Extended Abstract
Please do not add your name or affiliation

Paper/Poster Title	Monetary Policy's Asymmetric Impact on Food Inflation in Hungary

Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.

Abstract	***200 words max***

This study delves into the intricate relationship between monetary policy and food inflation in Hungary from January 2007 to March 2023, utilizing a nonlinear autoregressive distributed lag (NARDL) model. This model allows for a more nuanced understanding of the asymmetric dynamics between monetary policy and food inflation, as it captures both the short-run and long-run effects.

The empirical findings reveal a long-run asymmetry, suggesting that tighter monetary policy may lead to a subsequent rise in food prices over an extended period. This is because tighter monetary policy can increase the cost of borrowing, which can in turn lead to higher production costs for food producers. As a result, food producers may pass these higher costs on to consumers in the form of higher food prices.

However, in the short run, the impact of monetary policy on food prices remains insignificant. This is likely because food prices are also influenced by other factors, such as supply and demand shocks.

These findings underscore the importance of considering the asymmetric dynamics between monetary policy and food inflation when formulating economic policies. Policymakers should be aware that tighter monetary policy may have unintended consequences for food prices, especially in the long run.

Keywords	Food prices, Inflation, Monetary policy, Nonlinear ARDL, Asymmetry
JEL Code	Inflation E31, Monetary Policy E52, Prices Q11

Introduction	***100 – 250 words***

Policymakers have questioned the effectiveness of monetary policy in stabilizing food prices in light of recent high and erratic food inflation in industrialized and emerging countries. Monetary limitations may have no effect on food inflation as a result of the Engel law, but they do affect non-food prices and output. This begs the question of how monetary policy effects food shocks for policymakers. Food inflation raises uncertainty and inflation expectations. This makes forecasting and targeting aggregate inflation more difficult. Recent empirical research provides additional evidence that monetary policy influences agricultural product markets and food inflation (e.g., Bhattacharya and Jain, 2020; Iddrisu and Alagidede, 2020, 2021; Samal and Goyari, 2022), Samal et al. 2022). According to the majority of studies, tightening monetary policy raises food and agricultural prices. International procedures have a significant impact on tiny, open economies.

We study whether monetary policy can help to keep food price inflation under control. We used the Nonlinear Autoregressive Distributed Lag (NARDL) model to analyze the influence of monetary policy shocks on food inflation in Hungary from January 2007 to March 2023.

Methodology	100 – 250 words

The empirical variables are based on recent literature (Bhattacharya and Jain, 2020; Iddrisu and Alagidede, 2020, 2021; Samal et al., 2022). For the period January 2007 to March 2023, we used monthly data from the Hungarian Central Statistical Office and the Hungarian National Bank. The major variables are Hungarian food inflation (CPIfood), Hungarian economic production (GDP), the Hungarian forint/euro exchange rate (Euro), and the three-month Hungarian government bond yield (Policy). The non-linear ARDL model (NARDL) is used to explore the relationship between food inflation and monetary policy. It is possible to identify positive and negative impacts on the dependent variable (food inflation) using the NARDL model.

Results	100 – 250 words

Food prices tend to fall in the long run, whereas inflation remains sticky in the near run, with positive coefficients. The decline in GDP in period t-1 lowers food prices, which are expected to adapt due to reduced demand. In contrast, GDP growth raises food prices in the near run. In the case of the HUFEUR exchange rate, a decrease in the exchange rate (strengthening of the forint) raises food prices in both the short and long run. In the long run, an increase in the monetary policy variable raises food prices, suggesting inefficiency of monetary policy because prices do not fall over the monetary policy tightening phase. The proxy variable for monetary policy is positive and significant for long-run positive shocks, implying that tightening monetary policy raises food prices over time, as Samal et al. (2022) predicted. Negative shocks have a substantially lower effect. For long-run negative shocks, food inflation rises with a loss in GDP and falls with a strengthening of the Hungarian forint versus the euro at 90% confidence level.

Asymmetry results show that asymmetry impacts all variables in the long run; for example, the direction of a shock influences how food prices respond to it. This effect is only seen in the short run for economic production. The asymmetry has persisted for a long time. After month 10, the asymmetry maintains in GDP and monetary policy, and in the HUFEUR exchange rate after months 14 and 15.

Discussion and Conclusion	100 – 250 words

The NARDL model was used to estimate the factors that influence food prices in Hungary. According to our findings, monetary policy does not have a major impact on food prices in the short term. However, our study implies that tighter monetary policy may result in a long-term increase in food prices, correlating with previous research (e.g., Battarcharya and Jain, 2020; Iddrisu and Alagidede, 2020, 2021). Monetary policy has a limited impact; but, the strengthening of the Hungarian currency can cut food prices over time. There is a notable disparity, especially in the long-term impacts, making it more difficult for monetary policy to respond promptly and efficiently to Hungary's present record-high food prices. Because food accounts for a significant amount of Hungarian households' disposable income and inflation indices reflect spillover effects, monetary policy cannot be limited to tackling core inflation and inflation alone. However, our findings show that the deployment of fiscal policy tools is also required, as monetary policy may not be enough to keep food prices under control.