing of the discipline. Our illustrative paper citation analyses and landmark influential papers are altogether provided in Table 2.

The citation dominance of foundational works like Baker et al. (2016) indicates the presence of core knowledge services that stabilize the EPU research ecosystem. These highly cited papers function as service hubs, facilitating knowledge diffusion across disciplines and regions. From a service science perspective, this highlights the importance of standardized uncertainty metrics as shared service components in financial decision support systems, enabling interoperability between policy analytics platforms and market forecasting services.

Table 2. Th annual citation distribution of publications in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023.

| Year | Total papers | Total citations | Citations per paper | ≥1 | ≥10 | ≥20 | ≥50 | ≥100 | ≥200 |
|---|---|---|---|---|---|---|---|---|---|
| 2012 | 0 | 0 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2013 | 2 | 394 | 197.00 | 2 | 2 | 1 | 1 | 1 | 0 |
| 2014 | 5 | 906 | 182.20 | 5 | 5 | 5 | 4 | 3 | 2 |
| 2015 | 12 | 1002 | 83.50 | 11 | 11 | 8 | 6 | 2 | 2 |
| 2016 | 15 | 5676 | 378.40 | 15 | 14 | 14 | 7 | 5 | 2 |
| 2017 | 17 | 1569 | 92.29 | 17 | 15 | 14 | 11 | 7 | 2 |
| 2018 | 30 | 1245 | 41.50 | 30 | 22 | 18 | 10 | 3 | 0 |
| 2019 | 39 | 1738 | 44.56 | 38 | 24 | 18 | 12 | 4 | 2 |
| 2020 | 77 | 2558 | 33.22 | 74 | 40 | 29 | 12 | 2 | 1 |
| 2021 | 84 | 1748 | 20.81 | 81 | 48 | 35 | 5 | 2 | 0 |
| 2022 | 122 | 1199 | 9.83 | 109 | 43 | 15 | 4 | 0 | 0 |
| 2023 | 143 | 400 | 2.80 | 98 | 7 | 2 | 0 | 0 | 0 |
| Ratio (%) | - | - | - | 0.88 | 0.42 | 0.29 | 0.13 | 0.05 | 0.02 |
| Note: ⩾200, ⩾100, ⩾50, ⩾10 ⩾20and ⩾1 denote the number of papers with at least 200, 100, 50, 20, 10, and 1 citation, respectively. | | | | | | | | | |

## 4.3. Analysis of the Author

In Table 3, we introduce Top 15 authors who significantly participate in the research about EPU and stock market between 2012 and 2023. The weight is the number of publications, citation counts, and the impact in publication where an impact of a researcher determines by referring to impact factor. Therefore, this list represents the expert list based on the score of their excellence of publications. Among the top authors of the citations per papers, the top paper citation is 158 by Kang W. from California Polytechnic State University (USA) dominates the citation-per-paper metric among top authors, achieving 158.67 average citations across seminal works that confirm sustained academic relevance. Kang W. is one of the forefathers who developed models linking macroeconomic metrics, stock market and inflation dynamic into EPU through his representative theories. Chiang T.C. from Drexel University (USA) is the most productive author with high count of co-authored papers.The empirical observation shows that there is a negative correlation between risk returns (the return to equity) and EPU dynamics for international markets and this finding introduces a new light into the machine

of the mechanism in the behavior of the market. Chiang T.C. published in his research work the time lag effect on which EPU dynamics has a later-time positive correlation with market volatility that represents the potential trigger of the instability phenomenon in the market. Yu, H. and Yu, B., among many others., M. Arouri's research in EPU's ability to predict Chinese market volatility with 243 citations receives extensive scholarly attention. Distinguished contributors like Mensi, W. and Das, D. demonstrate consistent productivity with multiple works (≥2 papers) averaging over 60 citations each. Collectively, these scholars, particularly Chiang, T.C., Kang, W., Arouri, M., and Das, D. in particular, are having an interdisciplinary conversations between financial econometrics and behavioural finance theories and cross-border flow of capital.

The geographic and institutional concentration of top authors (e.g., China, USA) reveals regional knowledge service clusters that act as innovation hubs in EPU research. These authors function as knowledge service providers, producing high-impact theoretical and empirical tools that are consumed by policymakers, financial institutions, and regulatory bodies. This clustering suggests opportunities for global service network expansion, where cross-regional collaboration could enhance service resilience in global financial systems.

Table 3. The top15 productive authors writing in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023

