

GOLD PRICES AND CURRENCY DYNAMICS: A BIBLIOMETRIC ANALYSIS

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Abstract: *Gold has been captivated as a wealth and store of value for centuries. The price of gold has tremendously increased from year to year. The volatility of the price of gold has greatly impacted the global financial system especially in terms of currency and stock exchange rate. In ancient times, gold had been used as a medium of exchange which later switched to fiat currency. The interchange between gold price and currency has necessitated this study to investigate the relationship between gold price and currency. Therefore, this study provides a comprehensive bibliometric analysis on the relationship between gold prices and currency. The study employs a Scopus database to extract the data from 1977 - 2025. The database was filtered to include peer reviewed journals and a total of 169 documents were extracted. A software package Vosviewer is used to visualize the database in terms of keyword occurrences. Based on the Vosviewer map the study found that the most occurrence keywords are gold and gold prices with 68 and 41 occurrences. While for the citation analysis, the study employs Harzing's Publish or Perish Program to incorporate and integrate the data.*

Keywords: *Gold, Gold Prices, Currency, Exchange rate, Economic Indicators*

Introduction

Gold has held a prominent position in the global financial landscape for centuries, functioning not only as a medium of exchange but also as a dependable store of value. Although modern economies are now primarily driven by fiat currencies, gold continues to be recognized as a hedge against inflation and currency depreciation, as well as a safe haven asset during periods of financial instability (Baur & Lucey, 2010; Wang, Lee, & Thi, 2011). This enduring relevance has fuelled sustained academic interest in the complex relationship between gold prices and currency movements.

A substantial body of research has investigated various aspects of this relationship. Some studies have examined gold's role as a financial hedge or safe haven (Baur & Lucey, 2010), while others have analyzed its interaction with macroeconomic indicators and currency exchange rates in different regional contexts, including Malaysia (Tsen, 2014; Zakaria et al., 2015), India (Nair, Choudhary, & Purohit, 2015), and ASEAN nations (Ling, 2011). Additionally, scholars have explored forecasting techniques for predicting gold prices (Ismail, Yahya, & Shabri, 2009; Setyowibowo et al., 2021), the influence of liquidity on financial performance (Akenga, 2017), and the impact of geopolitical events such as economic sanctions on gold and currency volatility (Mashayeki, Ara, & Jafari, 2013).

Despite the breadth of literature on this topic, there remains a lack of comprehensive studies that systematically analyze the field using bibliometric techniques. Bibliometric analysis provides a structured and quantitative method for examining research trends, identifying leading contributors, and visualizing thematic developments within a specific domain. This study applies such an approach to evaluate the scholarly discourse surrounding gold prices and currency dynamics.

Using the Scopus database, a total of 169 peer-reviewed journal articles published between 1977 and 2025 were identified and analyzed. The VOSviewer software was employed to conduct keyword co-occurrence analysis, revealing that "gold" and "gold prices" appeared most frequently, with 68 and 41 mentions, respectively. To further assess scholarly influence, Harzing's Publish or Perish software was used to perform citation analysis, highlighting key contributions such as those by Worthington & Pahlavani (2006) and Baur & Lucey (2010).

This bibliometric review offers a structured overview of the research landscape on gold and currency dynamics. It aims to enhance understanding of historical developments, emerging trends, and influential works in the field, thereby offering valuable insights for researchers, investors, and policymakers alike.

Problem Statement

Many individual studies have looked at the link between gold prices and exchange rates. However, the current research remains scattered. Most studies focus on specific time frames, regions, or economic conditions. Despite the ongoing interest in this topic, few have put together trends and developments over several decades to give a clear view of how the field has changed. Importantly, there is a limited systematic bibliometric analysis has been done to identify the most influential authors, dominant keywords or emerging topics.

Therefore, this study fills this important gap by using bibliometric techniques to assess and compile scholarly work on gold prices and currency dynamics from 1977 to 2025. This gap is significant to guide the researchers to concentrate on what areas that are still underexplored and which works have the most impact.

