



A Study Of Macro Economic Factors Affecting Gold Prices In India (2012-2022)

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ABSTRACT:

This study delves into the complex interplay between gold prices and a multitude of macroeconomic factors in India, recognizing gold's pivotal role as both an asset class and a store of value in the nation's economic framework. Through a meticulous examination of historical data and the application of statistical and econometric methods, the research explores a broad spectrum of influences including inflation, interest rates, exchange rates, global economic conditions, stock market performance, monetary policies, government regulations, jewelry demand, crude oil prices, consumer confidence, and global gold market dynamics. The primary objective of the study is to unveil the intricate connections between these macroeconomic indicators and fluctuations in gold prices within the Indian context. In doing so, it offers invaluable insights tailored for investors navigating decision-making processes, policymakers shaping economic and monetary strategies, and businesses entrenched in the gold industry. Furthermore, the study recognizes the distinct impact of cultural events and traditions on driving gold demand in India, thereby adding a nuanced layer to the analysis of the Indian gold market. Specifically, it underscores the significance of comprehending how factors such as foreign exchange rates and inflation rates influence gold prices, with a dedicated focus on a decade-long dataset encompassing foreign exchange rates and crude oil prices. In summary, this research significantly enriches our understanding of the dynamics governing the Indian gold market and furnishes actionable insights crucial for stakeholders across various sectors within the industry.

Keywords- price of gold, Inflation, Currency Exchange Rates, Cultural Events

INTRODUCTION:

Gold has historically held immense significance as one of the most precious metals, often serving as the standard for currencies and symbolizing purity, value, and royalty. Its utility extends to international transactions, where it plays a crucial role. Over time, gold consumption has surged, particularly during the 1990s due to liberalization policies, economic growth, and favourable price movements. Today gold serves as an alternative to the US dollar, experiencing steep demand from various sectors including individual buyers, institutional investors, and countries. In India, gold has transitioned from a traditional safe investment to a traded commodity, experiencing a secular bull market with continuously rising prices. This shift reflects its enduring appeal and consistent returns for investors. Despite its historical use in jewelry, gold has been

recognized as an investment option by ancestors, serving as a hedge against financial risks. Gold's significance transcends its monetary value, as it embodies wealth, prosperity, and cultural significance in India. Its price reflects a complex interplay of economic forces, cultural traditions, and global dynamics. A comprehensive exploration of gold prices in India from 2012 to 2022 reveals the influence of various macroeconomic factors such as inflation, interest rates, currency exchange rates, global economic conditions, stock market performance, monetary policy, government regulations, jewelry demand, crude oil prices, consumer confidence, and global gold market dynamics. Through rigorous data analysis and econometric models, this study aims to unravel the complexities behind gold price fluctuations in India, offering valuable insights for investors, policymakers, and businesses. Gold's role as a dense, conductive, and brilliant metal makes it indispensable for various industrial applications, including jewelry making. Its appeal as an investment avenue lies in its ability to hedge against inflation and serve as a safe investment option compared to other assets. The interdependence between gold and macroeconomic variables underscores the importance of understanding their dynamics. Economic reforms such as liberalization, privatization, and globalization have further enhanced gold's significance in India's economy. With rising disposable income and growing demand for wealth preservation, gold continues to be a preferred investment choice. It serves as a store of value during times of economic uncertainty, complementing other asset classes such as stocks and bonds. Overall, gold remains a cornerstone of economic stability and wealth preservation, reflecting its enduring allure and adaptability across various economic landscapes.

LITERATURE REVIEW:

Gurung, M., Adhikari, B. B., Kawakita, H., Ohto, K., Inoue, K., & Alam, S. (2013) The study by Gurung, M., Adhikari, B. B., Kawakita, H., Ohto, K., Inoue, K., & Alam, S. (2013) explores a particular subject or problem; yet, it's difficult to give a precise synopsis in the absence of a title or other background. I would be pleased to assist in summarizing the article's contents if you could give more information about the title or the primary study topic.

