

Do commodity prices grow faster than global inflation?

IT Project Presentation

Ege Onur Gulec, Dogan Parlak, Milena Milosavljevic

[19/12/2022]



Outline

1 Introduction

2 Data and Methodology

3 Results and Graphs

Introduction

Currently, we are living in an era, where inflation became a major problem for global and local economies. In our paper, we have investigated the relationship between global inflation and commodity prices and checked whether commodity prices grow faster than global inflation.

Outline

1 Introduction

2 Data and Methodology

3 Results and Graphs

Data and Methodology

- ① We collected prices for the following commodities in order to approximate price changes in important categories : barley, beef, cocoa, orange, sugar (food prices), natural gas and oil (energy prices) and gold (metal prices).
- ② We used data from World Bank. Since G20 countries, which constitutes more than 80 percent of World GDP, we decided to use G20 inflation rate to approximate global inflation.
- ③ We used data from OECD in order to calculate global inflation rate. All our data is from 2018-05 until 2021-08 in monthly time interval.

Data and Methodology

- ① We transformed our data by using percentage change.
- ② Since commodity prices are in nominal values, observing percentage changes will allow us to compare it to global inflation.
- ③ Afterwards, we plotted all commodities against inflation and compared with each other in order to see possible relationship between them.

Outline

1 Introduction

2 Data and Methodology

3 Results and Graphs

Nominal Price Graphs

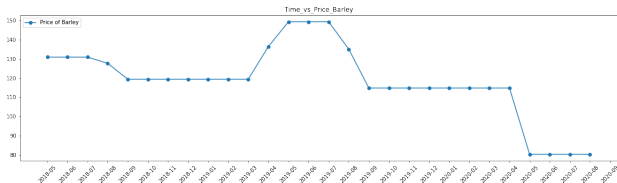


Figure: Price of barley in nominal values

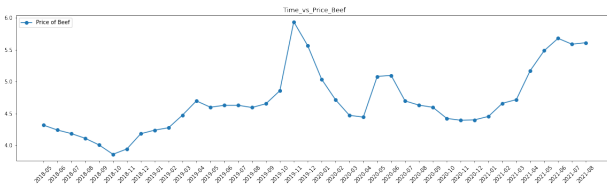


Figure: Price of beef in nominal values

Nominal Price Graphs



Figure: Price of cocoa in nominal values

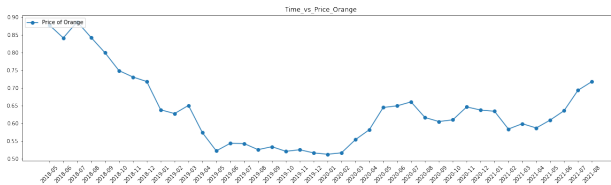


Figure: Price of orange in nominal values

Nominal Price Graphs

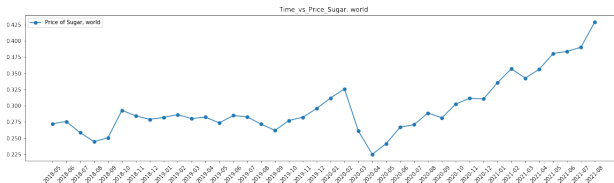


Figure: Price of sugar in nominal values

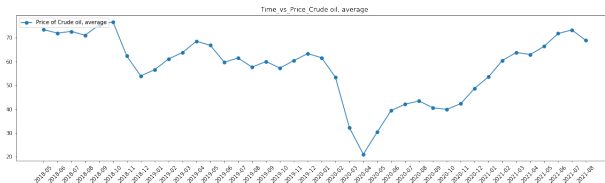


Figure: Price of crude oil in nominal values

Nominal Price Graphs

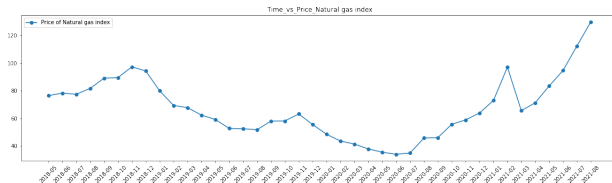


Figure: Price of natural gas in nominal values

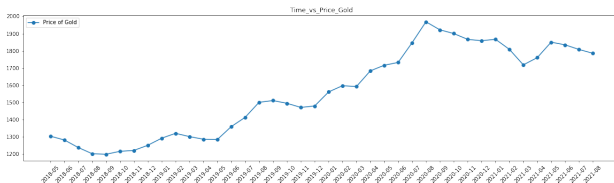