Literature Review

Gold as a Precious Metal

Gold is a precious metal that has maintained a long-standing and significant relationship with humanity. Historically, it functioned as a primary form of currency until alternative monetary systems were developed. Even in contemporary times, gold remains a popular investment asset (Michael, 2007). Gold holds a distinctive place in the global economy, valued not just for its beauty but also for its versatility. It acts simultaneously as a commodity, a precious metal, and a form of currency. Over time, it has served a variety of roles which are from being crafted into ornamental jewellery to acting as a trusted investment for both short-term needs and long-term wealth preservation. One of the most appealing features of gold is its liquidity; it can be converted into cash quickly and easily, often without losing much of its value. Liquidity refers to the efficiency or ease with which an asset or security can be converted into ready cash without affecting its market price Akenga (2017). Unlike many other assets, gold is widely recognized and accepted globally, making it an effective medium for international exchange. Despite its financial burden, gold is an asset that is easy to store and move. This statement has been supported by Wang et al. (2011). These traits make it particularly appealing to investors seeking a secure and flexible investment. As Worthington and Pahlavani (2006) noted, gold has attracted human interest for thousands of years precisely because it stands apart from most other commodities which are being durable, portable, and universally recognized as a store of value. Its longevity is further supported by physical qualities such as high ductility, chemical stability, and scarcity. These attributes, along with its ability to maintain consistent form and color over time, contribute to gold's enduring reputation (Setyowibowo et al., 2021). These timeless characteristics not only played a role in gold's historical use as currency but also help explain why it remains a reliable and appealing investment in today's financial landscape.

Gold as an Inflation Hedge and Safe Heaven

Although gold has maintained its value and relevance since the beginning, the broader concept of money and mediums of exchange has been a significant change. There has been many research and studies investigating the factors that influence the gold prices in various countries and the main objective of these studies were to identify the factors contributing to the unpredictability of gold prices, such as exchange rates and currencies' value. Baur and Lucey (2010) asserted that the medium of exchange over the centuries has witnessed numerous changes and changes, reflecting changes in economic systems, political structures, and technological advancements. Unlike gold, no single fiat currency has remained consistently stable or universally accepted over time, highlighting the unique and enduring role of gold in the global economic landscape. Besides, a study by Nair et al. (2015) examined the relationship between gold prices and the Indian Rupee against the US Dollar exchange rate, with a particular emphasis on the impact of the 2008 economic downturn. The Johansen Co-Integration test in their study revealed a long-lasting equilibrium relationship between these two variables. The

Granger Causality test further revealed a mutual influence between gold prices and the exchange rate prior to the economic crisis. However, during the 2008 downturn, this mutual relationship remained stable, showing that the link between gold prices and exchange rates in India had relatively remained stable or bounced back easily despite the economic challenges during the 2008 downturn.

Gold and Exchange Rate Relationship

Finding by Ismail et al. (2009) shows that the demand for gold commodities as an investment is increasing. They found that the USD against Euro foreign exchange rate and US Dollar index are considered to have influence on the prices of gold. Previous study by Nurulhuda et al (2014) stated that currency exchange rate has a negative significant relationship to the gold price. For example, the increase in the ringgit currency exchange rate may cause a decrease to the gold price in Malaysia.

Study by Seemuang and Suppanunta (2013) also found the same result as this study. A similar study was conducted by Zakaria et al. (2015), utilizing monthly data spanning 14 years, from 2000 to 2013, to examine the determinants of gold price fluctuations in Malaysia. The findings indicated that exchange rates, interest rates, and inflation rates exhibited significant relationships with gold prices, varying in both magnitude and direction. Empirical evidence from the study further demonstrated that changes in any of these three macroeconomic variables led to corresponding changes in the price of gold.

Omag (2012) conducted a study on the relationship between gold prices and financial variable (exchange rates) in Turkey. Data was taken from January 2002 to December 2011 using the Multiple Linear Regression Model. The results showed that there was a positive correlation between the prices of Turkish gold and the exchange rates between Turkish Lira and Dollar. However, Tsen (2014) argues that there was a negative correlation between the exchange rates and gold prices in Malaysia. From the analysis conducted, it showed long-term relationships between currency exchange rates and gold prices. He also argued that the rise in gold prices would depreciate the US Dollar.

Ling (2011) conducted a study on the relationship between gold prices and the exchange rate of Asean currencies (Ringgit Malaysia, Singapore Dollar, and Thai Baht) against the US Dollar. The data used were monthly data from January 1981 to December 2010. From the results of his study, he found that the prices of gold and Ringgit Malaysia had a long-term relationship and a positive relationship. In addition, there were negative relationships between gold prices and Singapore Dollar and Thai Baht were found in his study.

