

Characteristics of International Grain Price Movements under the High Oil Prices

Shoichi Ito*, Nguyen Hung Cuong***, Takashi Kubo**,
Chandaworn Bounnad***, Tomohiro Kuwabara***

* Department of Agricultural and Resource Economics, Faculty of Agriculture, Kyushu
University, Japan

** Doctorial graduate student at the Department of Agricultural and Resource
Economics, Kyushu University

*** MS graduate student at the Department of Agricultural and Resource Economics,
Kyushu University

Abstract

International grain prices have increased dramatically in recent years, prices of every single grain made all-time high records in early 2008. Sky-high food prices have put millions of people at the risk of starvation and were roots for social and political unrests happening in countries where people spend most of their incomes on food expenses. There were many factors contributing to the price hikes among which soar in crude oil prices was considered to be the key component. This paper attempts to determine the characteristics of international grain price movements as well as the relationships with oil prices.

Daily prices of grains including rice, corn, wheat and soybeans and crude oil were collected from price quotations by Chicago Board of Trade (CBOT) and New York Mercantile Exchange (NYMEX) from July 2, 2007 to August 4, 2008. The Ordinary Least Squared (OLS) regression was employed to define the price relationships of grains and oil. Various slope dummy and trend variables were also used in order to include other factors rather than oil prices only influencing international grain prices. Results of the analysis indicated that oil prices had positive relationships with all four grain prices at one percent significance level. One U.S dollar increased in oil prices led to increases in prices of rice, corn, wheat and soybeans at US\$0.180/cwt, US\$0.051/bu, US\$0.101/bu and US\$0.044/bu, respectively.

Soaring oil prices had direct impacts to the increases in grain prices possibly due to speculation as well as higher input costs for production. A large amount of corn is being used for producing ethanol and those four agricultural commodities are substitutes with one another to a certain extent for food, feed, processing, and bio-fuel. Accordingly, oil price will continuously influence the commodity prices in the future.