| Rank | Author | First author papers | Country | University | h-index | Total papers | Total citations | Citations per paper | ≥ 1 | ≥ 50 | ≥ 100 | ≥ 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Chiang, T.C. | 9 | United States | Drexel University | 23 | 10 | 273 | 27.3 | 10 | 2 | 0 | 0 |
| 2 | Kang, W. | 6 | United States | California Polytechnic State University | 15 | 6 | 952 | 158.67 | 6 | 4 | 3 | 2 |
| 3 | Lee, K. | 5 | South Korea | Hankuk University of Foreign Studies | 4 | 5 | 22 | 4.4 | 5 | 0 | 0 | 0 |
| 4 | Jeon, J.H. | 5 | South Korea | Hanyang University Business School | 3 | 5 | 26 | 5.2 | 4 | 0 | 0 | 0 |
| 5 | Yu, H. | 4 | China | Nanjing University | 16 | 6 | 243 | 40.5 | 6 | 3 | 0 | 0 |
| 6 | Mensi, W. | 4 | Tunisia | Université de Tunis El Manar | 43 | 5 | 343 | 68.6 | 3 | 0 | 1 | 1 |
| 7 | Donadelli, M. | 4 | Italy | Università degli Studi di Brescia | 14 | 4 | 96 | 24 | 4 | 1 | 0 | 0 |
| 8 | Shahzad, S.J.H. | 3 | France | Montpellier Business School | 52 | 6 | 74 | 12.33 | 6 | 0 | 0 | 0 |
| 9 | Arouri, M. | 3 | France | Groupe de Recherche en Management | 37 | 4 | 431 | 107.75 | 4 | 3 | 1 | 1 |
| 10 | Das, D. | 3 | India | Indian Institute of Management Bangalore | 20 | 4 | 337 | 84.25 | 4 | 3 | 2 | 0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Li, R. | 3 | China | Huaihua University | 5 | 4 | 73 | 18.25 | 3 | 0 | 0 | 0 |
| 12 | Hammoudeh, S. | 2 | United States | LeBow College of Business | 66 | 7 | 560 | 80 | 7 | 3 | 1 | 1 |
| 13 | Fang, L. | 2 | China | Nanjing University | 17 | 6 | 243 | 40.5 | 6 | 3 | 0 | 0 |
| 14 | He, F. | 2 | China | Capital University of EcoNomics and Business | 17 | 6 | 208 | 34.67 | 6 | 1 | 0 | 0 |
| 15 | Zhu, H. | 2 | China | Hunan University | 26 | 5 | 353 | 70.6 | 5 | 3 | 1 | 1 |
| Note: ⩾200, ⩾100, ⩾50, and ⩾1 denote the number of papers with at least 200, 100, 50, and 1 citation, respectively. | | | | | | | | | | | | |

Table 4. The top 15 most productive and influential academic institutionsin research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023.

| **Rank** | **Country** | **University** | **Total papers** | **Total citations** | **Citations per paper** | **≥1** | **≥ 50** | **≥ 100** | **≥ 200** |
|---|---|---|---|---|---|---|---|---|---|
| 1 | China | Southwest Jiaotong University | 20 | 437 | 21.85 | 17 | 3 | 1 | 0 |
| 11 | China | Nanjing University | 19 | 552 | 20.05 | 18 | 5 | 0 | 0 |
| 2 | United States | Drexel University | 16 | 830 | 51.88 | 16 | 5 | 1 | 1 |
| 3 | New Zealand | Massey University | 16 | 371 | 23.19 | 16 | 3 | 0 | 0 |
| 13 | China | Tianjin University | 14 | 381 | 27.21 | 12 | 2 | 0 | 0 |
| 4 | China | Central University of Finance and Economics | 14 | 350 | 25 | 11 | 3 | 1 | 0 |
| 5 | France | IPAG Business School | 14 | 1053 | 75.21 | 13 | 7 | 2 | 2 |
| 6 | United States | LeBow College of Business | 13 | 657 | 50.54 | 13 | 3 | 1 | 1 |
| 7 | South Africa | University of Pretoria | 12 | 777 | 70.64 | 11 | 7 | 2 | 1 |
| 8 | Viet Nam | University of Economics Ho Chi Minh City | 10 | 189 | 18.9 | 8 | 3 | 0 | 0 |
| 9 | France | Montpellier Business School | 10 | 468 | 46.8 | 10 | 2 | 2 | 1 |
| 10 | China | Tianjin University of Finance and Economics | 9 | 213 | 23.67 | 8 | 1 | 0 | 0 |
| 14 | China | Hunan University | 9 | 404 | 44.89 | 8 | 2 | 1 | 1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | China | Southwestern University of Finance and Economics | 8 | 232 | 29 | 5 | 1 | 1 | 0 |
| 15 | Russian | South Ural State University | 7 | 52 | 7.43 | 6 | 0 | 0 | 0 |
| Note: ⩾200, ⩾100, ⩾50, and ⩾1 denote the number of papers with at least 200, 100, 50, and 1 citation, respectively. | | | | | | | | | |

## 4.4. Analysis of Universities and Countries

Table 4 presents the 15 most influential academic institutions in EPU and stock market studies. Southwest Jiaotong University and Nanjing University leads in publication volume but ranks ninth in citation impact, highlighting disparities between research quantity and scholarly recognition. Drexel University and Massey University share next position with 16 publications each, followed closely by IPAG Business School with 14 papers. Geographically, these leading institutions span major economic power like China and the United States, it also includes major economies such as France, Russia, New Zealand, and South Africa. The dominance of Chinese and American institutions underscores their global research leadership, while specialized centers like LeBow College of Business demonstrate regional expertise through high citation-per-publication ratios. Conversely, institutions from peripheral economic areas appear less active, possibly due to weaker domestic market responses to international EPU fluctuations. Table 5 details national contributions, with China producing 204 papers (37.64% of total), followed by the United States (76; 14.02%), the U.K. (41; 7.56%), and France (37; 6.83%). The ranking encompasses both advanced economies and emerging markets like India, mirroring EPU's significance for nations with dynamic equity markets. While developed countries pioneered EPU research, developing economies including Malaysia and Vietnam are increasingly examining policy uncertainty-stock market relationships, indicating globalized research interests. This evolution suggests heightened recognition of transnational policy impacts, even in markets traditionally considered insulated from external volatility.

