

THE IMPACT OF FUEL ETHANOL ON MOTOR GASOLINE MARKET:
MODELING THROUGH A SYSTEM OF STRUCTURAL EQUATIONS

Xiaoyang Wang

Dr. Wyatt Thompson, Thesis Supervisor

ABSTRACT

This paper studies the impact of fuel ethanol on motor gasoline market, especially how the gasoline price will be affected if fuel ethanol takes a big share of motor fuel consumption. A system of structural equations is estimated over historical data to simulate the motor gasoline market. The proportion of fuel and additive use ethanol is calculated in the historical period. Ethanol supply is treated as a substitute to motor gasoline in the future and set to increase exogenously as mandated in scenarios. Projections for period 2008 to 2022 are made. Modeling results suggest a rise in future gasoline consumption and price. Ethanol use will partially offset gasoline price increase, though not much.