

Business line 15-12-13

Crude oil fuelling ethanol, grain prices: FAO study

Bloomberg
Dec. 14

Crude oil prices were found to be the main drivers of ethanol and grain prices in a statistical analysis by the United Nations Food & Agriculture Organisation.

Ethanol moves in line with oil in the long-term, while the relationship is non-linear in the short-term, based on a study of prices from January 1980 through to April 2012, FAO economists Natalia Merkusheva and George Rapsomanikis wrote in an online report via the Agricultural Market Information System.

About 40 per cent of US corn is used to make ethanol,

according to the research paper. The economists studied the price relationship for ethanol coupled with crude oil and corn, as well as the connection between prices of corn, wheat and rice with oil.

Although they can drift apart in the short run, market forces will ensure that prices will move together in the long run, Merkusheva and Rapsomanikis wrote. Corn's co-movement with crude oil prices can be attributed to the industrial demand for maize by the ethanol industry, they said.

The research implies a 10 per cent rise in the crude oil price will result in a long-

term climb in the price of ethanol of 4.5 per cent, while a 10 per cent gain for ethanol lifts corn prices by 14 per cent in the long run, based on the study.

Prices of crops not used to make ethanol, such as rice, may move in connection with crude oil due to substitution between crops in food consumption, the economists said. Commodity prices also tend to move together due to non-fundamental factors such as changes in money supply, they wrote.

The US Government's Renewable Fuels Standard mandate set a floor for ethanol use in gasoline, and up to that

volume demand can be unrelated to crude oil and ethanol prices, according to the authors.

SUBSTITUTION

Above the mandate, relative costs will determine ethanol demand, Merkusheva and Rapsomanikis wrote. Substitution possibilities link the price of ethanol, and possibly the price of maize and other grains, with the price of crude oil. In the long run, ethanol prices co-move with crude oil prices.

The US automotive fleet is made up mainly of vehicles that can run on gasoline blends that may contain as

much as 10 per cent ethanol, and above that threshold, the link between oil, ethanol and grain prices breaks, according to the study.

Analysis showed ethanol and corn operate as a system, with ethanol driving corn prices as well as the other way around, the FAO economists wrote.

Ethanol prices respond to changes in the crude oil prices in less than four months, the analysis showed. Corn prices will fully adjust to a change in price of ethanol in about 17 months, while the adjustment of ethanol to corn takes 12 months, according to Merkusheva and Rapsomanikis.

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