The dominance of Chinese and American institutions in EPU research output reflects national-level knowledge service strategies that align academic production with policy-market intelligence needs. These institutions act as knowledge intermediaries, translating policy uncertainty into financial risk services, regulatory logistics, and investment decision support. This suggests a need for service-oriented research platforms that integrate bibliometric intelligence into real-time policy dashboards for central banks, sovereign wealth funds, and financial logistics providers.

Table 5. The top 15 most productive and influential countries in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023.

| Rank | COUNTRY | Total papers | Total citations | Citations per paper | ≥1 | ≥50 | ≥100 | ≥200 |
|---|---|---|---|---|---|---|---|---|
| 1 | China | 204 | 4397 | 21.34 | 164 | 26 | 6 | 2 |
| 2 | United States | 76 | 3223 | 42.41 | 67 | 19 | 8 | 4 |
| 3 | United Kingdom | 41 | 1625 | 39.63 | 39 | 4 | 2 | 1 |
| 4 | France | 37 | 1910 | 51.62 | 35 | 11 | 4 | 3 |
| 5 | India | 31 | 588 | 18.97 | 29 | 3 | 2 | 0 |
| 6 | Turkey | 30 | 645 | 21.5 | 27 | 4 | 1 | 0 |
| 7 | Pakistan | 31 | 1261 | 40.72 | 26 | 2 | 2 | 1 |
| 8 | South Korea | 29 | 927 | 31.94 | 26 | 4 | 2 | 2 |
| 9 | Viet Nam | 26 | 439 | 16.88 | 22 | 5 | 0 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 | Australia | 23 | 1432 | 57.28 | 21 | 6 | 4 | 2 |
| 11 | New Zealand | 22 | 506 | 23 | 20 | 5 | 0 | 0 |
| 12 | Canada | 21 | 415 | 17.76 | 20 | 3 | 2 | 1 |
| 13 | Malaysia | 21 | 1411 | 67.19 | 20 | 5 | 2 | 1 |
| 14 | Saudi Arabia | 21 | 1328 | 63.14 | 18 | 4 | 2 | 1 |
| 15 | Germany | 17 | 381 | 22.41 | 16 | 4 | 0 | 0 |
| Note: ⩾200, ⩾100, ⩾50, and ⩾1 denote the number of papers with at least 200, 100, 50, and 1 citation, respectively. | | | | | | | | |

## 4.5. Analysis of the Journal

As shown in Table 6, high-impact journals focusing on EPU and stock market research have shown distinct characteristics in terms of academic output. These journals not only perform well in the number of papers published and the number of citations, but also play a positive role in promoting the construction of theoretical systems and empirical research in related fields. Among them, Financial Research Letters has become the journal with the most papers published on this topic with 26 related papers, further consolidating its position as an important academic exchange platform. Following closely behind is the International Review of Financial Analysis, which published 22 research results, and the North American Journal of Economics And Finance, which also published 22 research results. These papers mainly focus on cross-national comparisons and the impact of EPU in emerging markets, providing scholars around the world with a diverse research perspective. In terms of citation influence, the International Review of Financial Analysis has received a total of 1513 citations, ranking at the top; Financial Research Letters ranks second with 1450 citations, showing its wide influence and knowledge dissemination capabilities in the academic community. In addition, Economic Modeling maintained a high level of academic attention with 786 citations, and the North American Journal of Economics And Finance also received 556 citations, further demonstrating their value in this research field. In terms of impact factor, the ranking pattern is different. Energy Economics ranked first with 14.7 points, highlighting its advantage in the cross-research direction of energy policy and financial markets; followed by Resource Policy (11.3 citescore), Financial Research Letters (10.8 citescore) and International Review of Financial Analysis (9.1 citescore), reflecting the differences in the subject positioning of each journal. It is worth noting that although the impact factor of journals such as Economic Modeling (6.4 citescore) is not high, its actual citation performance is relatively outstanding, indicating that there is a certain difference between the impact factor and the citation index. This phenomenon may be related to its long-term accumulated academic reputation, the continuous attention to specific research topics, or the high concentration of author groups. Overall, top economics and finance journals have played a key role in the development of research on the relationship between EPU and the stock market, which not only promotes academic exchanges, but also provides solid theoretical support and decision-making basis for policymakers and market participants.

The high citation performance of journals like International Review of Financial Analysis and Finance Research Letters indicates their role as knowledge service platforms that aggregate, validate, and distribute EPU-related research outputs. These journals function as service intermediaries, connecting research producers (authors) with service consumers (policymakers, analysts, investors). This highlights the potential for journal-embedded decision support tools, such as AI-powered literature alerts, policy-market signal dashboards, and real-time bibliometric APIs for financial service integration.

