

The Protective Role of Gold Against Inflation and Market Fluctuations: Evidence from Pakistan

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Abstract

The study is conducted with an aim of analysis considering the relationship amongst inflation, interest rates, and gold prices in Pakistan. Respective study utilized the secondary data which was collected from both national as well as international institutions. The results indicated that inflation, interest rates, and gold prices experienced fluctuations during the period under study. The connection study has shown a positive relationship among the variables, whereas, the regression results have shown a statistically significant relationship. These revelations from study support both the hypotheses of the research and suggest that these fiscal variables are closely linked. The study revelations also are coherent with previous literature. Overall, the study concludes that inflation, interest rates, and gold prices are significantly related when referring to Pakistan. Findings serve as a useful insight for investors, researchers, and policymakers in understanding economic and financial market behavior.

INTRODUCTION:

Gold was always valued historically due to acceptance worldwide as an asset. It also plays the role of a border during the inflation, as it is a border of intrinsic value. Gold prices do vary in the short term, but hold a good share in the market nevertheless. Besides being a store of value, gold demand is also high in industrial applications, coins, & jewellery (Ghosh et al., 2002).

Le & Chang (2011) states that Investors believe that one of the safest assets for investment is gold, and that it can be used to not only broaden their portfolios but also to reduce financial risk. Numerous financial assets are very sensitive to the market but pertaining to gold, it is considered a “safe haven” amidst the economic crisis or instability. One of gold’s properties is that it is a considerable hedge when the financial markets are unstable. Despite this, some economists believe that gold is a monetary standard and it continues to be used as a value basis amidst economic uncertainty.

Because gold can be a store of value over the time, it is hence regarded “safe asset” along with hedge in counter to inflation in Pakistan. Other assets, including stocks, real estate, and foreign currencies, are also employed as inflation protection investments, but they tend to be more volatile in reaction to the external economic factors, like crisis, market changes, and political uncertainty. Gold is generally more stable than stocks, and in times of inflation, it holds its value better, relative to the market. From financial point of view, gold has an important role in Pakistan for hedging purpose, according to Nishat & Mustafa (2008).

The general macroeconomic context of Pakistan has been studied in detail in the recent literature. Hanif, Paracha, Khan, Noor & Irfan (2025) studied the interaction between economic and monetary variables in Pakistan, as economic policies impact the inflation and asset prices. Using a small sample of enterprises, Buzdar, Hanif & Khan (2022) examined the growth of enterprises and the monetary policy asymmetry effects, showing that the reaction of enterprises to monetary policy has been different in terms of size and financial structure of the enterprises, which indirectly affects the demand for assets such as gold. Remittances are shown to be a catalyst for the economic growth in Pakistan by Khan & Adnan (2026), indicating that external financial flows impact the price formation within the domestic economy and investment decisions. Moreover, Zubair, Adnan & Paracha (2026) studied the impacts of geopolitical conflicts on oil prices and Pakistan's economy and found that the external shocks cause inflationary pressures, which in turn affects gold demand as a hedge.

Since gold is a reserve currency used worldwide and is accepted internationally, its price is hence listed in main global currency, which is in everyday use and trade, mainly as dollar. One of important factors which directly influences gold is the dollar strength. That is when the dollar goes up, so does the cost of gold. Overall, a stronger U.S. dollar lowers its cost whilst a weaker dollar raises it (Gilroy, 2014).

Interest rates are also a factor in gold investments in Pakistan. Some studies have identified this connection amongst these gold prices and the rates of interest, notably when taking into consideration the bond yields and in the returns of alternative investments. Gold and bonds both serve as an inflation hedge but are viewed as being safer and more stable than bonds during periods of economic instability. In such difficult economic times, this tendency causes the investors to rebalance their portfolios towards gold and not bonds (Zafar & Javid, 2015).

