# Friedrich-Alexander-Universität Erlangen-Nürnberg



# Analysis Report: Correlations of Gold Price and Crude Oil Price Among Major Economies (1983-2020)

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Subject: Methods of Advanced Data Engineering

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# **Agenda**



- 1. Introduction
- 2. Questions
- 3. Data sources
- 4. Visualization
- 5. Analysis
- 6. Summary

Parth Ghinaiya

#### 1.Introduction



- This project focuses on analyzing the correlations between gold prices and crude oil prices across major economies from 1983 to 2020.
- Understanding the relationship between gold and crude oil prices can provide valuable insights for investors and market analysts. By examining the correlation, we can identify any patterns or trends that may exist and make informed decisions based on this analysis.
- Let's dive into the data and explore the correlation between the rates of gold price and crude oil price for each year.

### 2.Question



- How crude-oil effects on price of gold?
- How crude-oil and gold prices are correlated in major countries' economies?

#### 3.Data Sources



#### Datasource 1: Crude Oil Price

Description: Monthly crude oil price from 1983 to present

Source: <u>Kaggle</u>

Dataset: <a href="https://www.kaggle.com/datasets/sc231997/crude-oil-price">https://www.kaggle.com/datasets/sc231997/crude-oil-price</a>

#### Datasource 2: Gold Prices Data Set

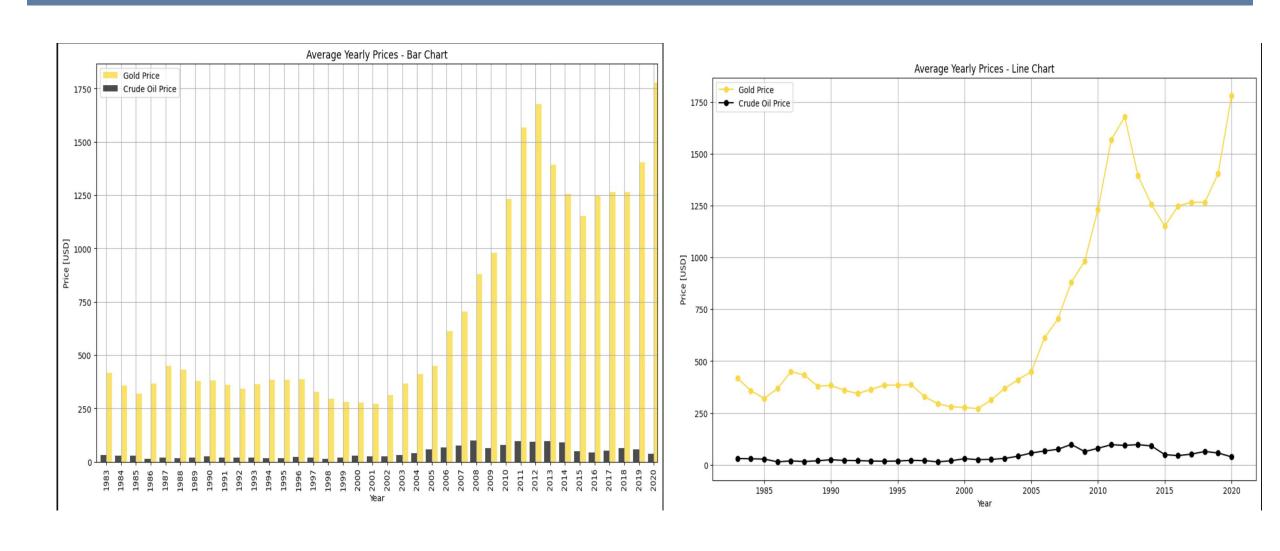
 Description: Monthly gold prices of 18 different countries starting from January 1979.

