

Co-Integration and Error Correction Mechanism of Supply Response of Sugarcane in Pakistan (1980-2012)

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Abstract : This study estimates supply response function of sugarcane in Pakistan from 1980-81 to 2012-13. The study uses co-integration approach and error correction mechanism. Sugarcane production, area and price series were tested for unit root using Augmented Dickey Fuller (ADF). The study found that these series were stationary at their first differenced level. Using the Augmented Engle-Granger test and Cointegrating Regression Durbin-Watson (CRDW) test, the study found that "production and price" and "area and price" were co-integrated suggesting that the two sets of time series had long-run or equilibrium relationship. The results of the error correction models for the two sets of series showed that there was disequilibrium in the short run there may be disequilibrium. The Engle-Granger residual may be thought of as the equilibrium error which can be used to tie the short-run behavior of the dependent variable to its long-run value. The Granger-Causality test results showed that log of price granger caused both the long of production and log of area whereas, the log of production and log of area Granger caused each other.

Keywords : co-integration, error correction mechanism, Granger-causality, sugarcane, supply response

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