

THE IMPACT OF RECENT ENERGY PRICE CHANGES ON THE U.S. COTTON INDUSTRY

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Abstract

Over the last few years, energy prices have fallen sharply, with crude oil and natural gas prices down more than 40 percent and 20 percent, respectively, and ethanol prices down more than 35 percent. Energy prices and other commodity prices have remained relatively volatile since 2007. From lower energy prices, all economic sectors and agricultural sector in particular benefit because of reduced production cost, but oil price volatility has concerned producers and policymakers. This paper addresses several key issues in this debate and evaluate its effect on U.S. cotton industry using a multivariate structural vector auto regression (SVAR) methods over the period April 1994 to March 2016. Therefore, the aim of this paper is to answer to the main question that how do energy price volatility affect the U.S. cotton industry? This paper will analyze the response of U.S. cotton prices to the fluctuations in oil prices and ethanol prices, and examine whether the transmission of the fluctuations in crude oil prices to cotton prices is driven by crude oil supply shocks or demand shocks. Also, we investigate the impact of crude oil price shock on agricultural commodities such as corn. We find that response of cotton price to the unanticipated disruptions in global crude oil production [supply shock] is positive until the third month and then back to equilibrium with a low volatility. Also, unexpected increases in the U.S. industrial production index as a proxy for global real economic activity [demand shock] cause a short-lived increase in cotton prices until the second month and then back to equilibrium with a relative volatility. The response of cotton price to the ethanol price is positive and increasing until the third month and then back to equilibrium. The responses of cotton price to the indirect effect of oil price, namely, currency exchange rate is also very low and back to equilibrium after three months. Also, the monthly changes in cotton prices were significantly affected by unexpected increases in the corn prices. The results will be useful in analysis of the welfare effects of different policies to support cotton farmers.