



# THE EFFECT OF INFLATION AND INTEREST RATE ON ECONOMIC GROWTH IN SULTANATE OF OMAN

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**Abstract:** This study examines the intricate relationship between inflation, interest rates, and economic growth in the context to Oman. Utilizing the data of the previous years, various statistical techniques are employed to analyze the impact of inflation and interest rates on the country's economic growth to investigate their influence on Oman's economic performance. This research contributes to the understanding of the Omani economy's dynamics and provides valuable insights for policymakers, stakeholders, and investors. The implications underscore the importance of maintaining a balanced monetary policy framework that considers inflation and interest rates in fostering sustainable economic growth in Oman. Moreover, the study uncovers the significance of interest rate policies in influencing investment patterns and overall economic performance. The impact of interest rates on economic growth is observed to be multifaceted, where optimal rate levels stimulate investment while excessively high rates can impede economic expansion.

**Keyword:** Inflation, Interest Rate, Consumption, Monetary Policy, and Economic Growth.

## 1. INTRODUCTION

The Omani economy has seen considerable changes recently, with an increased focus on sustainable development and economic diversification. Inflation and the interest rate are two important factors impacting a nation's overall economic growth. If inflation is not controlled, it may result in lower buying power, increased living expenses, and a fall in total economic activity. Contrarily, interest rates impact borrowing and lending costs, affecting consumption and expenditure trends and eventually impacting economic development. Thus, the study focuses on investigating how inflation and interest rates impact Oman's economic development. Several circumstances have caused the necessity for this research. First, Oman's economy is mostly based on oil, and with the current drop in the price of petroleum, it is more crucial than ever to diversify it and concentrate on industries other than oil. As a result, knowing how interest and inflation rates affect economic development can help policymakers create efficient economic plans for achieving long-term growth. Second, the Central Bank of Oman has established several monetary policies to control interest rates and inflation. To ensure that these policies are accomplishing their intended goals, it is necessary to assess their efficacy. The link between Oman's inflation, rates of interest, and economic expansion has also received little attention. This study can therefore close the information gap and add to the body of existing material. In general, this study is crucial because it can shed light on the variables that affect Oman's economic growth and guide decision-making by policymakers.

### 1.1 Statement of the Problem

Important macroeconomic variables that influence economic growth include inflation and interest rates. These factors' effect on Oman's economic growth has yet to be thoroughly researched. Investigating how rising interest and inflation rates affect the growth of the economy in Oman is the study problem. The issue is crucial because interest rates and inflation may significantly affect a nation's economic performance. A rise in living expenses and lower consumer expenditure brought on by high inflation might result in a fall in overall economic growth. Similarly, high-interest rates can deter borrowing and investment, impacting economic development. Understanding how inflation and interest rates affect economic development is essential for policymakers, given Oman's reliance on the oil industry and recent efforts at economic diversification. To guide future research and inform policy decisions, the problem statement thus asks for a study of the connection between Oman's interest rate, inflation, and economic growth.

## 1.2 Aims and Objectives of the Study

- To look at Oman's inflation pattern through time.
- To examine how inflation affects Oman's economic expansion.
- Discover how inflation affects capital formation in Oman.
- To consider how inflation affects people's consumption.
- To propose concrete answers to the nation's inflation problem.

## 1.3 Research Questions

- What is the trend of inflation in Oman?
- How does inflation impact economic growth in Oman?
- How does inflation affect the level of capital formation in Oman?

## 1.4 Scope and Limitation

The impact of interest rates and inflation on Oman's economic development from 2000 to 2021 will be examined in this study. The investigation of inflation and interest rate movements throughout this period, as well as how they affected economic growth, will be part of the research. In addition, the study will look at how inflation affects people's consumption habits and how it relates to capital formation.

However, this study does not include other macroeconomic variables, such as currency rates or governmental policies, which may impact economic development. Additionally, no comparison with other nations or areas will be made in the study. The study will investigate the impact of both interest and inflation rates on Oman's economic development using data from 2000 through 2021. The National Centre for Statistics and Information (NCSI) and the Central Bank of Oman will provide secondary data for the study. Econometric methods, such as statistical analysis, correlation analysis, and regression analysis, will be used to analyze the data. One of the study's weaknesses is the need for more trustworthy and reliable data. Despite coming from official sources, the precision and comprehensiveness of the data utilized in this study may still have certain limits.