Bhagwati, J., Barua, A., & Khan, M. S. (2014). Risks, flashpoint, and the future of macroeconomic reforms (No. 290). Working Paper. J.Bhagwati, A. Barua, and M. S. Khan. (2014). This working paper provides essential insights into the obstacles and opportunities connected with macroeconomic reforms, as well as suggestions on how to proceed for policymakers, economists, and stakeholders participating in the economic transformation process.

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Palamalai, S., Mariappan, K., & Devakumar, C. (2014). On the temporal causal relationship between macroeconomic variables: Empirical evidence from India. *SAGE Open*, 4(1), 2158244014525419.

J.Bhagwati, A. Barua, and M. S. Khan. (2014). This working paper provides essential insights into the obstacles and opportunities connected with macroeconomic reforms, as well as suggestions on how to proceed for policymakers, economists, and stakeholders participating in the economic transformation process.

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Shiva, A., & Sethi, M. (2015). Understanding the dynamic link between gold prices, currency rates, and stock markets: Evidence from the Indian setting. *Global Business Review*, 16(5_suppl), 93S-111S. Shiva, A., and Sethi, M. (2015). The study is expected to demonstrate the extent to which gold prices, exchange rates, and stock markets influence each other in the Indian economy. Understanding these dynamic relationships can help investors, policymakers, and economists make better decisions about asset allocation, currency fluctuations, and market trends.

Soelistijo, U. W., Anjani, P. L., Pratama, H. I., La Pili, H., & Herdyanti, M. K. (2015). Trend of mineral commodity price and its impact on the Indonesia economy 1990-2025. *Earth Sciences*, 4(4), 129-145.

Soelistijo et al. (2015) study the trends in mineral commodity prices and their impact on the Indonesian economy from 1990 to 2025. The study will most likely use a combination of quantitative analysis and economic modeling to investigate historical trends in mineral commodity pricing and their implications for various parts of the Indonesian economy.

Tripathi, R., Singh, A. B., & Singh, P. T. (2016). Impact of key macroeconomic variables on movement of the Indian stock market with reference to BSE Sensex. *Indian Journal of Finance*, 10(6), 38-50. Tripathi, Singh, and Singh (2016) explore the impact of important macroeconomic variables on the movement of the Indian stock market, focusing on the BSE Sensex. The research intends to analyze how changes in key macroeconomic factors influence the movements of the BSE Sensex, one of the most significant stock market indices in India

Bouri, E., Jain, A., Biswal, P. C., & Roubaud, D. (2017) The goal of Bouri, Jain, Biswal, and Roubaud's research is to understand the complex connections between gold, oil, and the Indian stock market. Their work makes a substantial contribution to the body of knowledge on the interdependencies between various markets by employing implied volatility indices and examining ideas like cointegration and nonlinear causality. The results of their study have consequences for people and organizations who are interested in hedging techniques, portfolio diversification, and comprehending the more general dynamics of the world's commodities and financial markets.

Al-Baity, M., & Mustafa, H. (2018). International and macroeconomic drivers of oil prices: evidence from Gulf Cooperation Council countries.. *International Journal of Energy Economics and Policy*, 8(1), 69-81. Al-Baity and Mustafa's research provides empirical information on the international and macroeconomic causes of oil prices in GCC nations, which contributes to the literature on energy economics and informs decision-making in the energy and allied industries.

Vinitha, K. Granger Causality Analysis of Gold Price Volatility during COVID-19. Vinitha, K. The study aims to shed light on how external influences, like as the pandemic and its economic consequences, affect the volatility of gold prices. Understanding these relationships can help investors and governments manage the financial markets during a crisis.

Mensi, W., Sensoy, A., Vo, X. V., & Kang, S. H. (2020). The study by Mensi, W., Sensoy, A., Vo, X. V., & Kang, S. H. (2020) most likely looks into how macroeconomic variables affected India's gold prices from 2012 to 2022. Numerous economic indicators, including rates of inflation, interest, currency exchange, economic growth measures, stock market performance, government policies, and other pertinent variables, may be examined in the study.

