Chapter 3
An Analysis on the Determinants of Global Inflation

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ABSTRACT

The volatilities observed in different markets have an impact on global inflation. The persistent upward trend in inflation forms the basis of economic challenges experienced in all countries.Therefore, especially considering recent developments and events, inflation stands out as one of the most researched topics. In this contextthis, this study analyzes the relationship between global inflation, global food price, Brent oil price, global energy prices, the global supply chain, and global geopolitical risks variables using monthly data from 2004:08 to 2023:10. In this analysis, the Dynamic Wavelet Correlation Analysis For Multivariate (WLMC) approach is employed to examine the dynamic correlation relationship between variables across time and frequency dimensions. Considering the findings from the study, it can be stated that strong correlation relationships among variables have been found after the year 2021 in all analyses. This suggests a stronger economic integration across different global markets, especially in recent years.

1. INTRODUCTION

In recent years, wars, pandemics, and terrorist incidents that have had a global impact have led to disruptions in the global supply chain, problems in global supply, fluctuations in crude oil prices, changes in global energy prices, increases in global food prices, geoeconomic problems and rising geopolitical risks. The volatilities or

shocks occurring in different markets spread to other markets, with some countries becoming exporters of the shock while others become importers. This situation leads to the diffusion of the shock across all markets (Taşdöken & Kahyaoğlu, 2023a).

In recent years, one of the most significant factors affecting national economies has been geopolitical issues. The raw material resources a country possesses highlight its foremost geo-economic power in international relations. Considering recent global events affecting global markets, it can be argued that geopolitical influence, which has traditionally held significant importance in international trade, is now evolving toward geo-economic influence.

Since World War II, there have been various periods globally and in many countries where there has been a continuous upward trend in the general price level for different reasons (Taşdöken & Kahyaoğlu, 2023b). Although the reasons for the increasing trend in inflation have varied, central banks have implemented tight monetary and fiscal policies to repress the resulting increase in domestic demand. The policies implemented by central banks to slow down the increase in inflationary tendencies have an impact on savings and investment decisions.

After the Covid-19 pandemic began in 2019, numerous disruptions and issues occurred in global markets. These global disruptions and issues have led to both supply and demand-side changes in many countries. Changes in supply and demand also contribute to a continued upward trend in inflation and introduce uncertainties in inflation. To mitigate the rising trend in inflation and prevent potential recessionary issues, central banks have begun implementing disinflationary policies. In other words, policies aimed at raising interest rates to reduce domestic demand have been initiated. The increase in interest rates affects the economy through two different macroeconomic channels. As interest rates rise, borrowing costs for households and firms increase (Örn, 2017), leading to reduced consumer spending by households (Weller & Chaurushiya, 2004), changes in economic preferences among households (Taşdöken & Kahyaoğlu, 2022), and influencing investment and saving decisions.

Despite disinflationary policies implemented by all countries, there has been a continued upward trend in inflation in recent years. In other words, despite tight monetary policies being implemented in countries, inflation expectations have been slow to respond to these policies. The persistent upward trend in inflation, despite central banks raising interest rates, indicates that domestic demand has not been sufficiently suppressed, and supply and demand shocks continue to be effective in markets due to the current global economic conditions. This situation leads to persistence of inflation in many countries (Canepa, 2024). In other words, the effectiveness of tight monetary policies implemented due to the continuing upward trend in countries' inflation affects markets (Sun & Dimiski, 2024). Therefore, instead of standard monetary policies aimed at reducing the effectiveness of supply and demand shocks on markets, a monetary policy may be required that also considers

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