Table 6. The top 15 journals in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023.

| Rank | Total papers | Journal | Publisher | Citations per paper | Total citations | Citescore |
|---|---|---|---|---|---|---|
| 1 | 26 | Finance Research Letters | Elsevier | 55.76 | 1450 | 10.8 |
| 2 | 22 | International Review Of Financial Analysis | Elsevier | 68.78 | 1513 | 9.1 |
| 3 | 22 | North American Journal Of Economics And Finance | Elsevier | 25.26 | 556 | 5.6 |
| 4 | 16 | Applied Economics | Taylor & Francis | 15.12 | 242 | 3.4 |
| 5 | 15 | International Review Of Economics And Finance | Elsevier | 19.61 | 294 | 5.7 |
| 6 | 15 | Pacific Basin Finance Journal | Elsevier | 21.52 | 323 | 5.9 |
| 7 | 14 | Emerging Markets Finance And Trade | Taylor & Francis | 20.21 | 283 | 6.4 |
| 8 | 13 | Economic Modelling | Elsevier | 60.45 | 786 | 6.4 |
| 9 | 12 | Research In International Business And Finance | Elsevier | 27.82 | 334 | 9.1 |
| 10 | 10 | International Journal of Finance And Economics | Wiley-Blackwell | 19.71 | 197 | 3.7 |
| 11 | 10 | Resources Policy | Elsevier | 20.4 | 204 | 11.3 |
| 12 | 9 | Energy Economics | Elsevier | 60.9 | 548 | 14.7 |
| 13 | 9 | Physica A Statistical Mechanics And Its Applications | Elsevier | 34.1 | 307 | 7.5 |
| 14 | 9 | Plos One | Public Library of Science | 3.6 | 33 | 6 |
| 15 | 8 | Applied Economics Letters | Routledge | 7.5 | 60 | 2.5 |

## 4.6. Analysis of Author Keywords

Author keyword examination focuses on determining research directions and conceptual connections through statistical evaluation of keyword prevalence and analysis of their co-occurrence networks. This investigation prioritizes author-designated keywords as the principal units of analysis. Among 1,483 distinct author-identified terms, 54 met inclusion criteria requiring at least five instances and substantial co-occurrence relationships with central concepts such as economic policy unpredictability and equity market fluctuations. The refined dataset underwent thematic pattern detection and interdisciplinary association mapping, graphically represented in Figure 4.

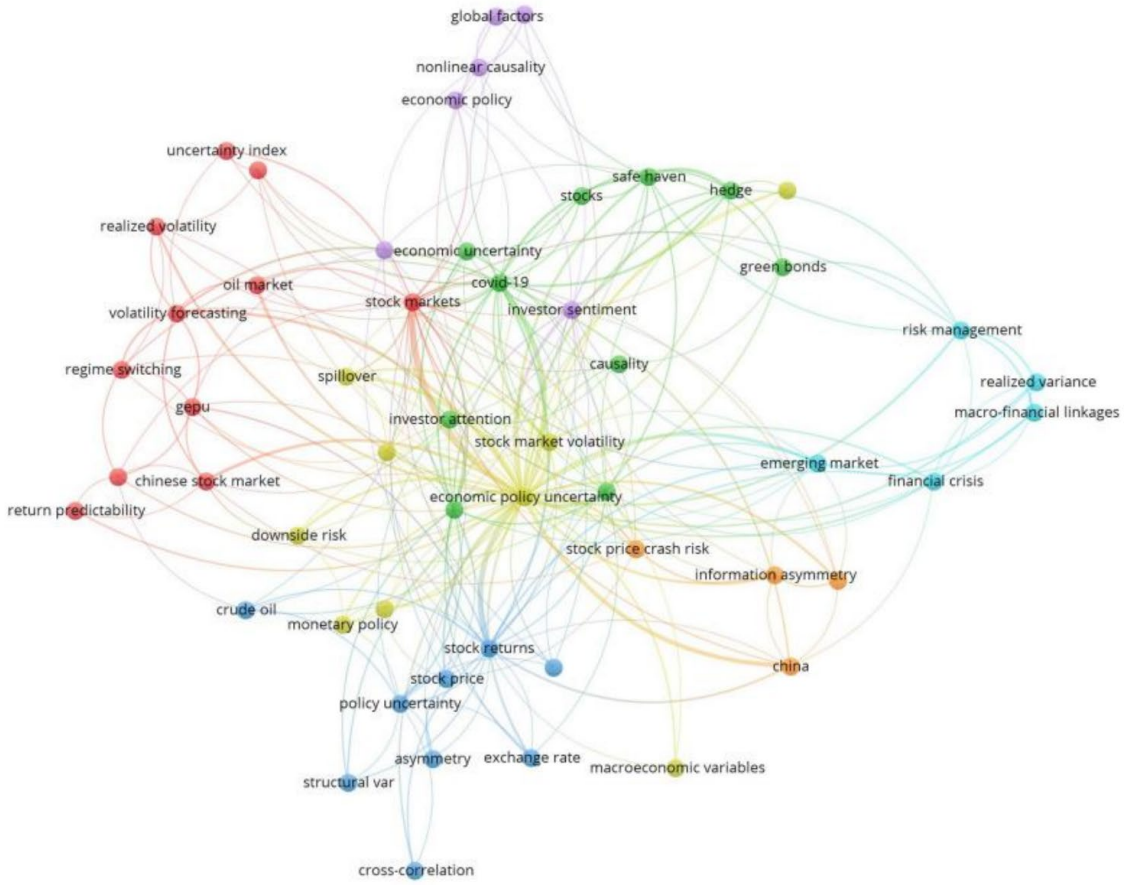


Fig.4: Co-occurrence network of major author keywords in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023