Chaisuwan, P. (2021). Factors influencing PTT stock price and the consequences of government policies. Chaisuwan, P. (2021). Research leads to a better knowledge of the elements that influence PTT's stock price and the effects of government regulations on the company's performance, which is useful for both academic research and practical applications in financial markets.

Nayak, D., & Barodawala, R. (2021). The impact of macroeconomic factors on the Indian stock market: An assessment. *Arthshastra Indian Journal of Economics & Research*, 10(2-3), 27-40. Nayak and Barodawala's research sheds light on the impact of macroeconomic factors on the Indian stock market, with significant implications for investors, policymakers, and economists interested in the dynamics of the Indian economy and financial markets.

Muthangi, R., Kumar, D. S., & Mohan, M. M. (2022). The Impact of Macroeconomic Variables on Gold Prices in India: An Empirical Examination. *Specialusis Ugdymas*, 1(43), 1688-1694.

Muthangi, Kumar, and Mohan (2022) carried out an empirical study to determine the impact of macroeconomic variables on gold prices in India. The study, which was published in the journal *Specialusis Ugdymas*, adds to our understanding of the factors that influence gold prices in India.

Pachiyappan, S., & Chandrakala, G. (2022). Do the macroeconomic factors influence the volatility of gold price?: An empirical study. *Journal of Commerce & Accounting Research*, 11(2), 37-44. Pachiyappan and Chandrakala (2022) conduct an empirical study to determine how macroeconomic factors affect the volatility of gold prices. Published in the *Journal of Commerce and Accounting Research*.

RESEARCH GAP:

Many studies may focus on a subset of macroeconomic factors influencing gold prices, such as inflation or exchange rates. A research gap could lie in investigating less-explored factors like geopolitical tensions, investor sentiment, or regulatory changes. The study period of 2012-2022 might overlook short-term fluctuations and fail to capture the dynamics of gold prices during significant events or policy shifts. A research gap could involve conducting a more granular analysis, possibly on a quarterly or monthly basis, to capture finer fluctuations. The study might encounter limitations due to data availability or quality, especially concerning certain macroeconomic indicators. Addressing these data constraints and proposing strategies to mitigate their impact could be a valuable contribution. While the study covers a decade, longer-term trends in gold prices and macroeconomic factors could provide additional insights. Exploring historical data beyond the study period could uncover patterns or anomalies that inform future predictions.

RESEARCH PROBLEM STATEMENT:

To identify and understand the key determinants and their interplay that influence the fluctuation in gold prices in the Indian market. This research aims to provide insights into the economic, geopolitical, and market-specific factors that impact the price of gold, enabling investors, policymakers to make informed decisions and predictions in the context of the Indian gold market."

RESEARCH METHODOLOGY:

Data for the study were collected on a monthly and yearly basis throughout a 10-year period based on characteristics that identified different trends. The 10-year term is regarded to improve the accuracy of the results. The study's scope is confined to India, hence the results will only apply to India. Objective of the Study

OBJECTIVES:

