Abstract

This thesis investigates the impact of ethanol blending mandates and tax credits on fuel prices in the United States. Utilizing three microeconomics models - partial equilibrium models by de Gorter & Just and Drabik et al., with Wu & Langpap general equilibrium model - the research provides a comprehensive analysis of how these biofuel policies influence consumer fuel prices at the pump. The study employs data from 2009 to 2022, sourced from the Energy Information Administration (EIA) and the United States Department of Agriculture (USDA), to simulate various scenarios involving various ethanol blend rates and the Volumetric Ethanol Excise Tax Credit (VEETC). The findings indicate that increasing ethanol blend rates generally lead to lower fuel prices, contrary to initial hypothesis, while the reintroduction of ethanol tax credits like is shown to result in significant consumer savings. The thesis also extends the analysis into future projections, suggesting that higher ethanol blend rates could continue to reduce fuel prices through 2030. These results offer valuable insights for policymakers aiming to balance economic, environmental, and energy security goals through biofuel-related regulations.