The reliance on just two macroeconomic indicators—inflation and interest rates—could make it difficult to account for all the variables that influence economic development. Other macroeconomic variables that may potentially impact economic growth, such as currency rates and governmental regulations, are not considered in this study.

Finally, the lack of comparisons between Oman's performance and that of other nations or areas may restrict the applicability of the findings.

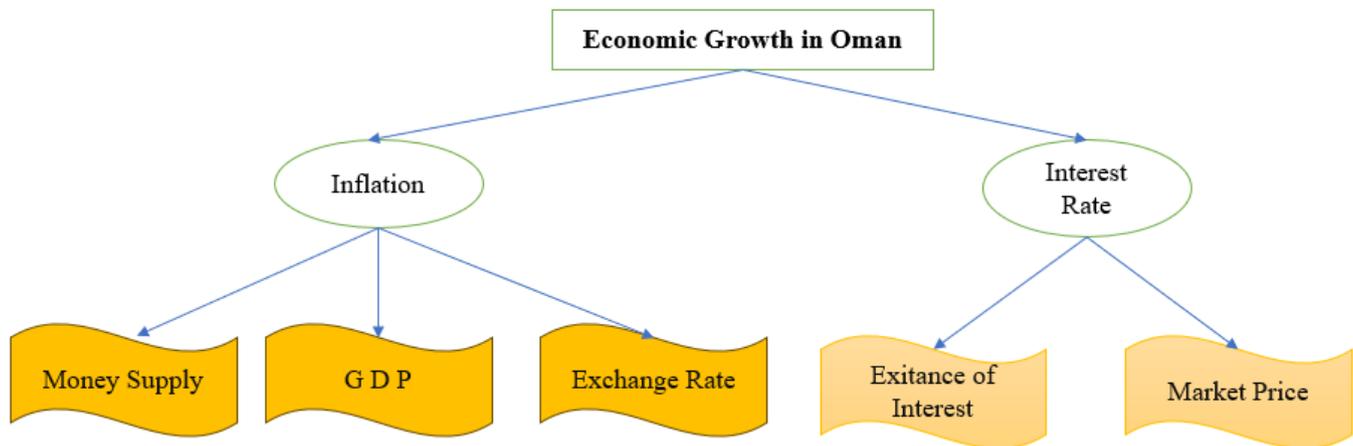
## 1.5 Significance of the Study

This study is important for several reasons about how interest rates and inflation affect Oman's economic growth. First and foremost, the study's findings will aid Oman's policymakers in developing suitable measures to promote economic growth by controlling inflation and interest rates. Second, the study will add knowledge about macroeconomic indicators and how they affect economic growth in emerging nations, especially in the Gulf. Additionally, research will help businesses and investors in Oman by giving them information on the nation's economic situation. With the research they will be better able to allocate resources and make investment decisions. Researchers and academicians fascinated by macroeconomic indicators and their effects on economic growth may also find the study helpful. The research is important since it will shed light on Oman's economic dynamics, help formulate policies, and guide future macroeconomic research.