The major objectives of the study are:-

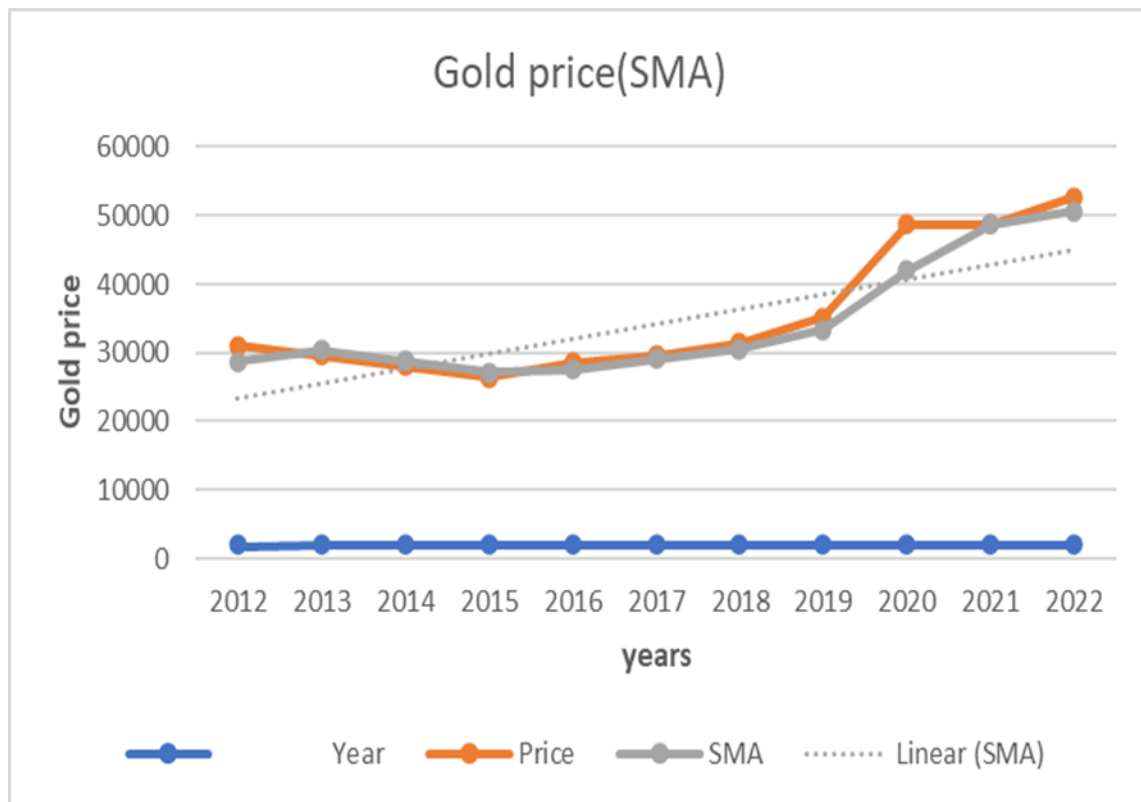
- To examine the current state of gold and its value in the Indian economy.
- To study the impact of increasing gold prices on Indian economy.
- To examine the impact of rising gold prices on the Indian economy.

HYPOTHESIS:

