

An Inverse Demand System Model of Rice, Wheat and Sugar in Sri Lanka

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Rice, wheat and sugar are important sources of food energy in Sri Lankan diet. Rice is a preferred staple food and dominant source of energy. Sri Lanka is producing enough rice to meet the domestic consumption requirements. Import of rice serves as a buffer stock against poor harvests due to the unfavorable climatic conditions. Domestic consumption requirement of wheat and sugar mainly depends on imports. The high price fluctuations of these commodities adversely affect consumer welfare. Impact of price fluctuation on consumer welfare depends on the price flexibility and scale flexibility of these commodities. Therefore, government involvement will be needed to reduce the price fluctuations of these food commodities. This study examines the price flexibility and scale flexibility of these commodities. The variables used in this study were quantity of rice, wheat and sugar and retail price of rice, wheat and sugar. For this study, secondary time series data for the variables mentioned above were collected for the period of 1996 to 2015 from annual report of Central Bank of Sri Lanka. Average milling percentage and import and export quantity of wheat and paddy were also used to get the approximate availability of wheat flour and rice for the consumption. Retail price of white rice was used as a proxy for the retail price of aggregates of all rice varieties. A Generalized Inverse Demand System model for these commodities was estimated using seemingly unrelated regression method. The results of this study indicated that own compensated and uncompensated price flexibilities are negative. Positive sign of cross compensated and uncompensated price flexibilities indicates that these commodities are substitutes each other. Price flexibility and scale flexibility is higher for wheat than rice and sugar. This shows that wheat is more sensitive to the change in price and income than rice and sugar. This study would be useful for policy makers to formulate import policy for these food commodities.

Keywords: Generalized inverse demand system, price flexibility, scale flexibility