## 2. LITERATURE REVIEW

**Albalushi and Alharthi (2018)** conducted a study in the Omani environment to examine how interest rates and inflation affect economic growth. The study's findings demonstrated that while interest rates have a positive and large impact on economic growth, inflation has a negative and considerable impact. **Al-Yahyaee (2016)** used the autoregressive distributed lag (ARDL) approach to examine how inflation and interest rates affected economic development in Oman. The study's findings demonstrated that while interest rates have a positive and large impact on economic growth, inflation has a negative and considerable impact. These results align with the neoclassical growth model, which contends that capital accumulation and technological advancement are the main forces behind economic expansion. **Al-Mahrouqi et al. (2018)** used time series data from 1990 to 2015 to research the link between Oman's inflation and economic growth. The study's findings demonstrated that Oman's economic growth is significantly harmed by inflation. The research suggested that the Central Bank of Oman implement an inflation-controlling monetary strategy to promote long-term economic growth. Using the Autoregressive Distributed Lag (ARDL) model, **Al-Nabhani and Al-Yahyai (2019)** conducted a second research to investigate the impact of inflation on economic growth in Oman over the years 1990–2017. The study's findings indicated that Oman's economic growth is significantly hampered by inflation; as a result, authorities should concentrate on preserving price stability. **Al-Harthy and Al-Wahaibi (2019)** used time series data from 1990 to 2018 to examine how Oman's interest rate affected economic development. According to the study's findings, interest rates and economic growth are negatively correlated in Oman. Consequently, monetary policy should be implemented to maintain low interest rates to encourage economic growth.

## 2.1 Conceptual Framework



## 2.2 Research Gap

The study will investigate the link between these variables and offer fresh insights into how they impact Oman's economic growth using empirical data and statistical analysis. By analyzing the impact of inflation and interest rates on economic development in Oman while considering the nation's specific economic features, the suggested study seeks to contribute to the subject.

The potential relationship between Oman's inflation and interest rates is one novel notion the suggested study may investigate. While earlier studies concentrated on the different effects of these factors, there may also be an interaction effect that needs to be investigated. The application of sophisticated statistical techniques to better reflect the intricacy of the link between inflation, interest rates, and economic growth might be another contribution of the suggested study. The proposed study will provide a methodological and contextual addition to the discipline by producing a fresh understanding of how inflation, interest rates, and economic growth interact in the economic environment of Oman. Policymakers in Oman and other nations dealing with comparable economic difficulties may need to consider this.

## 3. RESEARCH METHODOLOGY

### Type of Research

Quantitative research was selected for this investigation on how Oman's economy is affected by inflation and interest rates. The process of gathering and analyzing numerical data using statistical and mathematical methods is known as quantitative research. It uses a systematic research strategy to test hypotheses and discover correlations between variables.

Because it enables a systematic and impartial investigation of the link between inflation, interest rates, and economic development in Oman, quantitative research is recommended in this study. Quantitative research in this study will enable data collection and analysis on the correlation between Oman's inflation, interest rates, and economic growth. Data on important economic indicators like inflation, interest rates, GDP growth rates, and investment levels will be gathered using semi-structured interviews and econometric modeling. Then, statistical tools will be applied to analyze the link between these variables. As a result, we can test hypotheses and identify the causal links between Oman's inflation, interest rates, and economic growth.

## 4. PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA (Time Series Analysis: Trends and Patterns)

### 4.1 Inflation Rate in Oman

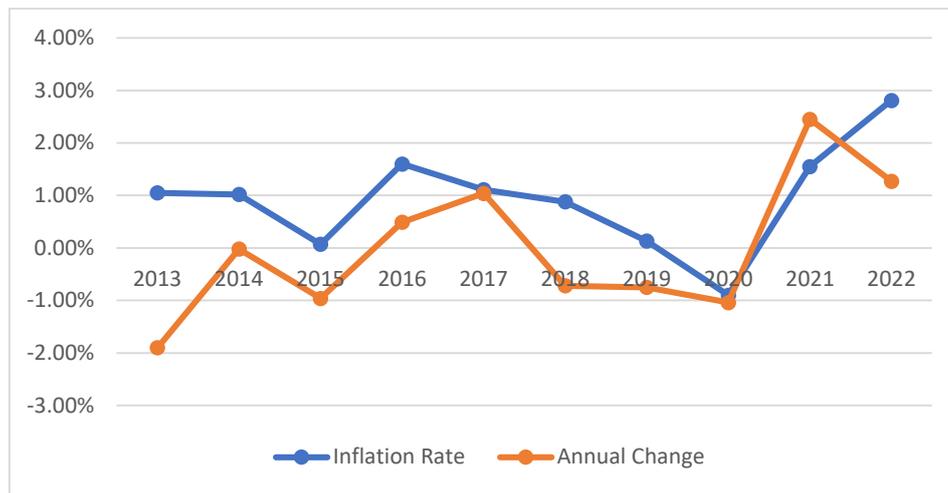
Interesting patterns and trends may be seen by doing a time series analysis of Oman's inflation rate over the previous ten years. With an annual rise of 1.27%, the inflation rate in 2022 was 2.81%, as shown in Graph 1, a significant increase over the previous year. This implies that inflationary pressures are on a significantly increasing track, which may be due to several economic variables.

