

Review of: "A VAR Framework of Exchange Rates, Interest Rates, and Inflation Through COVID-19 in Turkey: Empirical Evidence From Linear Cointegration and Causality Analysis"

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Peer Review for Qeios on "A VAR Framework of Exchange Rates, Interest Rates, and Inflation Through COVID-19 in Turkey: Empirical Evidence From Linear Cointegration and Causality Analysis"

This paper presents a comprehensive and robust econometric analysis of the interconnected relationships among exchange rates, interest rates, and inflation in Turkey, spanning January 2004 to July 2020. By employing a vector autoregressive (VAR) model, the study rigorously explores both short- and long-run relationships across these variables, especially in the context of substantial external shocks such as the COVID-19 pandemic, the 2016 failed coup, and the 2018 U.S. sanctions. The choice of this period is particularly valuable, as it captures a range of economic and geopolitical disturbances, providing insights into how Turkey's monetary environment has responded to both domestic and global events.

The paper's use of Johansen cointegration and Granger causality analysis is appropriate and well-executed, confirming the existence of significant long-run equilibrium relationships. Specifically, the findings indicate a sustained linkage between inflation, the producer price index (PPI), and Turkish interbank overnight rates (TIBOR), highlighting these variables' influence on inflationary trends. However, the study notes no significant causality from dollar exchange rates (DSR) and commercial banks' interest rates (CBIR) to inflation, suggesting that other internal factors are stronger drivers of inflation within the Turkish context. These results align with observed patterns of fiscal dominance and indicate that structural factors may mitigate certain external influences, notably on inflation.

The study's methodological rigor is evident in its thorough use of diagnostic tests and statistical checks. This includes breakpoint tests, which indicate structural breaks around 2016-2019—coinciding with the failed coup and subsequent U.S. embargo, which heavily influenced Turkey's economic stability. These breaks emphasize the value of adopting advanced methodologies like TVP-VAR models in future studies to allow for an evolving dynamic assessment that could better reflect real-time shifts and volatilities in response to policy changes and global crises.

While the VAR approach provides meaningful insights, further exploration using time-varying parameter VAR (TVP-VAR) models could add depth by capturing evolving patterns and non-stationary relationships, which are especially relevant in times of significant economic flux like the COVID-19 pandemic. Such an advanced model could more fully capture the temporal shifts in causality and correlation, particularly between DSR, CBIR, and inflation, where causality relationships

appear limited in the current static framework.

Additionally, the study makes valuable policy recommendations, emphasizing the need for Turkish monetary authorities to consider policy frameworks that address fiscal dominance and stabilize the economy. The findings suggest that managing TIBOR and PPI in alignment with inflation control could support economic resilience and mitigate inflationary pressures. This recommendation aligns with the study's broader conclusion that internal factors, particularly production costs and lending rates, are primary inflation drivers in Turkey, overshadowing direct exchange rate effects.

Suggested Improvements:

Keywords: Including targeted keywords could enhance the paper's discoverability. Suggested keywords are as follows:

- Turkey, exchange rates, inflation, interest rates, VAR model, cointegration, causality, fiscal dominance, structural breaks, Turkish economy, COVID-19 impact.

Advanced Modelling: As mentioned, the introduction of a time-varying parameter VAR (TVP-VAR) model could capture temporal dynamics more effectively, offering further insights into the relationships under study, particularly during volatile periods like the pandemic.

Clarity in Policy Recommendations: The discussion could benefit from greater specificity regarding potential policy actions in response to the identified inflationary drivers, such as strategies for managing the influence of PPI and TIBOR on lending rates to stabilize inflation.

Overall, this paper meets Qeios' publication standards, contributing valuable insights into the complex dynamics between exchange rates, interest rates, and inflation in Turkey. The research offers a foundation for future studies on economic resilience in emerging markets and highlights the critical role of internal monetary factors during periods of fiscal dominance and external pressures.