

Cyclical Effect of Lagged Price on Red Onion Production in Sri Lanka

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In Sri Lanka, onion is one of the high value minor food crops. Each family spends nearly 1.8 % of their monthly income on onions. Up to the recent past cultivation of red onions was confined to the Jaffna district.

Because of the cyclical effect of lagged price on onion production, farmers are affected drastically and face difficulties in making their production decisions. It is therefore the study aim to identify the cyclical effects of lagged price on onion production in Sri Lanka.

This assessment is predominantly based on secondary data. Production (MT) and wholesale prices (Rs/Kg) were collected from the year 1980 – 2001 from Statistical Abstract and Annual Reports of the Central Bank of Sri Lanka. The Koyck lag model was developed by using the ordinary least square method. The koyck lag model is originally an infinite distributed lag model.

This model contains stochastic explanatory variable (lagged dependent variable) and this model explicitly includes serial correlation. So ordinary least squares for this model will yields biased and inconsistent estimators. Therefore, the extent of onion cultivation was used as an instrumental variable to obtain consistent estimators. This variable is highly correlated with the lagged dependent variable but uncorrelated with the error term.

The study revealed that the alternation of positive and negative signs of coefficients for lagged prices indicate that the effect of lagged prices on onion production take a cyclical pattern. The influence of last year's price on the current production is higher than the previous lagged prices.

Finally the study concludes that the cyclical effect of lagged prices on onion production indicates that an increase in last year's price will increase current production. Thus, this will lower the current price for onions when there is no change in the demand for onions.