In 2021, the inflation rate was 1.55%, with a significant yearly variation of 2.45%. This sharp rise in inflation from 2020's negative rate of -0.90% suggests a quick economic recovery, which might be fueled by monetary policy shifts or more consumer demand.

2020 saw a negative rate of inflation of -0.90%, indicating pressures towards deflation and a reduction in the level of prices overall. The yearly change of -1.04% highlights the contractionary economic conditions, with prices showing a significant decline.

When comparing the years before, the steady increases in inflation from 2013 to 2019 point to a typically inflationary climate. Interestingly, 2013 had a notable and considerable price decline, with an inflation rate of 1.05% and a huge negative annual change of -1.90%.

This time series analysis shows that Oman's economy is dynamic, with periods of deflation, inflation, and variations in the yearly change. The data emphasizes how crucial it is to consider both the yearly change and the inflation rate to have a thorough grasp of the nation's economic trends and pressures throughout the given time frame.

**Graph 1: Oman: Inflation rate from 2013 to 2022 (compared to the previous year)**

Source: (O'Neill, 2023)

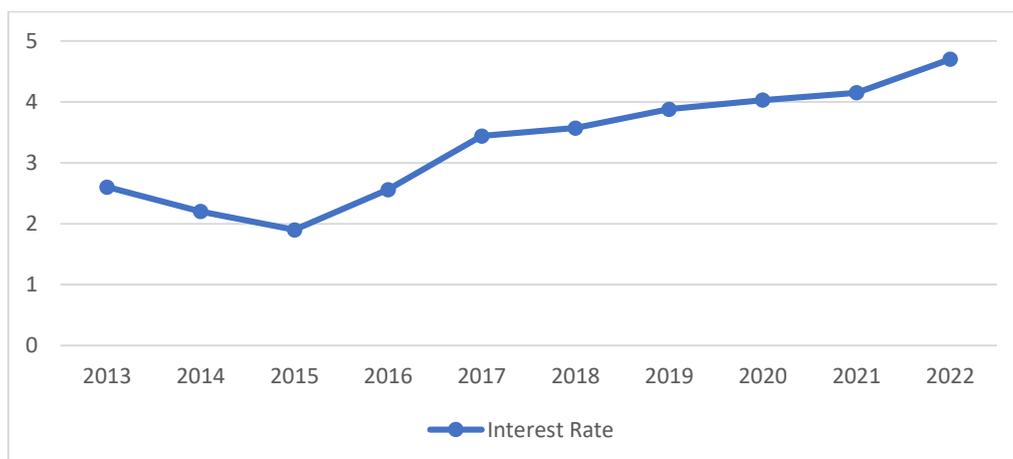
#### 4.2 Interest Rate in Oman

An understandable narrative of Oman's monetary policy developments over the last ten years may be found in the time series analysis of interest rates in the nation. The interest rate was 2.6% beginning in 2013, which represented a rather low cost of borrowing as shown in Graph 2. There were variations in the years that followed, with 2014 showing a minor decline to 2.2%, which could be a sign of attempts to boost economic activity by lowering interest rates.

The interest rate dropped even lower to 1.9% in 2015, signalling a significant change in monetary policy that was probably intended to promote lending and investment. The following years, from 2016 to 2019, show that interest rates have been rising steadily, with a high of 3.88% in 2019. This points to a potential change in monetary policy towards a more conservative one, maybe in reaction to inflationary pressures or changes in the economy.

A little increase to 4.03% in 2020 suggested that the prior increasing trend would continue. This may represent attempts to strike a compromise between worries about inflation and economic stability in the face of global economic uncertainty. The interest rate increased to 4.15% in 2021 as a result of a steady monetary policy management strategy in the face of changing economic circumstances.