Throughout the years, gold has manifested itself in different forms. Gold was displayed in the form of jewellery in start and now it has gained popularity in the

financial markets in the form of gold bullion, exchange traded funds (ETFs) along with sovereign gold bonds. Investors preserve their wealth by shifting to protective asset like gold in an instability of economy as gold has an intrinsic value, it preserves its value. However, in situations where investors requires the cash, they may liquidate gold holdings to meet cash requirements. Adding gold to a portfolio can offer risk diversification and may aid in preserving wealth, especially throughout unpredictable markets. Although gold is regarded as safe asset, it is generally effective as a hedge only under certain market conditions (Garg, 2021; Brabenec et al., 2020; Pruchnicka-Grabias, 2020).

As stated before, gold can be a portfolio booster for investors. Hence, this preference is mainly associated with gold's relative stability in comparison to the additional financial assets. When compared to bonds as well as stocks, gold is a much less volatile investment and is seen as a lower risk investment to help diversify a portfolio. Therefore, according to Baur and Lucey (2010) gold not only acts as a diversifying tool but also a "safe haven" amidst financial crisis or uncertainty.

It can also be considered in terms of good inflation protection, but it is not a perfect inflation hedge, as it fluctuates over the short term. The indicators responsible for fluctuation in gold prices when considering Pakistan are inflation, interest rates, along with the economic situation. These fluctuations show the stability of gold as an asset in the long-term. Moreover, such fluctuations are evident also in the short-term run (Chaithep et al., 2012).

The trade of bullion gold takes place across major markets like the London Bullion Market, NY Globex and NY COMEX. As stated before about gold being a hedge amidst inflation with empirical data indicating that, compared to equity investing, gold can offer more stable returns during inflationary times. On the other hand, equity markets do not always provide protection against inflation, especially amidst crisis or uncertainty. This refers to testament to gold's value in terms of investment assets safer to the risk of loss (Jensen et al., 2018).

Problem Statement

In times of economic uncertainty inflation and interest rates keep varying. It's a dilemma for the Pakistani locals as where they should invest their money. People think of gold in terms of being a safer investment, but a limited amount of proof is available to demonstrate the influence of inflation along with rates of interest upon gold prices in Pakistan. This study examines the relevant facts and attempts to draw some inferences whether inflation along with rates of interest affect gold value.

Research Objectives:

This research endeavor focused on respective objectives:

Comparing effect of inflation rate upon prices of gold in Pakistan

To shed light on effect of interest rates on gold prices in Pakistan

Research Questions:

On the basis of these objectives withdraw these research questions:

Is there a significant relation amongst inflation rate and gold price in Pakistan?

Are interest rates significantly affecting prices of gold in Pakistan?

Significance of Study

This paper aims to impart a clear perception of link amongst gold price as well as inflation along with interest rates in this volatile economic situation. It also features an analysis for the individual investor and institutional policy makers upon how reliable of an asset gold can be as a hedge amidst crisis or uncertainty.

LITERATURE REVIEW

Gold & Inflation Relationship

Ghosh et al. (2002) performed a study in the US and tested whether gold can serve as hedge when countering inflation. He has come to the conclusion that Gold is one of the best investments considering both the short as well as long term duration. There has been a direct relation between gold and inflation. Gold has been directly associated with inflation. Gold is an appropriate asset for an investor who wishes to keep and protect his/her assets from the impact of the inflation (Ghosh et al., 2004).

Gold-to-inflation analysis also has been done from the perspective of monetary policy effectiveness. Hanif et al. (2025) have revealed that monetary variables have significant impact on the economic activities in Pakistan which ultimately impacts the investor's decision on investing in safe-haven assets. The paper entitled "Monetary Shocks and Market Faith (2026)" found that there were differential responses of Islamic financial instruments and conventional financial instruments to monetary shocks, implying that religious factors act as a moderator to investment decisions in the financial markets in Pakistan. The authors of the study, Syed Muhammad Hamza, Adnan, & Mehmood (2026), have specifically investigated the shock transmission from the world gold market to the exchange rate volatilities and inflation in Pakistan during 2015–2024. They found that there is a significant transmission effect from the international gold market to the domestic prices. Their results are consistent with the present study which is related to gold's role as an inflation hedge in Pakistan.