Geopolitical and Macroeconomic Influences on Gold

Mashayeki, Ara, and Jafari (2013) examined the impact of currency devaluation and economic sanctions on gold prices in Iran. The purpose of this study was to analyze the price trend of gold in Iran within 5 years. The findings revealed that the changes in the value of global currencies and gold prices affected gold prices in Iran. Additionally, economic sanctions emerged as a major factor contributing to these price changes, underscoring their substantial effect on the country's gold market.

Gold's Role in Islamic Economic History

Gold and silver have historically served as Shariah money (dinār and dirham). They formed the foundation of trade and financial transactions in early Islamic civilizations. Meera (2004) points out that these metals were accepted because of their intrinsic value, scarcity, and universal recognition. Their use aligned with the Quranic rules against unjust enrichment (riba) and speculative gain. Umer Chapra (2008) argues that using tangible assets like gold supports Islamic finance's focus on maintaining real economic value. This stands in contrast to fiat currencies, which can face inflation and speculation.

Gold as a Store of Value in Islamic Finance

Gold is important in Islamic finance because it helps preserve wealth, especially during times of economic instability or when fiat currencies lose value. Laldin and Furqani (2013) suggest that gold's role matches the Maqasid al-Shariah, which focuses on protecting wealth (ḥifz al-maal). This role is even more crucial in unstable markets. Gold acts as a stable and ethical investment option. Research by Baur and McDermott (2010), although not specifically related to Islamic finance, supports this idea by showing gold as a global safe haven. This points to its potential inclusion in Shariah-compliant portfolios.

Research Methodology

This paper employs a bibliometric analysis to theoretically examine the relationship between gold prices and the movement of currency. Bibliometric analysis is a quantitative method that allows scholars to evaluate the structure, development, and trends within an investigated field of study by examining patterns of scientific publication. The database was extracted on 10th May 2025 using Scopus database using a combination of keywords such as "gold price", "gold prices", "currency", "exchange rate", and "economic indicators". Scopus was selected due to its being among the biggest and most comprehensive abstract and citation databases for peer reviewed journals, particularly for economics, finance, and social science. Compared to other databases such as Web of Science (WoS), Scopus covers broader journals, particularly for Asian and developing nations studies, which are relevant to the global context of gold and currency research.

Moreover, Scopus integrates analytic features and export options that are compatible with bibliometric applications like VOSviewer and Harzing's Publish or Perish, that is suitable for this analysis. The time frame of this analysis was from 1977 to 2025. The database was then filtered to only include peer reviewed journals and managed to retrieve 179 documents. The study used Vosviewer Software to visualize the database in terms of the occurrence of keywords and citation analysis. To analyze the citation metrics, the study employs Harzing's Publish or Perish program. The data were also calculated manually using Microsoft Excel. The results for the Bibliometric analysis were presented in the next section.

Results and Discussion

Keyword Analysis

Figure 1 below illustrates the Vosviewermap and it illustrates a network analysis of research literature in the Scopus database, in which the “gold price” and “currency” are the topic of interest. The network graph exhibits a number of interesting patterns and associations: Clustering result is visually shown as follows: it can be observed in the following visualization that there are clear clusters that can be distinguished by various colors:

A green cluster around “gold,” “gold prices,” “gold price,” and links to economic terms “inflation,” “monetary policy,” and “interest rate”

A red community of crude oil, price dynamics, commodity market, and currency market

A blue cluster corresponding to “price prediction,” “machine learning,” “forecasting,” and “electronic trading”.

The nodes are varied in size according to the number or prominence of term used in a literature. “Gold” seems to be the most dominant topic in this research area in terms of centrality. Thick lines mean the strong connections between certain terms, which means the terms co-occur often in the papers.