The most current data point for 2022 shows a further increase to 4.7%, highlighting a consistent attempt to control interest rates in the face of shifting economic conditions. The general pattern points to an even-handed and adaptable strategy by Omani authorities in guiding the nation's economic course through changes in monetary policy. This time series study contributes to a thorough knowledge of the economic dynamics in Oman by offering insightful information on the country's changing financial landscape.

**Graph 2: Interest Rate in Oman 2013-2022**

Source: (The World Bank, 2023)

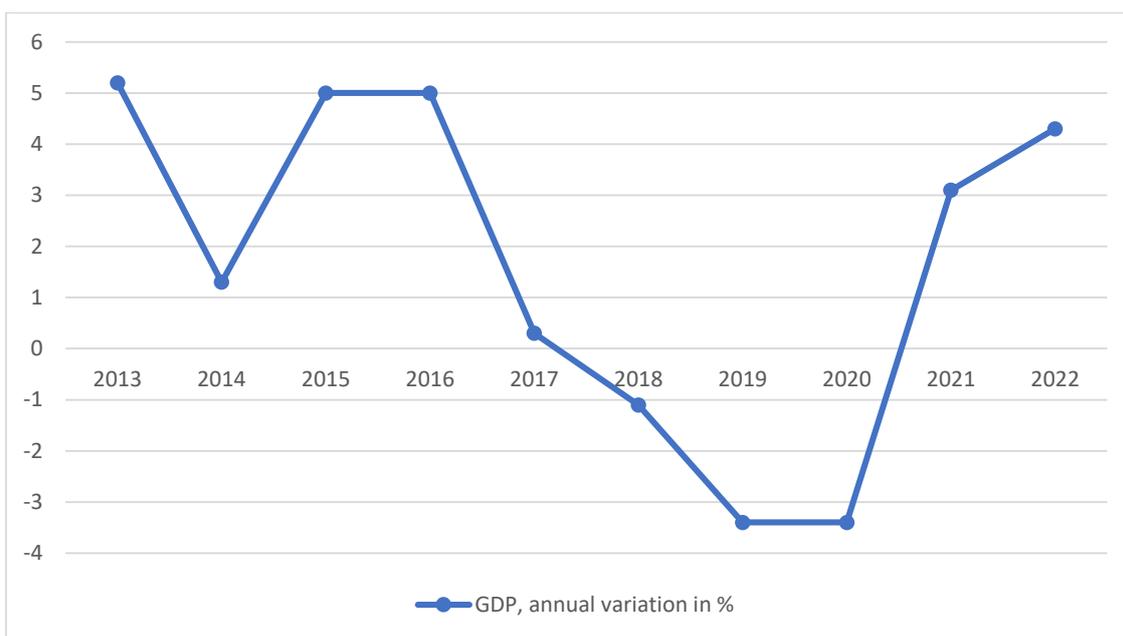
### 4.3 Economic Growth of Oman

A detailed picture of Oman's economic performance during the last ten years may be obtained through the time series analysis of the country's economic growth. The statistics represented in Graph 3 show several notable trends that show both times of strong expansion and difficult recession. Oman's GDP grew by 5.2% in 2013, which is a significant rate of growth and indicates a healthy economy. 2014 and 2015 both continued to expand at respectable rates, finishing at 1.3% and 5%, respectively.

But in 2017, there was a noticeable change as economic growth slowed to 0.3%. This might be due to a number of things, such as shifts in the price of oil globally, which is a big part of Oman's economy. Modest positive growth rates of 1.3% and -1.1% were seen in 2018 and 2019, respectively.

The pandemic's effects on Oman's economy are demonstrated by the sharp decline that the country experienced in 2020—a significant contraction of -3.4%. Reduced demand, trade disruptions, and the effects on the world economy were all major factors. But in 2021, the country showed tenacity, recording a noteworthy comeback with a 3.1% growth rate. With an economic growth rate of 4.3% in 2022, this upward trend persisted, demonstrating coordinated efforts in both economic recovery and post-pandemic adaptation.