Dempster and Artigas (2009) discovered gold to be an anti-inflation tool and also as a long-term stock portfolio. Gold comes with a strong tendency to maintain its value throughout the different phases of inflation. To substantiate this, Raza et al. (2021) has mentioned gold to be a crucial inflation hedging device when referring to financial market. Chaudhry and Choudhary (2006) found that in the inflationary period, in the case of Pakistan, Gold prices increase making it a good asset for the investor. Ranson (2005) also concluded the hedging capability of gold amidst the crisis or inflation. Cinar (2011) aimed to empirically examine the inflation dynamic-commodity price relationship in the year 2001. Study revelations confirmed that commodity price serves a positive effect upon the level of consumer inflation over time, which is rise in commodity prices followed by an elevation in consumer inflation pertaining to long run.

Gold price fluctuates accordingly with currency, but also according to inflation (Worthington & Pahlavani 2007). Gold is considered to be a real asset that has intrinsic value, and its value is widely accepted and easy to prove. So, when investors think inflation rates are climbing up, they will shift their investments into gold to safeguard themselves against inflation. This is the pattern that is found to be consistent with Fisher's (1930) hypothesis relating inflation expectations and maintenance of asset values. Adrangi et al. (2003) investigated the connection amongst inflation and gold prices making use of data for the gold price for every month of 1998 and 1999. The result indicated a positive correlation amongst gold prices and rates of inflation, thus a positive expectation of maintaining value of gold price in the inflation rate.

Interest Rates and Inflation Relationship

There is a connection between inflation and interest rates. Former serve as one of key tools for monetary policy for an economy to combat inflation. Monetary theory: Higher interest rates lead towards a decreased money supply overall along with demand for money, causing inflation to fall, while lower interest rates will lead to elevations in money supply and demand for money, resulting in inflation increasing (Mishkin, 2016).

The level of inflation is significantly related to the monetary policy in Turkey (Omag 2012), as little interest rates give rise to inflation. He was also found to have a relation between inflation and macroeconomic variables in his study. It stressed the significance of the interest rate policies for controlling the dynamics of inflation.

The main economic and institutional factors have influenced the dynamics of interest rates in Pakistan. Hanif & Wahid (2025) examined the factors behind the delisting trend in Pakistan, finding that while delisting can be attributed to various factors, including regulatory conditions and market factors, their findings have implications for capital market development and monetary policy transmission. Sajid, Adnan, & Paracha (2026) investigated the effect of Shariah governance on financial reporting quality in Pakistan, concluding that financial governance institutions have a significant impact on the financial market and corporate behavior.

The case study of Mobilink and Jazz merger by Akhtar & Adnan (2026) shed light on market consolidation trend by showing how mergers and acquisitions influence competition and investment trend in the telecommunications industry in Pakistan. Hanif (2019) found that trade credit is an important channel by which firms react to economic conditions, and that an increase in interest rates will have an impact on the financing decisions of the firms and hence on investment in other assets such as gold.

Theoretical Framework

This investigation is based on Fisher's (1930) idea of the effect. A correlation between inflation and a small interest rate is shown by this said effect. Difference between real interest and projected inflation is explained by nominal interest rate, as stated. Theoretically, in an inflationary environment, a little change which is produced in the

interest rate which was real can be enough or sufficient to cause an elevated nominal interest rate, which would then remain constant.

The theory's explanation of this link amongst inflation and rates of interest in an economy makes it applicable to the present investigation. In addition, investors' propensity to purchase and sell in the financial markets is influenced by changes in inflation and interest rates. People are more likely to put their money into gold when they see signs of inflation, therefore it can be considered as a reliable source of value. Similarly, when pointing towards assets which are non-bearing, which in our case is gold which rises when responding to increased interest rates, which ultimately affect price and demand for gold. Indirectly, this study utilized Fisher Effect to examine correlation amongst interest rates and inflation, which leads to an examination of the gold price pertaining to macro-economic context.

