Analysis of Vertical Price Transmission along Sugar Supply Chain in Kenya: A Vector Autoregression (VAR) Approach

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Abstract

Kenya retail sugar prices responds quickly to a rise in producer prices, but respond very slowly to a drop in producer price. A vertical price transmission analysis was carried out on how transmission occurs from the producer level to the wholesale or retail level. The Objectives were; to find out if vertical price transmission exists between different levels of sugar markets in Kenya and to evaluate the size and direction of the impact of sugar price shocks at one market level on another market level in Kenya. The null hypotheses tested were; H01: There is no significant asymmetric price transmission along the sugar marketing value chain in Kenya; H02: The impact of price shocks from one market level to another market level is not significant. Monthly sugar prices were extracted from Kenya Sugar Board. At 5% level, test statistics for Dickey fuller test were below the critical value -2.887, KPSS test statistics were more than 0.146. No unit roots were present. Optimum lag 2 was selected. VAR results show P values of 0.008, 0.000 and 0.013 for relationships between ex-factory, wholesale and retail levels respectively. Thus H01 was rejected. Granger Causality Wald tests showed a downstream price movement from wholesale to retail, but also an upstream from wholesale to ex-factory levels. Thus H02 was rejected. It was therefore recommended that; Producers should be facilitated to ensure constant production; establishment of an incentive for producers to produce at lower costs; licence middlemen; price controls at producer and wholesale level; regulate imports in relation to the existing local stocks of sugar; and finally, licensing of importers.