The Dynamic Relationship between General, Food and Non-food Price Volatility in Sri Lanka

Gayathiri B.[1], Neruja N.[2]

Department of Economics, Faculty of Arts, University of Jaffna[1, 2]

gayathiribranavan@gmail.com[1], nneruja@univ.jfn.ac.lk [2]

ABSTRACT

Price volatility has become a critical macroeconomic challenge in Sri Lanka, as persistent fluctuations in food and non-food prices and exchange rates continue to intensify inflationary pressures and erode household welfare. This study examines the dynamic relationship between food price volatility and general price volatility in Sri Lanka, while explicitly evaluating Walsh's (2011) three key assumptions, namely that food inflation is sustained, persistent, and has second-round effects. Assessing these assumptions enables the study to determine whether excluding food price from core inflation is appropriate in the Sri Lankan context. The analysis begins with the Pairwise Granger causality test to identify the direction of predictive relationships among the variables. Based on this, the ARDL bounds testing approach and error correction models are employed to capture both long-run and short-run dynamics, using monthly data from January 2014 to May 2025 obtained from the Department of Census and Statistics (DCS) and the Central Bank of Sri Lanka (CBSL). In addition, Impulse Response Functions (IRF) and Variance Decomposition analyses are used to trace the transmission of shocks and to quantify the relative importance of food, non-food, and exchange rate volatility to general price instability over time. The Bai– Perron multiple breakpoint tests identify several structural shifts and confirm a mix of I(0) and I(1) processes, validating the use of the ARDL framework. Empirical results reveal a strong long-run cointegrating relationship between food price volatility and general price volatility, indicating that food price shocks exert a persistent and significant influence on general price volatility. The Impulse Response Function (IRF) and Variance Decomposition analyses further show that food price volatility is the most influential driver of general price fluctuations, accounting for nearly 19% of the variation in the final forecast horizon. Overall, the findings identify food price volatility as the central determinant of price instability in Sri Lanka and provide empirical support for Walsh's (2011) argument that excluding food from core inflation is inappropriate in economies where food prices are structurally persistent. These findings highlight the need for policies aimed at stabilising food markets, safeguarding vulnerable households, and restructuring core inflation measures to capture true inflationary pressures more accurately.

Keywords: ***ARDL Bound Test, Food Price Volatility, General Price Volatility, Impulse Response Function, Variance Decomposition***