The author-keyword co-occurrence mapping generated through VOSviewer has thoroughly investigated and visualized the central thematic framework within EPU-stock market research. This analytical network integrates pivotal concepts including economic policy uncertainty, equity markets, the COVID-19 crisis, security yields, market fluctuations, investor psychology, cross-market influences, and valuation dynamics, revealing both prominent research foci and underlying interrelationships. As evidenced in Table 7, the fifteen most recurrent author keywords demonstrate scholarly dominance through their citation prevalence. Keyword frequency evaluations through CiteSpace since 2020 have revealed novel investigative dimensions, particularly highlighting pandemic impacts, geopolitical instability, energy commodity pricing, and behavioral finance as crucial determinants modifying EPU-equity market dynamics. Table 8 quantifies lexical prominence across 2013-2023, with "economic policy uncertainty" leading at 365 instances, succeeded by "stock markets" (66), "COVID-19" (46), "equity returns" (46), and "market volatility" (38). Notably, terminology like "China," "petroleum pricing," and "geopolitical risk" indicates intensified scholarly attention toward regional economies and macroeconomic interdependencies. Centrality metrics in Table 8 further quantify terminological significance, with "economic policy uncertainty" achieving 1.03 centrality versus secondary terms like "stock markets" (0.15) and "investor sentiment" (0.12). Emerging constructs such as "equity price collapse risk" (0.13) and "volatility prediction" (0.04) signal the discipline's progressive orientation toward risk quantification and anticipatory modeling. These findings collectively position EPU as the foundational construct, with cross-disciplinary investigations into pandemic repercussions and stock markets directing contemporary academic exploration.

The emergence of keywords like “COVID-19”, “geopolitical risk”, and “investor sentiment” reflects evolving user demands in financial knowledge services. These terms act as service request signals, indicating market needs for real-time uncertainty analytics, behavioral finance integration, and crisis-responsive policy tools. From a service science perspective, this suggests that bibliometric keyword networks can function as demand forecasting systems, enabling research institutions, fintech firms, and policy labs to anticipate and respond to emerging financial service needs through adaptive knowledge service design.

Table 7. The top 15 author keyword occurrences in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023.

| Rank | Author keyword | Cluster | Frequency | Total link strength |
|---|---|---|---|---|
| 1 | economic policy uncertainty | 4 | 365 | 354 |
| 2 | stock markets | 1 | 66 | 96 |
| 3 | covid-19 | 2 | 52 | 91 |
| 4 | stock returns | 3 | 46 | 74 |
| 5 | stock market volatility | 4 | 38 | 47 |
| 6 | policy uncertainty | 3 | 30 | 21 |
| 7 | china | 5 | 23 | 31 |
| 8 | investor sentiment | 5 | 23 | 41 |
| 9 | oil price | 2 | 23 | 51 |
| 10 | geopolitical risk | 2 | 22 | 40 |
| 11 | volatility forecasting | 1 | 20 | 30 |
| 12 | safe haven | 2 | 19 | 45 |
| 13 | spillover | 4 | 19 | 29 |
| 14 | emerging market | 5 | 16 | 30 |
| 15 | stock price crash risk | 3 | 15 | 16 |

Table 8. Top 15 author keywords by centrality in research on economic policy uncertainty and stock market in SCOPUS database between 2012 and 2023.

| Rank | Author keyword | Year | Centrality | Frequency |
|---|---|---|---|---|
| 1 | economic policy uncertainty | 2013 | 1.03 | 365 |
| 2 | stock markets | 2016 | 0.15 | 66 |
| 3 | stock returns | 2013 | 0.07 | 46 |
| 4 | geopolitical risk | 2020 | 0.05 | 22 |
| 5 | stock market volatility | 2015 | 0.05 | 38 |
| 6 | stock price crash risk | 2022 | 0.05 | 15 |
| 7 | volatility forecasting | 2018 | 0.05 | 20 |
| 8 | investor sentiment | 2019 | 0.04 | 23 |
| 9 | financial leverage | 2023 | 0.04 | 2 |
| 10 | oil price | 2020 | 0.03 | 23 |

| | | | | |
|---|---|---|---|---|
| 11 | monetary policy | 2017 | 0.03 | 7 |
| 12 | financial risk | 2021 | 0.03 | 2 |
| 13 | stock market returns | 2015 | 0.02 | 13 |
| 14 | gold price | 2021 | 0.02 | 4 |
| 15 | global factors | 2014 | 0.02 | 4 |

# 5. Future Research Trends and Conclusions

This study contributes to service science by converting raw bibliographic data into actionable knowledge services that reduce search costs for EPU – stock-market stakeholders. First, the EPU index is based on the collection and measurement of text information from newspapers in various countries, and its specific measurement process needs to be further improved. Second, the current updated EPU index only contains quarterly and annual frequencies. In the future, more attention can be paid to obtaining massive information and real-time updates of high-frequency data from various websites. This move will provide strong support for accurately capturing high-frequency details of the stock market, thereby achieving more efficient matching and analysis. Third, most of the existing studies are empirical studies, and updating and expanding the model may help to more scientifically analyze the intrinsic relationship between the EPU index and the stock market conditions at the specific industry and company levels. Fourth, the interaction mechanism between economic policy uncertainty (EPU) and other indicators (such as investor sentiment) can be further analyzed. On this basis, the impact of economic policy uncertainty and investor sentiment on asset pricing is further analyzed to enrich the relevant theories of behavioral finance.