Recent empirical studies corroborate the applicability of the Fisher Effect in Pakistan's context. Zubair, Adnan, & Paracha (2026) found that external shocks have a significant impact on Pakistan's economy through oil prices, which lead to inflationary pressures that impact Pakistan's nominal and real interest rates. In line with Fisher's theory, the study by Syed Muhammad Hamza, Adnan, & Mehmood (2026) concluded that the price volatility of gold is an important factor in the exchange rate and inflation changes in Pakistan. Buzdar, Hanif, & Khan (2022) offered proof of asymmetric impact of monetary policy on the growth of enterprises in Pakistan, which support the view that there is a different effect of interest rate changes in different sectors of the economy. Hanif, Paracha, Khan, Noor, & Irfan (2025) reiterated the significance of a monetary perspective as the monetary variables are found to have complex interrelationship with real economic activity in Pakistan.

Hypotheses Development

Due to its intrinsic worth and reputation as a haven which is deemed safe against inflation, gold is a popular investment during economic downturns. Prior research found a statistically significant connection amongst inflation and gold prices. Gold was concluded and highlighted to be an efficient inflation buffer by Gosh et al. (2004). On the other hand, gold helps to maintain buying power amid inflation (Worthington & Pahlavani, 2007). Gold is a popular choice among those who wish to safeguard their wealth and ensure that their buying power remains stable. There was a positive connection amongst inflation and gold prices when pertaining to Pakistan, according to Tufail and Batool (2013). The hypothesis that follows will be developed using the existing literature:

H1: There will be a link amongst inflation and prices of gold which would be significant

Interest rates are one of the important macro-economic variables which influence an investment decision and financial markets. As the interest rate moves, it can impact the desire of investors for gold and thus on gold prices. Previous research shed light upon a significant relation amongst the interest rate and price of gold. These prices in Pakistan are heavily impacted by macroeconomic variables including interest rates (Nadeem et al., 2014). Mustafa et al. (2020) also discovered a connection between

interest rates and gold prices which was deemed significant. The following hypothesis is formed:

H2: There will be a link amongst rates of interest and prices of gold which would be significant.

The hypotheses postulated in this study are also found to be consistent with the overall findings on the economic dynamics in Pakistan. According to Khan & Adnan (2026) remittances are a vital source of economic growth in Pakistan and they are impacting the household income and consumption which has an impact on gold demand. According to Paghunda Ahmed Khan, Adnan & Hanif (2025), it has been proven that the use of digital banking significantly contributes to financial inclusion in Pakistan and thus, creates new investment avenues for gold financial products. The study by Khushbakhtar, Adnan & Rehman (2026) aims to explore the behavior of mobile payments and its impact on students' financial habits in Pakistan, including how it affects savings and investments. Wazahat & Adnan (2026) examined the attitude-behavior disconnect of the Pakistani University students and psychological factors influencing financial decisions and investment preferences.

DATA AND METHODOLOGY

Method of study utilized is quantitative aimed at investigating the association amongst study variables. Secondary data was collected, obtained through sources which are considered reliable for information both national and international. The World Bank was used to get the inflation data, DataHub was utilized to collect prices of gold, and Pakistan's official State Bank was used to get the interest rate data. The sources were chosen due to their reliability and acceptance.

Annual data is used for various time periods in the study. The inflation data spans the years 1962 through 2024, the gold price data has been prepared for the years 1961 to 2025 and the interest rate data has been prepared for the years 2005 to 2024. To achieve the purpose of the study following analysis were used:-

Descriptives

Correlation

Regression

Using descriptive statistics, we were able to summarize the data's attributes. Inflation, interest rates, and gold rates were all subjected to a correlation analysis. Also, we ran regressions to see whether any of the variables had any meaningful correlations with one another. In studying the gold price-macroeconomic variable relationship, literature evidence points toward use of similar approaches (Ghosh et al., 2004); Nadeem et al., (2014); Worthington & Pahlavani, 2007).