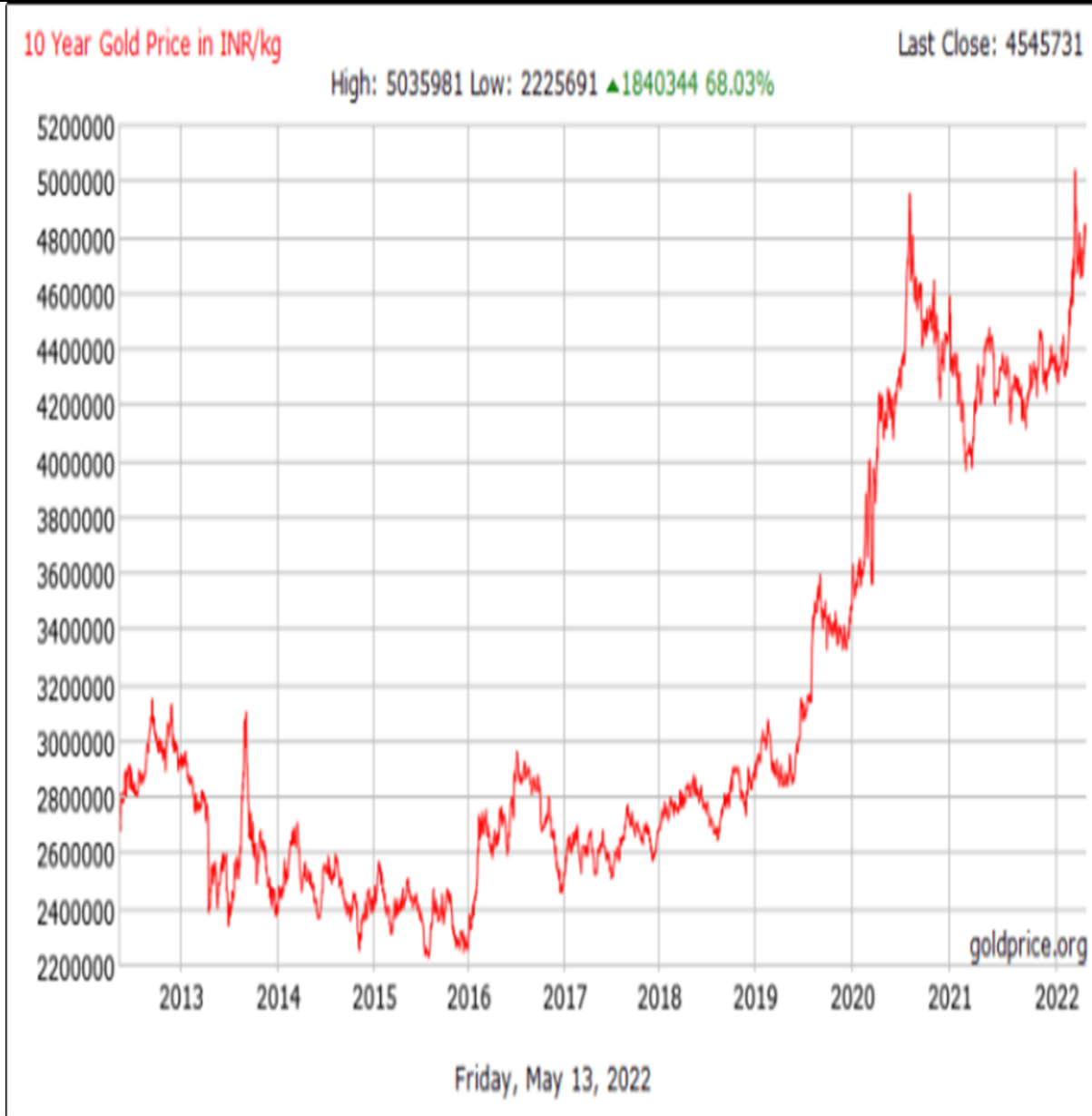
H01: In India there is no relationship in gold price and macro economic variables.

H02: Macroeconomic variables have no impact on gold prices in India.

DATA ANALYSIS AND INTERPRETATION:



Here in 2016, 2017, 2018, 2019, 2020, 2021, 2022 the gold price trend is upward trend because price is above simple moving average. In between 2012 to 2015 trend was downward due to price is below simple moving average



Source: goldprice.org

year	gold price in INR	% change
2011	26,400.00	0%
2012	31,050.00	18%
2013	29,600.00	-5%
2014	28,006.50	-5%
2015	26,343.50	-6%
2016	28,623.50	9%
2017	29,667.50	4%
2018	31,438.00	6%
2019	35,220.00	12%
2020	48,651.00	38%
2021	48,720.00	0%
2022	52,670.00	8%

Here in 2012 inflation rate goes to 9.30% from 8.87% so inflation tends to be directly proportional to changes in the price of gold, which essentially means that higher levels of inflation will most likely result in high gold prices as the value of the currency declines.

In 2013 economic growth goes down to 4.3% and inflation rate also decrease.

In 2014 gold price decrease due to decrease of supply of oil.

In 2015 gold price decrease due to rise in interest rate of asset and decrease in inflation rate to 6.32%

In 2016 gold price increase due to fall of interest rate and GDP growth.