Source: <u>Kaggle</u>

Dataset: <a href="https://www.kaggle.com/datasets/odins0n/monthly-gold-prices">https://www.kaggle.com/datasets/odins0n/monthly-gold-prices</a>

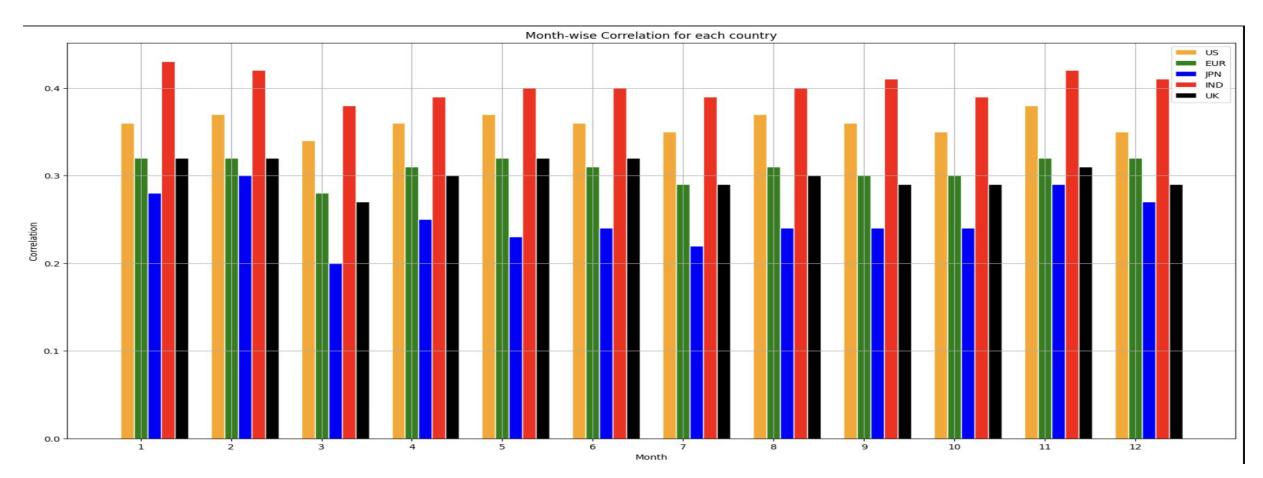
### 4. Visualization





# 5. Analysis

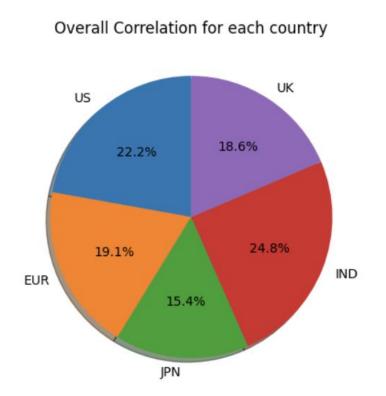




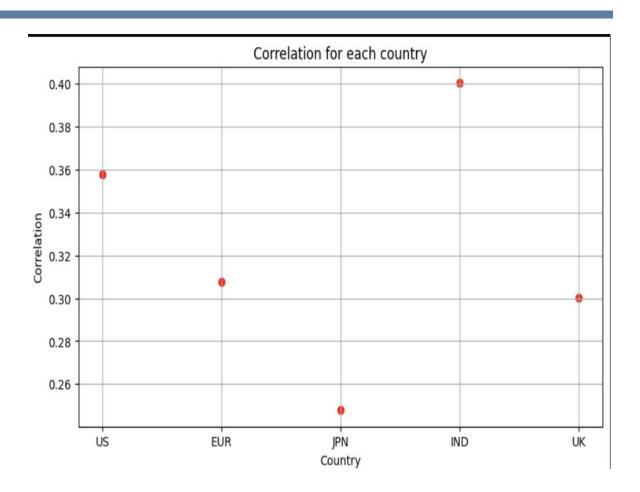
Month-wise correlation comparison for each country

## 5. Analysis









Overall correlation comparison for each country

### 6. Summary



- Based on the analysis performed, we can conclude that there is a moderate positive correlation (0.32) overall, and the monthly correlations between crude oil and gold prices hover consistently around 0.20 to 0.43. This suggests that there is some tendency for both prices to move in the same direction, although not consistently. It is important to note that the correlation is not very strong, but it is not negligible either.
- This data forms a foundation for deeper analysis, potentially involving additional economic indicators, events, or macroeconomic factors to paint a more comprehensive picture of the global economic landscape during this period.

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# Thank You