**Graph 3: GDP, Annual Variation in %**

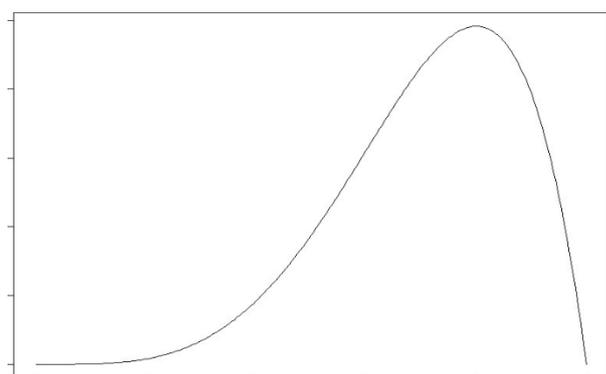


Source: (Focus Economics, 2023)

### 4.4 Descriptive Statistics of Key Variables

The data supplied indicates that the Inflation Rate provides crucial insights into the mechanics of changes in price levels throughout the given period (2013–2022). The median inflation rate of 1.08% highlights the data's central trend, while the mean inflation rate of 1.22% points to a generally steady price environment. The range of 4.60% highlights the variation in inflation rates, which vary from a significant -1.90% decline to a 2.70% gain. Within the Omani economy, this spectrum indicates times of both inflationary tendencies and deflationary pressures.

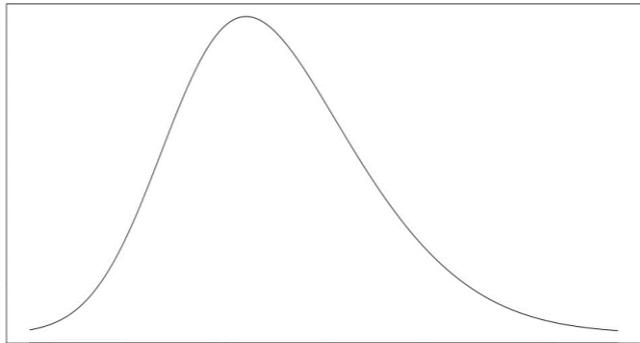
The statistical metrics shed further light on the properties of the data. The degree of inflation rate dispersion is shown by the variance of 2.1362, which shows considerable variability. This is further supported by the standard deviation of 1.4612, which gives an indication of how far out from the mean the average inflation rates are for each individual. A longer left tail in the distribution is implied by the negative skewness of -0.4126, indicating the presence of more severe negative values that are consistent with lower inflation rates. This asymmetry suggests that there is a little higher tendency for below-average inflation in the data.



Statistic	Result
Mean	1.22
Median	1.08
Range	4.60
Variance	2.1362
Standard Deviation	1.4612
Skewness	-0.4126

Regarding interest rates, the average cost of borrowing or lending in Oman over the given time is represented by the mean interest rate of 3.38%. Relative symmetry is indicated by the median interest rate of 3.51%, which sheds light on the distribution's centre. The interest rate variability, which is a reflection of changes in monetary policy and economic situations, is exemplified by the range of 2.50% from 1.9% to 4.7%.

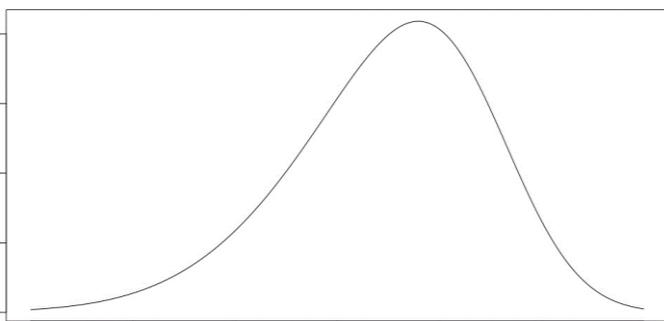
In terms of statistics, the 1.2851 variance and 1.1333 standard deviation point to a considerable degree of interest rate unpredictability. A longer right tail is implied by the distribution's minor positive skewness (skewness of 0.1225), which suggests that there are more extreme positive values. This distribution suggests that interest rates typically tend to be somewhat higher than average.