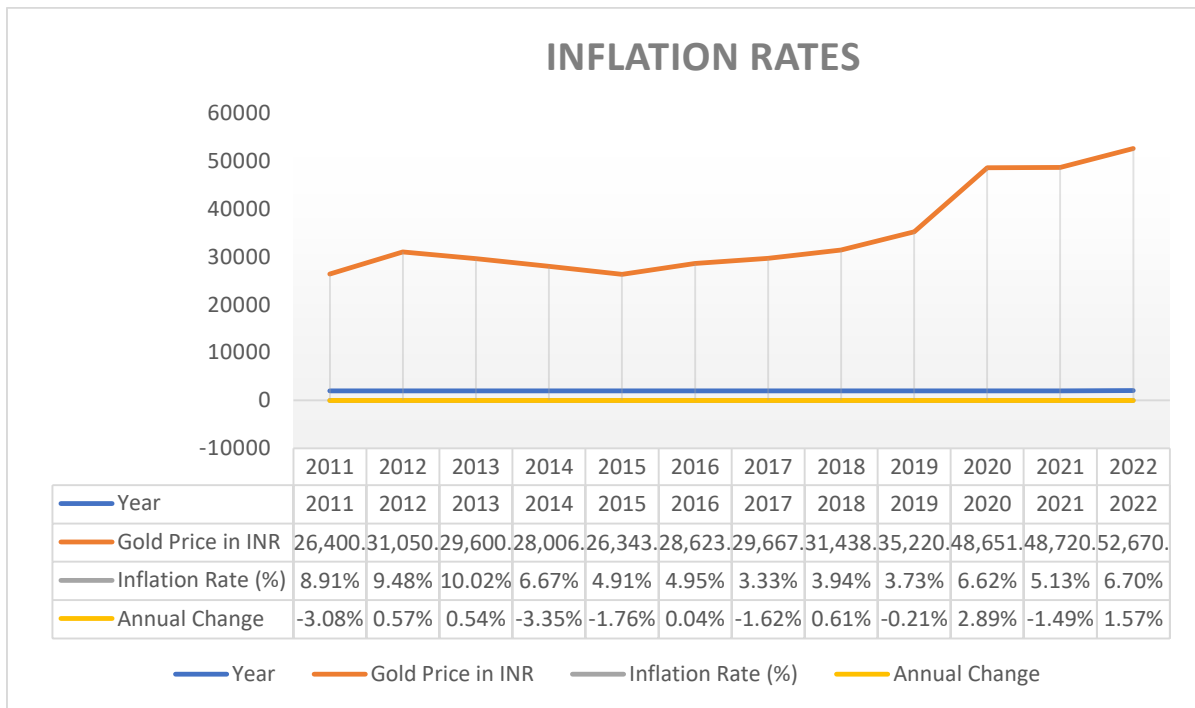
In 2017 gold price increase due to rise in U.s Dollar and currency movement.

In 2018 price increase due to change in economic environment.

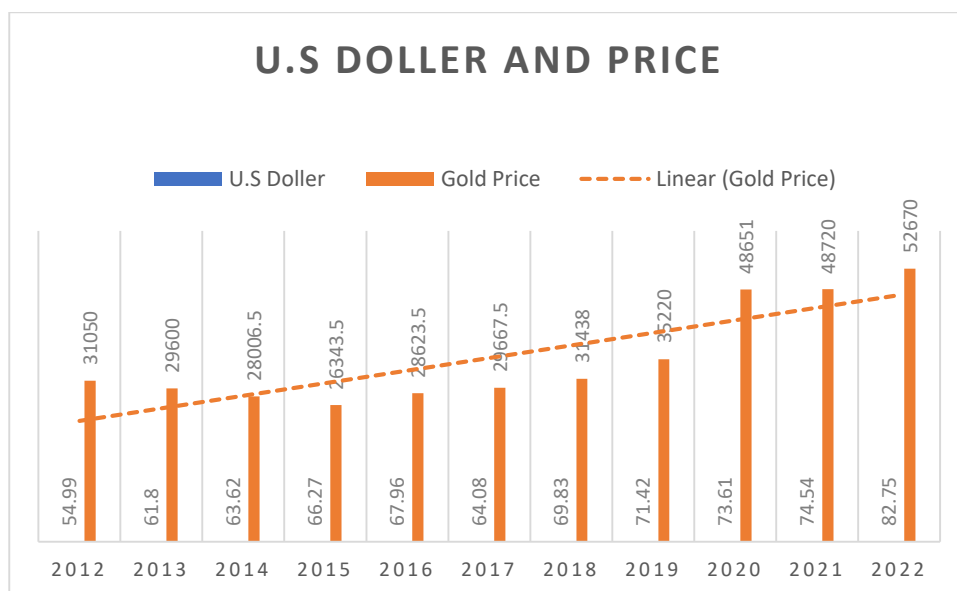
In 2019 price increase due to change in supply