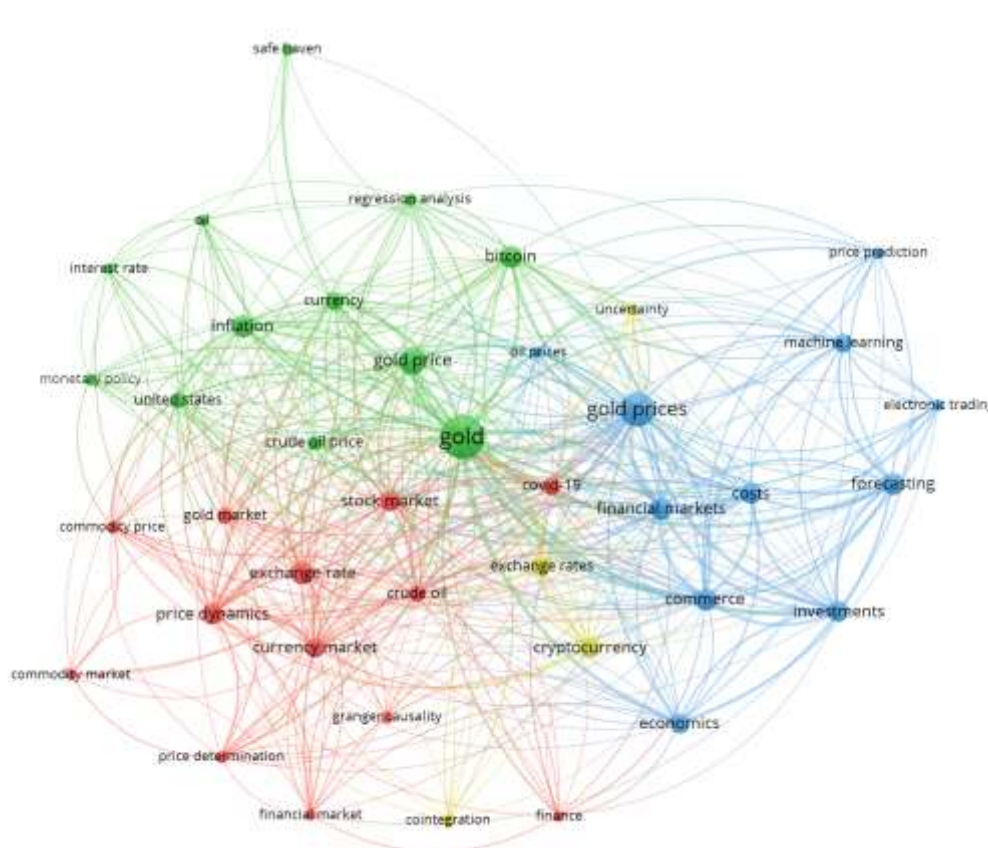


Figure 1: Keyword map for the study on the Gold Price and Currency (based on co-occurrence of all keywords)

Citation Analysis

The Publish or Perish software by Harzing was used to calculate the citation metrics for the data. Table 1 displays the number of citations for each text as of May 10, 2025. 179 published papers over a 52-year period, from 1973 to 2025, 3061 citations were used, as indicated by the citation metric table. This indicates that, annually, an average of 45.50 citations were used by 89.39 value papers per author.

Table 1: Citation Metric Table

Metric	Value
Publication years	1973–2025
Citation years	52 (1973–2025)
Papers	179
Citations	2366
Cites/year	45.50
Cites/paper	13.22
Cites/author	946.46
Papers/author	89.39
Authors/paper	2.59
h-index	28
g-index	45
hl,norm	17
hl,annual	0.33
hA-index	10

Table 2 : Google Scholar Citations

No	Title	Authors	Year	Source	Scopus Cites	Scopus Cites Per Year	Google Scholar Cite	Google Scholar Cite Per Year
1	Bitcoin and gold price returns: A quantile regression and NARDL analysis	F. Jareño, M.D.L.O. González	2020	Resources Policy	127.0	25.4	207.0	41.4
2	Asymmetric nexus between Bitcoin, gold resources and stock market returns: Novel findings from quantile estimates	J. Jie, S. Tiwari, J. Zhou, M.U.	2021	Resources Policy	40.0	20.0	46.0	23.0
3	Does Bitcoin exhibit the same asymmetric multifractal cross-	G. Gajardo, W.D. Kristjanpoll	2018	Chaos, Solitons and Fractals	134.0	19.1	186.0	26.6

