

This thesis discusses the significance of ethanol as a biofuel in the United States, investigating its role in affecting retail gasoline price. The empirical analysis replicates previous studies by Du and Hayes, and Knittel and Smith, revealing dynamics between ethanol production and gasoline prices. Contrary to earlier findings, this research demonstrates a positive and statistically significant effect of ethanol on gasoline prices as well as its negative but insignificant effect. A novel approach using wavelet coherence analysis provides deeper insights into the time-frequency relationships between ethanol production, retail gasoline prices, and oil producers' margins, indicating that ethanol's impact is less significant than other factors like natural gas and oil prices.