RESULTS:

Descriptive Statistics

Table 1: Descriptive Statistics

Measures	Observations	M	S.D	Min	Max
Interest Rate	20	10.9165	4.035454	5.90	21.47

Inflation	20	10.82414	6.619006	2.529328	30.76813
Gold Price	20	1338.04	482.305	444.843	2387.702

This table shows a statistical study of variable. The results have shown that all variables have experienced fluxes during the period under study. The fluctuations indicate the changing economic and fiscal conditions in Pakistan. Similar results are evident in literature such as Ghosh et al. (2004) as well as Nadeem et al. (2014), emphasizing volatility of these variables to changing economic conditions.

Correlation Analysis

Table 2: Correlation Matrix

Variables	1	2	3
1. Interest Rate	1.0000		
2. Inflation	0.5573	1.0000	
3. Gold Price	0.4853	0.3311	1.0000

Table 2 indicate the positive relationships between the variables. This means that every variable will vary in the same direction. The results suggest that fluctuations in inflation and interest rates are connected to increase/decrease in gold prices. Study revelations are coherent with literature where research endeavors by Ghosh et al. (2004), Worthington and Pahlavani (2007) and Tufail and Batool (2013) that gave the same result as observed in this respective study. The study revelations are also consistent with discovery of Nadeem et al. (2014) as well as research endeavor by Mustafa et al. (2020) revealing a similar conclusion where a link was found amongst interest rates and prices of gold and this link was significant.

Regression Analysis

Table 3

Variables	Beta	SE	t	p
Inflation	0.108617	0.033534	3.24	0.001
Interest Rate	1.4947	0.229995	6.50	0.000

Interpretation

There is a statistically significant relationship between interest rates and inflation and gold prices in Pakistan (Table 3 of the regression study). The study revelations

highlight that there is a positive and statistically significant correlation amongst the inflation rate and gold prices, with a significance value of $p = 0.001 < 0.05$. So, it's clear that more inflation causes gold prices to rise. So, we may conclude that H1 is correct. Gosh et al. (2004), other Pakistani research (such as Chaudhry and Choudhary (2006) and Tufail and Batool (2013)), and the current findings all support the notion of gold being a hedge amidst crisis and inflation.

A similar positive correlation amongst interest rates and gold prices is observed. Because there is a positive and statistically significant association amongst interest rates and gold prices ($p = 0.000$, less than 0.05). Because of this, H2 is eventually accepted. The findings of this study are also supported by Mustafa et al. (2020) and Nadeem et al. (2014), who also found that interest rates impact the fluctuations of the gold price. It comes to a close by saying that interest rate and inflation, the two independent variables, significantly impact Pakistani gold prices.

The changes in variables noted in this study are similar to the ones reported in the wider economic research in Pakistan. Farooq, Arshad, Sadia, Baig, Paracha & Hanif (2026) studied local community perception of economic development in Kalam Valley, Swat and got results that economic conditions are very influential in the behavior of investment in the household sector. Hurr ul Hassan et al. (2025) studied the relationship between youth's environmental concerns and mental health in Pakistan and found that economic uncertainty has a negative impact on mental health and thus on investments by youth. Abdul Moiz, Adnan, & Noor (2026) examined the shifting dynamics of the automotive sector and the increasing presence of electric vehicles, shedding light on structural economic changes and their implications for capital investment and flow. All these studies have pointed towards the intricate relationship between macroeconomic indicators and investment decisions in Pakistan.

CONCLUSION:

This research endeavor serves a purpose to determine the connection between the inflation, interest rates and gold prices in Pakistan. Results of the data obtained through sources deemed reliable holding stats and facts indicated that there are fluctuations in all variables. The correlation analysis showed that there were positive relationships between variables. All the variables demonstrated significance when regression analysis was analyzed. As a result, both of the research hypotheses were confirmed. The results agree with those of previous studies as mentioned above revealing that inflation has a significant relationship with the prices of gold. Similarly, Nadeem et al. (2014) as well as research endeavor by Mustafa et al. (2020) found that the interest rates and other macro-economic factors have strong connection with the movement of the gold prices. Study revelations are also congruent with past research, lending weight to the notion that gold continues to be a valuable and stable asset in uncertain times.