	correlations with gold and DJIA as the Euro, Great British Pound							
4	Is gold a hedge against inflation? New evidence from a nonlinear ARDL approach	T.H.V. Hoang, A. Lahiani, D. H.	2016	Economic Modelling	165.0	18.3	156.0	17.3
5	Risk spillovers effects between cryptocurrencies and traditional currencies and gold under different global economic conditions	S.-H. Hsu, C. Sheu, J. Yoon	2021	North American Journal of Economics	72.0	18.0	110.0	27.5
6	Commodity dynamics in the COVID-19 crisis: Are gold, oil, and stock commodity prices symmetrical?	M. Sadia, C.-Y. Lin, K.-T. Wan	2022	Resources Policy	45.0	15.0	53.0	17.7
7	Asymmetric correlation and Hedging effectiveness of gold & cryptocurrencies: From pre-industrial to the 4th industrial revolution	N. Thampana, M.A. Nasir, T.	2020	Technological Forecasting	72.0	14.4	116.0	23.2
8	The effects of economic uncertainty, geopolitical risk and pandemic upheaval on gold prices	T.C. Chiang	2022	Resources Policy	43.0	14.3	66.0	22.0
9	Gold price forecasting research based on improved online extreme learning machine algorithm	F. Weng, Y. Chen, Z. Wang, M	2020	Journal of Ambient Intelligence	59.0	11.8	70.0	14.0
10	Analysis on the influence factors of Bitcoin's price based on VEC model	Y. Zhu, D. Dickinson, J. Li	2017	Financial Innovation	91.0	11.4	195.0	24.4

11	Can gold or silver be used as a hedge against policy uncertainty and COVID-19 in the Chinese market?	T.C. Chiang	2022	China Finance Review International	30.0	10.0	45.0	15.0
12	Investment in gold: A bibliometric review and agenda for future research	D. Pattnaik, M.K. Hassan, A.	2023	Research in International Business	18.0	9.0	24.0	12.0
13	Time series analysis of Cryptocurrency returns and volatilities	R.K. Malladi,	2021	Journal of Economics and Finance	34.0	8.5	84.0	21.0
14	Analysis of Bitcoin prices using market and sentiment variables	P.L.Dheeriyab. Kapar, J. Olmo	2021	World Economy	34.0	8.5	60.0	15.0
15	A new approach to predicting cryptocurrency returns based on gold prices under safe haven implications during the COVID-19	E. Mahdi, V. Leiva, S. Mara'b	2021	Sensors	34.0	8.5	43.0	10.8

Table 2 illustrates how the authors used Google Scholar citations to determine the annual average number of citations. Based on the citations given, the highest cite from Scopus is 165 in 2016 which entitled “*Is Gold a Hedge against inflation? New Evidence from a nonlinear ARDL Approach*”. Then followed by article that was done by Gajardo and Kristjanpol (2018) which has been cited by Scopus 134 times. Based on the computation of Google Scholar as of 10 May 2025, article that was done by Jareno and Gonzales (2020) entitled *Bitcoins and Gold Price Return: A Quantile Regression and NARDL Analysis* received the highest number of citations 207 times, 41.4 per year.

Conclusion

This study conducted a bibliometric analysis to explore the scholarly discourse surrounding the relationship between gold prices and currency dynamics. It is a subject of enduring relevance to global financial stability and economic development. Drawing from 169 peer-reviewed publications indexed in the Scopus database from 1977 to 2025, the analysis utilized VOSviewer software to map keyword co-occurrences and Harzing's Publish or Perish program for citation tracking. The findings reveal that terms such as "gold," "gold prices," "exchange rate," and "inflation" are consistently central across decades of literature, underscoring the significant and complex interrelation between gold and currency markets.

Gold's long-standing role as a stable store of value particularly in periods of economic uncertainty and it continues to attract scholarly attention. This is especially relevant for developing economies and Islamic financial systems where gold is often viewed not only as an investment asset but also as a Shariah-compliant store of wealth. The review highlights contributions from various geographical contexts, including Malaysia, India, and Iran, where gold plays a culturally and economically significant role. Moreover, studies from these regions emphasize that fluctuations in currency values, inflation rates, and geopolitical developments are key drivers of gold price volatility.

For the Islamic social and economic development agenda, this study offers key insights. The resilience of gold as an asset class may offer stability to financial systems operating under Islamic principles, which prohibit interest (riba) and emphasize tangible assets. The findings also encourage policymakers in Muslim-majority countries to consider the role of gold in strengthening monetary frameworks and safeguarding value in times of economic distress. In conclusion, this bibliometric analysis not only maps the intellectual structure of existing gold-currency research but also offers a valuable foundation for future scholarly inquiry, particularly in the context of Islamic finance, sustainable economic development, and global financial resilience. Future research could explore gold's interaction with digital currencies, Islamic monetary systems, and regional economic policies to further advance understanding in this critical area.

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