

## Explaining the comovement of monetary base, liquidity and inflation in the Iranian economy, by comparing the performance of discrete and continuous wavelet analysis

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### Abstract

The present study, using two discrete and continuous wavelet methods and using Quarterly data (1982-2018), has investigated the correlation and coherence between the variables of money supply (monetary base and liquidity) with inflation at different time horizons. What distinguishes this research from similar studies, The use of new methods of wave conversion and related tools Therefore, it is possible to draw relationships between variables dynamically by time-frequency analysis, which is a much more accurate analysis. The results of the present study show that in discrete wavelet analysis, the degree of correlation between variables in different time horizons is different, but in the long run, the wavelet correlation between liquidity and inflation and the wavelet correlation between monetary base and inflation is positive. In continuous wavelet analysis, while identifying the backward and forward variables, it was determined: Liquidity changes in the considered time horizons are not significant. But the monetary base variable has a direct, strong and parallel relationship with inflation in the long run. According to the findings, inflation can not be considered a monetary phenomenon in all time scales, so monetary policy alone will not be enough to control and manage inflation.

**Keywords:** Discrete Wavelet; Continuous Wavelet; correlation; coherence.

**JEL Classification:** E50, E40, C60, C45.

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