



TESTING THE ASYMMETRIC RELATIONSHIP BETWEEN CPI, PPI, AND EXCHANGE RATES: AN APPLICATION OF THE ARDL AND NARDL METHODS

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ABSTRACT

Purpose- Inflation and exchange rates are the leading indicators for an economy. The most important index is Consumer Price Index (CPI) and Producer Price Index (PPI) to calculate the inflation rates. Changing in these indexes is important to understand the source of shocks that effects the inflation. For this reason, understanding the relation between these indexes are crucial to determine whether demand pull factors or cost push factors are important on inflation. Furthermore, there is a strong correlation between exchange rates and price indexes in Turkish economy because Turkish economy has high important dependency. Thus, it is also important to determine the effects of exchange rates on price indexes for Turkey. The purpose of this study is to investigate the asymmetric relations between price indexes and exchange rates over the sample 2003.01-2022.09.

Methodology- The study employs linear and non-linear Autoregressive Distributed Lag Models to find the asymmetric effects of exchange rates on producer price index and consumer index and the effects of producer price index on consumer price index.

Findings- The analysis reveals that exchange rates have a positive and significant effects on CPI and PPI both in the short-run and in the long-run. However, the effects of positive changes in exchange rate has a significant and positive effects on CPI, negative changes has not a significant effects on CPI. Thus, there is an asymmetric effects of changes on exchange rates on CPI. In contrast to these results, changes in exchange rate has a symmetric effects on PPI. Another result obtained from the study is there is a positive relation between CPI and PPI both in the long-run and in the short-run and there is an asymmetric effects of PPI on CPI.

Conclusion- According to the results, in order to control inflation based on CPI, the effects of fluctuations in exchange rates should be reduced both in the short run and long run. In addition to this result, there is a strong effect of PPI on CPI. Thus, policy makers should implement policies to control inflation in Turkish economy.

Keywords: exchange rates, consumer price index, producer price index, ARDL model, NARDL model

JEL Codes: F31, E31, C22

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