This paper conducts a comprehensive bibliometric analysis of the literature on the intersection of economic policy uncertainty (EPU) and stock markets, and plots key authors, publications, journals, publishing countries, and keyword co-occurrence patterns with the help of VOSviewer and CiteSpace software. Through four bibliometric techniques, namely co-citation analysis, citation analysis, keyword co-occurrence analysis, and document coupling, the research trends and structural relationships in this field are systematically synthesized. Co-citation analysis reveals Measuring Economic Policy Uncertainty by Baker et al. (2016) as the most cited article, while Baker, S.R., and Bloom are identified as the top-cited authors, underscoring their foundational contributions to EPU measurement and stock market research. Bibliographic coupling of sources indicates that Finance Research Letters leads in publication output, followed by International Review of Financial Analysis, establishing these journals as primary dissemination hubs. Keyword co-occurrence analysis highlights "EPU," "stock markets," and "stock returns" as central themes, with emerging concepts like "COVID-19," "investor sentiment," and "geopolitical risk" reflecting post-2020 research expansions. Citation analysis by country shows China as the most prolific contributor (204 publications, 37.64%), followed by the U.S. and Europe, while disciplinary distribution confirms economics, econometrics, and finance as dominant fields. Temporal trends demonstrate exponential growth in publications since 2013, with a marked acceleration post-2020, coinciding with global economic disruptions. Limitations include reliance on author-assigned keywords, potential bias in SCOPUS database coverage, and the inability of bibliometric methods to fully capture qualitative research nuances. Looking ahead, informatics-driven EPU research still holds vast untapped potential. The Word-Power framework proposed by Jegadeesh & Wu (2013) can be extended to analyze real-time multilingual policy texts, thereby overcoming the current reliance on English-language news sources. Network-coupling insights from Zhang et al. (2019) indicate that graph neural networks could be employed to trace instantaneous EPU contagion pathways across global equity markets. Rekabsaz et al. (2017) demonstrate how word-embedding-based information retrieval (IR) models can uncover latent EPU signals within the MD&A sections of 10-K and annual reports, opening a new high-frequency, firm-level research frontier. Finally, integrating the financial-sentiment

dictionary of Loughran & McDonald (2011) with deep-learning architectures can generate real-time, firm-specific EPU exposure factors, enabling a more precise assessment of the heterogeneous impacts of policy uncertainty on corporate stock prices. Despite these, this study demonstrates how bibliometric informatics can serve as a knowledge service to help understand and manage economic policy uncertainty (EPU) in finance. Based on 546 papers, we propose a framework that lets researchers identify under-explored topics and methods, shows policymakers where scholars agree on EPU's economic effects, and allows financial professionals to embed bibliographic insights into risk models. Looking forward, the priority is to develop AI-powered bibliometric dashboards that: (i) track EPU research trends in real time; (ii) connect to financial-data APIs to fuse policy and market signals on the fly; (iii) monitor EPU in multilingual sources; and (iv) integrate with central-bank digital platforms to streamline policy operations.

# References

Alter S. (2012). Service system fundamentals: Work system, value chain, and life cycle. IBM Systems Journal, 47(1), 1–10.

Al-Thaqeb S A, Algharabali B G. (2019). Economic policy uncertainty: A literature review. The Journal of Economic Asymmetries, 20, e00133.

Antweiler W, Frank M Z. (2004). Is all that talk just noise? The information content of Internet stock message boards. The Journal of Finance, 59(3), 1259–1294.

Arouri M, Estay C, Rault C, Roubaud D. (2016). Economic policy uncertainty and stock markets: Long-run evidence from the US. Finance Research Letters, 18, 136-141.

Baker S R, Bloom N, Davis S J. (2013). Measuring economic policy uncertainty. Stanford Institute for Theoretical Economics Summer 2013 Workshop.

Baker S R, Bloom N, Davis S J. (2016). Measuring economic policy uncertainty. The quarterly journal of economics, 131(4), 1593-1636.

Balcilar M, Bekiros S, Gupta R. (2017). The role of news-based uncertainty indices in predicting oil markets: a hybrid nonparametric quantile causality method. Empirical Economics, 53, 879-889.

Behrendt S, Schmidt, A. (2018). The Twitter myth revisited: Intraday investor sentiment, Twitter activity and individual-level stock return volatility. Journal of Banking & Finance, 96, 355–367.

Bollen J, Mao H, Zeng X. (2011). Twitter mood predicts the stock market. Journal of Computational Science, 2(1), 1–8.

Brogaard J, Detzel A. (2015). The asset-pricing implications of government economic policy uncertainty. Management science, 61(1), 3-18.

Caporin M, Poli F. (2017). Building news measures from textual data and an application to volatility forecasting. Econometrics, 5(3), 35.

Castelnuovo E, Lim G, Pellegrino G. (2017). A short review of the recent literature on uncertainty. Australian Economic Review, 50(1), 68-78.