Figure: Price of gold in nominal values

Figure for G20 inflation with respect to time

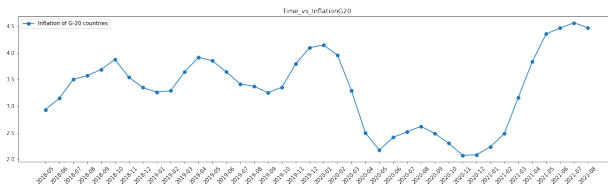


Figure: G20 inflation with respect to time

Percentage Change Graphs

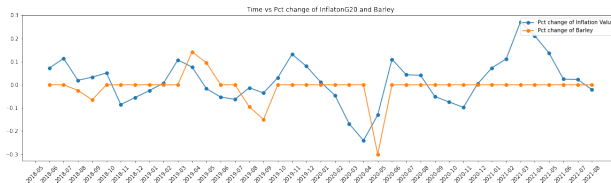


Figure: Percentage change of barley in comparison to G20 inflation

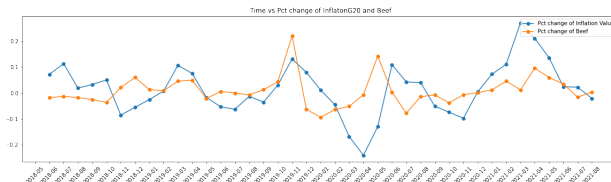


Figure: Percentage change of beef in comparison to G20 inflation

Percentage Change Graphs

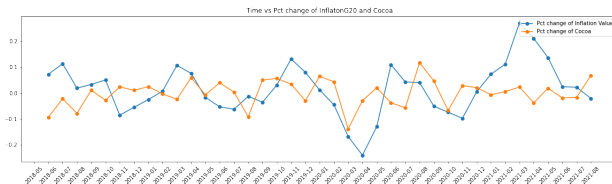


Figure: Percentage change of cocoa in comparison to G20 inflation

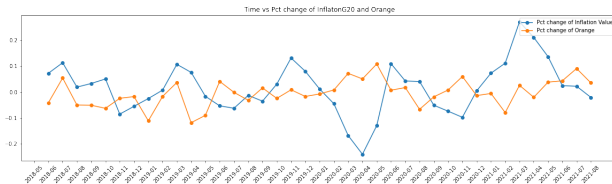


Figure: Percentage change of orange in comparison to G20 inflation

Percentage Change Graphs

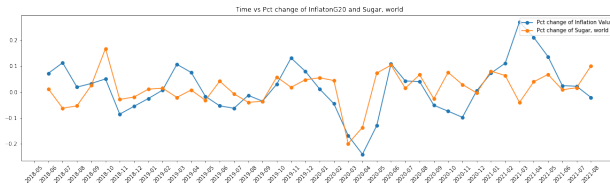


Figure: Percentage change of sugar in comparison to G20 inflation

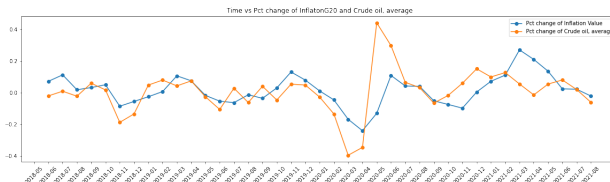


Figure: Percentage change of crude oil in comparison to G20 inflation

Percentage Change Graphs

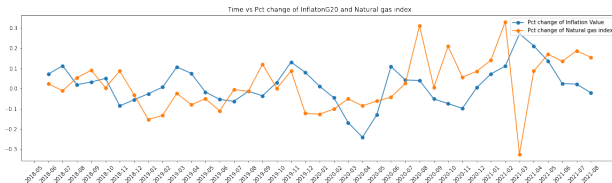


Figure: Percentage change of natural gas in comparison to G20 inflation

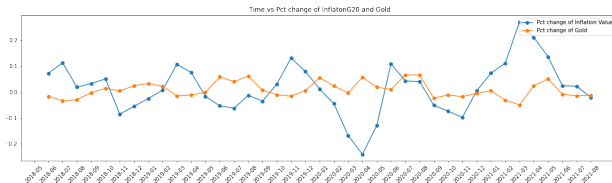


Figure: Percentage change of gold in comparison to G20 inflation

Percentage Change of All Commodities vs Inflation

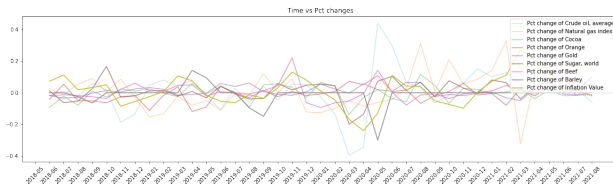


Figure: Percentage change of all commodities in comparison to G20 inflation

Result

- ① From the previous graphs we can see that not all commodity prices increase faster than inflation rate. Clearly there is a strong positive correlation between most of the commodity prices and inflation.
- ② However, from figure percentage change of all commodities, we can see that not all commodity prices increase faster than inflation.
- ③ To conclude, our analysis display that general trend of inflation and commodity prices are positively correlated. However, there is no clear evidence which supports the statement commodity prices grow faster than global inflation.

- ① At some time intervals, commodities dominate the rate of increase in inflation value and vice versa.
- ② In other words, since we have not observed any consistent pattern, the question "Do commodity prices grow faster than global inflation?" can not be answered directly and depends on the small monthly intervals.