Statistic	Result
Mean	3.38
Median	3.51
Range	2.50
Variance	1.2851
Standard Deviation	1.1333
Skewness	0.1225

In terms of economic growth, Oman's GDP (gross domestic product) changes on average by 1.53% annually. This is further supported by the 1.3% median economic growth, which illustrates the centre trend. The wide range of 8.7%—from a contraction of -3.4% to a gain of 5.3%—highlights the variety of economic circumstances that prevailed throughout that time.

The statistical values of 3.2114 and 2.6866 indicate a significant degree of fluctuation in economic growth. A longer left tail is indicated by the distribution's minor negative skewness (skewness of -0.1754), which is consistent with the contractions that have been observed in 2019 and 2020. This implies that there may be a minor trend in the data towards more severe negative values, which might be impacted by worldwide occurrences like the COVID-19 pandemic.



Statistic	Result
Mean	1.53
Median	1.3
Range	8.7
Variance	7.2114
Standard Deviation	2.6866
Skewness	-0.1754

#### 4.5 Correlation Analysis: Inflation, Interest Rates, and Economic Growth

##### Correlation between Inflation Rate and Interest Rate

- Coefficient of Pearson Correlation: 0.268. The positive correlation coefficient shows a modest positive linear link between the interest rate and the inflation rate. This suggests that interest rates often rise with inflation and vice versa.

##### Correlation between Inflation Rate and Economic Growth

- Pearson Correlation Coefficient: -0.090. The negative correlation coefficient indicates a weak negative linear association between the inflation rate and economic growth. This implies that economic growth tends to decrease somewhat as inflation rises and vice versa.

##### Correlation between Interest Rate and Economic Growth

- Pearson correlation coefficient: -0.118. The negative correlation coefficient shows a modest negative linear association between the interest rate and economic growth. This suggests that economic growth generally declines as interest rates rise.

##### Observations

- The fact that the interest rate and inflation rate have a positive connection point to a widespread occurrence in many countries, wherein central banks may increase interest rates in reaction to rising inflation to restrain unwarranted price increases.

- Given the weak negative association between the inflation rate and economic growth, greater inflation and somewhat slower economic development may be related to rising costs and the declining buying power of consumers.
- Given the impact of greater borrowing costs on consumers and companies, the modest negative association between interest rates and economic growth suggests that higher interest rates may be somewhat connected with slower economic development.

\*It is crucial to remember that correlation does not indicate causation and that associations seen may result from other factors not considered in this research.

## 5. FINDINGS

- Trend of Inflation in Oman
- Impact of Inflation on Economic Growth
- Effects of Inflation and Interest on Capital Formation in Oman
- Influence of Inflation and Interest on Consumption
- Proposing Solutions to Oman's Inflation Problem
- Diversification of Revenue Sources
- Strengthening Monetary Policy Framework
- Enhancing Fiscal Policy Measures
- Investment in Productivity and Innovation
- Strengthening Price Control Mechanisms

## 6. RECOMMENDATIONS

- Establishing an Inflation Forecasting Unit
- Implementing Targeted Subsidy Programs
- Promoting Financial Literacy
- Collaborative Regional Initiatives
- Continuous Monitoring and Evaluation

### 6.1 CONCLUSION

The study successfully negotiated Oman's complex economic environment and uncovered subtle correlations between important factors. Using rigorous econometric modeling and time series data analysis from 2013 to 2022, the study found patterns that defied expectations and provided new insights into Oman's economic dynamics. Future research projects can expand on these insights thanks to the obstacles and constraints that have been revealed. They also highlight the importance of exercising caution when interpreting the data. Data limitations and the complex structure of macroeconomic variables presented difficulties, but they also offered chances to improve methods and broaden our comprehension of the complexities of Oman's economy. The research serves as a stepping stone for Oman's economic journey, offering thorough knowledge that may support economic resilience, guide future policies, and add to the continuing discussion on the dynamics of rising economies in a global setting.

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