Chen J, Jiang F, Tong G. (2017). Economic policy uncertainty in China and stock market expected returns. Accounting & Finance, 57(5), 1265-1286.

Chiang T C. (2019). Economic policy uncertainty, risk and stock returns: Evidence from G7 stock markets. Finance Research Letters, 29, 41-49.

Christou C, Cunado J, Gupta R, Hassapis C. (2017). Economic policy uncertainty and stock market returns in PacificRim countries: Evidence based on a Bayesian panel VAR model. Journal of Multinational Financial Management, 40, 92-102.

Costa D F, Carvalho F D M, Moreira B C D M. (2019). Behavioral economics and behavioral finance: A bibliometric analysis of the scientific fields. Journal of Economic Surveys, 33(1), 3-24.

Das D, Kumar S B. (2018). International economic policy uncertainty and stock prices revisited: Multiple and Partial wavelet approach. Economics Letters, 164, 100-108.

Dash S R, Maitra D, Debata B, Mahakud J. (2021). Economic policy uncertainty and stock market liquidity: Evidence from G7 countries. International Review of Finance, 21(2), 611-626.

Debata B, Mahakud J. (2018). Economic policy uncertainty and stock market liquidity: does financial crisis make any difference? Journal of Financial Economic Policy, 10(1), 112-135.

Du Y, Sui X, Wei W, Du J. (2023). Economic policy uncertainty and stock price crash risk. Asia-Pacific Journal of Accounting & Economics, 30(3), 667-689.

Gentzkow M, Kelly B, Taddy M. (2019). Text as data. Journal of Economic Literature, 57(3), 535-574.

Gui J, Pu J, Naktnasukanjn N, Yu X, Mu L, Pan H. (2022). Measuring investor sentiment of China's Growth Enterprises Market with ERNIE. Procedia Computer Science, 202, 1–8.

Haq I U, Maneengam A, Chupradit S, Suksatan W, Huo C. (2021). Economic policy uncertainty and cryptocurrency market as a risk management avenue: A systematic review. Risks, 9(9), 163.

Jegadeesh N, Wu D. (2013). Word power: A new approach for content analysis. Journal of Financial Economics, 110(3), 712–729.

Jegadeesh N, Wu D. (2013). Word power: A new approach for content analysis. Journal of Financial Economics, 110(3), 712–729.

Jing N, Wu Z, Wang H. (2021). A hybrid model integrating deep learning with investor sentiment analysis for stock price prediction.Expert Systems with Applications, 178, 115006.

Jing X, Chen Z, Yang X. (2019). Economic policy uncertainty and stock price crash risk. Accounting & Finance, 58(5), 1291-1318.

Jing Z, Lu S, Zhao Y, Zhou J. (2023). Economic policy uncertainty, corporate investment decisions and stock price crash risk: Evidence from China. Accounting & Finance, 63, 1477-1502.

Jurado K, Ludvigson S C, Ng S. (2015). Measuring uncertainty. American Economic Review, 105(3), 1177-1216.

Kang W, Gracia F P, Ratti R A. (2017). Oil price shocks, policy uncertainty, and stock returns of oil and gas corporations. Journal of International Money and Finance, 70, 344-359.

Kang W, Lee K, Ratti R A. (2014). Economic policy uncertainty and firm-level investment. Journal of Macroeconomics, 39, 42-53.

Kang W, Ratti R A. (2013). Oil shocks, policy uncertainty and stock market return. Journal of International Financial Markets, Institutions and Money, 26, 305-318.

Karnizova L, Li J C. (2014). Economic policy uncertainty, financial markets and probability of US recessions. Economics Letters, 125(2), 261-265.

Kaveh Y F, Zarifzadeh S. (2023). Economic Policy Uncertainty: A Review on Applications and Measurement Methods with Focus on Text Mining Methods. arXiv preprint arXiv:2308.10304.

Ko J H, Lee C M. (2015). International economic policy uncertainty and stock prices: Wavelet approach. Economics Letters, 134, 118-122.

Li S, Kong J. (2022). News sentiment and the risk of a stock price crash: Based on financial dictionary combined BERT-DCA. Discrete Dynamics in Nature and Society, 2022, 8305947.

Li X L, Balcilar M, Gupta R, Chang T. (2016). The causal relationship between economic policy uncertainty and stock returns in China and India: Evidence from a bootstrap rolling window approach. Emerging Markets Finance and Trade, 52(3), 674-689.

Li Y, Bu H, Li J, Wu J. (2020). The role of text-extracted investor sentiment in Chinese stock price prediction with the enhancement of deep learning. International Journal of Forecasting, 36(4), 1541–1562.

Liu L, Zhang T. (2015). Economic policy uncertainty and stock market volatility. Finance Research Letters, 15, 99-105.

Liu W, Gu M, Hu G, L C, Liao H, Tang L, Shapira P. (2014). Profile of developments in biomass-based bioenergy research: a 20-year perspective. Scientometrics, 99, 507-521.

Liu Z, Ye Y, Ma F, Liu J. (2017). Can economic policy uncertainty help to forecast the volatility: A multifractal perspective. Physica A: Statistical Mechanics and Its Applications, 482, 181-188.