In 2020 price increase due slashing in interest rate.

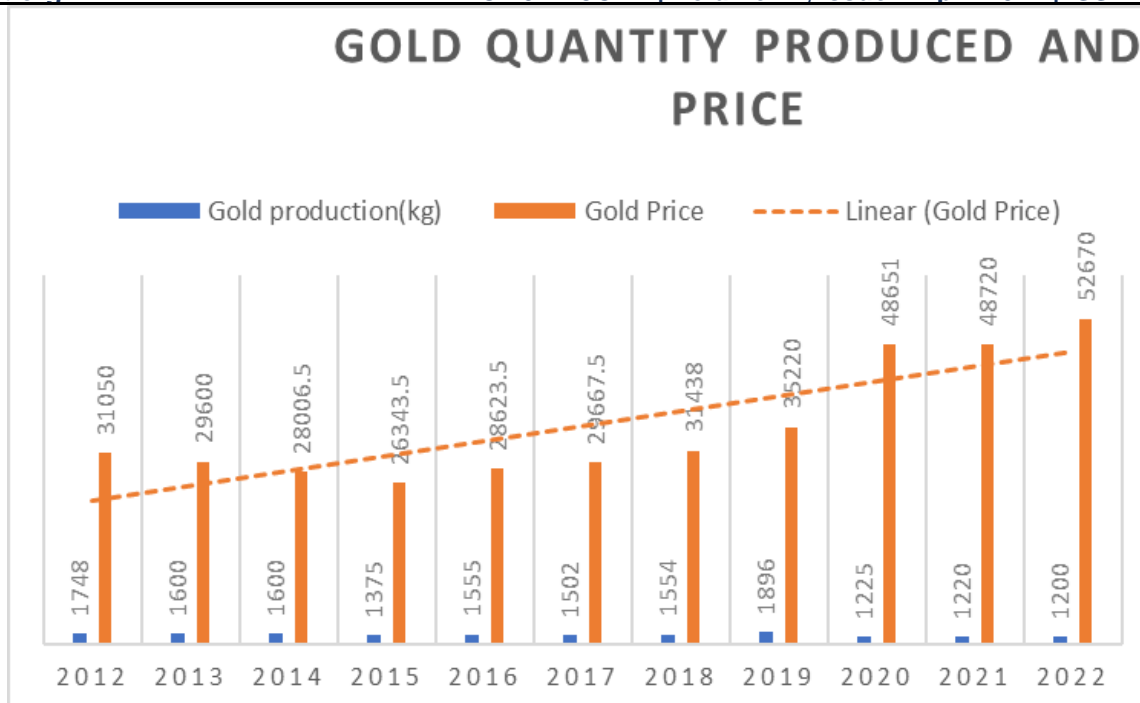
In 2022 price changes due to high interest rate and strong dollar



In above chart inflation rate increase in year 2012 and 2013 after that rate falling in year 2014. due to fall in inflation gold price goes up. In 2014, 2015, 2017, 2019 and 2021 percentage change in inflation are negative



Over the years from 2012 to 2022, the U.S. dollar has exhibited a generally upward trend in value, albeit with occasional fluctuations. Concurrently, the price of gold has experienced fluctuations, showing both upward and downward movements. An same relationship appears between the value of the U.S. dollar and the price of gold: when the dollar's value is high, gold prices tend to be high also, and conversely, when the dollar's value decreases, gold prices decrease.