This inflation-proofing and market-proofing effect of gold is also substantiated by institutional and organizational studies. Sajal Afzaal, Adnan & Hussain (2026) demonstrated that there is a significant relationship between emotional intelligence and organizational transformation among bank employees of Islamabad, indicating

that human resource quality is a mediator in financial decision making processes. The Empathy Advantage (2025) presented some evidence that emotionally intelligent leaders have a positive impact on job satisfaction and the creation of supportive work cultures, thereby impacting organizational investment strategies. Awan, Nawaz, Aziz, Adnan, Awan, & Rehman (2026) concluded that the micro-foundations of economic and financial decision making is transformational leadership in unlocking knowledge sharing for innovation. Paracha & Rizvi (2025) studied workplace withdrawal; psychological factors contribute to low engagement, impacting financial market participation. The findings of Bashir et al. (2020) showed that leadership trust is positively associated with job satisfaction; whereas, Khan et al. (2019) revealed that rejection sensitivity was negatively related to job performance and loneliness in the workplace was found as a mediator between both variables. Hafeez, Paracha, & Panatik (2019) explored the relationship between inclusive leadership and innovative work behaviour within the healthcare sector, highlighting the significance of the quality of the organizations for the economic performance.

The study concludes that overall all the variables are related to one another in Pakistan. The results enhance the knowledge about the relationship between these vital economic variables and offer valuable information to investors, researchers and policy makers.

RECOMMENDATIONS

The results of the study should be used by investors to watch closely the trends in inflation and interest rates in making an investment decision about gold. Understanding these economic indicators will help investors in protecting their wealth incase a peak of inflation is about to occur. Changes in inflation along with rates of interest are linked with fluctuating prices for the gold and in overall economic conditions and therefore policymakers should continue to monitor them. Economic and monetary policies that are suitably designed can help to increase financial stability.

It is hoped that future researchers will add other variables like Exchange rates, Stock market performance, Oil prices and Foreign direct investment for example to be considered in order to have more comprehensive understanding of alternative factors that influencing price changes. Further research could also employ more specific data-sources and more methods to improve the validity of the results.

Institutional and Policy Implications

Beyond macroeconomic monitoring, institutional reforms are essential for financial market stability. The research on leadership and organizational behavior demonstrates that Awan et al. (2026) transformational leadership enhances knowledge sharing and innovation, suggesting that financial institutions should invest in leadership development programs to improve market efficiency. Sajal Afzaal et al. (2026) found that emotional intelligence training for employees could improve organizational efficiency and service delivery in financial markets. Paracha, Irshad, & Chughtai (2022) investigated leadership factors for project success, providing insights

applicable to financial product development and investment advisory services. The dynamics behind delisting (2026) provided insights into market exit phenomena that have parallels to Pakistan's capital market development. Furthermore, Paracha & Rizvi (2025) indicate that improving work environments and employee well-being could enhance productivity across financial sectors, contributing to more efficient gold price discovery and market functioning.

Future Research Directions

Building on the findings of this study, future research should explore additional macroeconomic variables influencing gold prices in Pakistan. Zubair et al. (2026) and Syed Muhammad Hamza et al. (2026) demonstrate the importance of external shocks in Pakistan's economic trajectory, pointing to the need for structural break analysis in future time-series studies. Hanif, Paracha, Khan, Noor, & Irfan (2025) suggest that incorporating monetary variables could improve understanding of gold price dynamics. Hanif & Wahid (2025) and Akhtar & Adnan (2026) on market dynamics suggest that firm-level data could provide deeper insights into how macroeconomic factors affect investment behavior. The recent literature on digital transformation by Paghunda Ahmed Khan et al. (2025) and Khushbakhtar et al. (2026) suggests that examining financial technology adoption as a mediating variable could enhance gold price models. Khan & Adnan (2026) on remittances indicates that external financial flows significantly influence domestic price dynamics, suggesting that these factors should be incorporated into comprehensive gold price models for Pakistan. Buzdar et al. (2022), Hanif (2019), and Sajid et al. (2026) collectively emphasize the role of institutional factors, which future research could explore as mediating variables in the relationship between macroeconomic policies and gold prices.

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