Loughran T, McDonald B. (2011). When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. The Journal of Finance, 66(1), 35–65.

Lu C, Bing Z, Bi Z, Liu M, Lu T, Xun Y, Yang K. (2019). Top-100 most cited publications concerning network pharmacology: a bibliometric analysis. Evidence-based complementary and alternative medicine, 2019(1), 1704816.

Luo Y, Zhang C. (2020). Economic policy uncertainty and stock price crash risk. Research in International Business and Finance, 51, 101112.

Maglio P P, Spohrer J. (2008). Fundamentals of service science. Journal of the Academy of Marketing Science, 36(1), 18–20.

Mbanyele W. (2023). Economic policy uncertainty and stock liquidity: the role of board networks in an emerging market. International Journal of Emerging Markets, 18(1), 122-147.

Mensi W, Hammoudeh S, Reboredo J C, Nguyen D K. (2014). Do global factors impact BRICS stock markets? A quantile regression approach. Emerging Markets Review, 19, 1-17.

Nagar V, Schoenfeld J, Wellman L. (2019). The effect of economic policy uncertainty on investor information asymmetry and management disclosures. Journal of Accounting and Economics, 67(1), 36-57.

Nassirtoussi A K, Aghabozorgi S, Wah T Y, Ngo D C L. (2014). Text mining for market prediction: A systematic review. Expert Systems with Applications, 41(16), 7653–7670.

Obaid K, Pukthuanthong K. (2022). A picture is worth a thousand words: Measuring investor sentiment by combining machine learning and photos from news. Journal of Financial Economics, 144(1), 273–297.

Phan D H B, Sharma S S, Tran V T. (2018). Can economic policy uncertainty predict stock returns? Global evidence. Journal of International Financial Markets, Institutions and Money, 55, 134-150.

Rekabsaz N, Lupu M, Baklanov A, Hanbury A, Dür A, Anderson L. (2017). Volatility prediction using financial disclosures sentiments with word embedding-based IR models. arXiv preprint arXiv:1702.01978.

Rekabsaz N, Lupu M, Baklanov A, Hanbury A, Dür A, Anderson L. (2017). Volatility prediction using financial disclosures sentiments with word embedding-based IR models. arXiv preprint arXiv:1702.01978.

Renault, T. (2017). Intraday online investor sentiment and return patterns in the U.S. stock market. Journal of Banking & Finance, 84, 25–40.

Sharif A, Aloui C, Yarovaya L. (2020). COVID-19 pandemic, oil prices, stock market, geopolitical risk and policy uncertainty nexus in the US economy: Fresh evidence from the wavelet-based approach. International review of financial analysis, 70, 101496.

Shen, X, Wang G, Wang, Y. (2021). The influence of research reports on stock returns: The mediating effect of machine-learning-based investor sentiment. Discrete Dynamics in Nature and Society, 2021, 1–13.

Singh V K, Singh P, Karmakar M, Leta J, Mayr P. (2021). The journal coverage of Web of Science, Scopus and Dimensions: A comparative analysis. Scientometrics, 126, 5113-5142.

Thaqeb S A, Algharabali B G. (2019). Economic policy uncertainty: A literature review. The Journal of Economic Asymmetries, 20, e00133.

Tsai I C. (2017). The source of global stock market risk: A viewpoint of economic policy uncertainty. Economic Modelling, 60, 122-131.

Wang L, Wang Q, Jiang F. (2023). Booster or stabilizer? Economic policy uncertainty: New firm-specific measurement and impacts on stock price crash risk. Finance Research Letters, 51, 103462.

Williams R, Bornmann L. (2016). Sampling issues in bibliometric analysis. Journal of Informetrics, 10(4), 1225-1232.

Wu S, Liu Y, Zou Z, Weng T H. (2022). S_I_LSTM: Stock price prediction based on multiple data sources and sentiment analysis. Connection Science, 34(1), 44–62.

Xu X, Chau M. (2018). Informatics-driven financial decision support. Decision Support Systems, 114, 1–3.

You W, Guo Y, Zhu H, Tang Y. (2017). Oil price shocks, economic policy uncertainty and industry stock returns in China: Asymmetric effects with quantile regression. Energy Economics, 68, 1-18.

Zhang D, Lei L, Ji Q, Kutan A M. (2019). Economic policy uncertainty in the US and China and their impact on the global markets. Economic Modelling, 79, 47-56.

Zhang D, Lei L, Ji Q, Kutan A M. (2019). Economic policy uncertainty in the U.S. and China and their impact on the global markets. Economic Modelling, 79, 47–56. https://doi.org/10.1016/j.econmod.2018.10.010

Zhang L, Chen W, Hu N. (2023). Economic policy uncertainty and stock liquidity: evidence from China. International Journal of Emerging Markets, 8(1), 22-44.

Zhang W, Gong X, Wang C, Ye X. (2021). Predicting stock market volatility based on textual sentiment: A nonlinear analysis. Journal of Forecasting, 40(8), 1479–1500.

Zhang X, Shi J, Wang D, Fang B. (2018). Exploiting investors social network for stock prediction in China's market. Journal of Computational Science, 28, 294–303.

Zhang X, Wang Z, Hao J, Liu J. (2022). Stock market entry timing and retail investors' disposition effect. International Review of Financial Analysis, 82, 102151.