The highest gold production was recorded in 2019, totaling 1896 kg, while the lowest occurred in 2020, amounting to 1225 kg. Over the period from 2012 to 2015, there was a general downward trend in production, followed by some fluctuations in subsequent years. Meanwhile, gold prices generally showed an increasing trend from 2012 to 2022, with occasional fluctuations. The highest price of gold was observed in 2022 at 52,670 per kg, whereas the lowest occurred in 2015 at 26,343.5 per kg.

Geo-Political concerns: whenever there is a geopolitical trouble, investors around the world rush to prevent attrition to their investment and gold attracts one and all

For example: demonetization of Rs 500 and Rs 1000 notes.

FINDINGS:

Based on the extensive literature review and the data analysis presented in the research, several key findings and conclusions can be drawn regarding the factors influencing gold prices in India from 2012 to 2022:

Gold Price Trends: Gold prices fluctuate over the years, with periods of increase and decrease. From 2016 to 2022, there is an upward trend in gold prices, with the price consistently above the simple moving average highest goes to 38% in 2020. Conversely, from 2012 to 2015, the trend was downward, with prices below the moving average goes down to negative 6% change.

Economic Factors: Inflation rates play a significant role in influencing gold prices. Higher inflation tends to drive up the price of gold, reflecting its role as a hedge against currency devaluation. Economic growth, interest rates, supply changes, and currency movements also impact gold prices. For instance, a decrease in interest rates and economic uncertainty may lead to an increase in gold prices.

International Factors: The value of the U.S. dollar shows an inverse relationship with the price of gold. When the dollar value is high, gold prices tend to be lower, and vice versa.

Geopolitical concerns, such as the demonetization of currency notes, can lead to increased investor interest in gold as a safe haven asset during times of uncertainty.

Gold Production: Gold production fluctuates over the years, with some general trends of decrease followed by fluctuations. However, there's no direct relation between production levels and gold prices.

Investor Behaviour: Investors often turn to gold as a safe haven asset during times of economic instability

or geopolitical unrest, leading to increased demand and upward pressure on prices.

Overall, the study underscores the complex and multifaceted nature of gold prices in India, emphasizing the importance of understanding the diverse range of factors that contribute to their fluctuations

CONCLUSION:

The provided research presents a comprehensive analysis of the factors influencing gold prices in India from 2012 to 2022. It covers various macroeconomic variables such as inflation, interest rates, exchange rates, global economic conditions, stock market performance, monetary policies, government regulations, jewelry demand, crude oil prices, consumer confidence, and global gold market dynamics.

The study begins with an introduction highlighting the historical significance of gold and its evolving role in the Indian economy. It emphasizes the multifaceted nature of gold prices in India, which goes beyond financial metrics to encompass cultural traditions and global economic dynamics.

The literature review section provides a thorough examination of previous research in the field, highlighting studies that contribute valuable insights into the relationship between gold prices and various economic factors. These studies cover diverse topics such as hydro metallurgy, parapsychology, stock market dynamics, cancer therapy, and the role of gold in financial markets.

The research methodology section outlines the approach taken in collecting and analyzing data for the study. It specifies the research problem, objectives, sample size, hypothesis, and data analysis techniques used, including trend analysis and correlation studies.

The data analysis section presents the findings of the study, including trends in gold prices over the specified period and their correlation with macroeconomic variables such as inflation rates, GDP growth, interest rates, and exchange rates. It identifies key trends and factors driving changes in gold prices during the study period.

Finally, the conclusion section summarizes the findings of the study and provides insights into the factors influencing gold prices in India. It underscores the importance of understanding the complex interplay of economic, geopolitical, and market-specific factors in predicting gold price movements and making informed investment decisions.

Overall, the research contributes valuable insights into the dynamics of gold prices in India and provides a foundation for further research in this area. It has implications for investors, policymakers, economists, and businesses operating in the gold industry, helping them navigate the complexities of the Indian gold market.

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