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Analysis of Factors Affecting Tea Exports of Sri Lanka and Their Dynamic Interrelations Using the Vector Autoregression Approach

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Abstract

Sri Lanka is renowned for its high-quality tea and is the world's third-largest tea exporter. The tea industry is considered a main source of foreign exchange in Sri Lanka. However, Sri Lankan tea exports have been significantly fluctuating over the years, with noticeable reductions recently, which can negatively impact economic stability. Therefore, understanding the influential factors of tea exports and the dynamic relationships between them is crucial, which is the aim of this study. Monthly data on the volume of tea exports, Free-on-board (FOB) price, tea production, exchange rates and the tea export volume of the major competitor, Kenya from August 2011 to April 2024 were obtained from the Sri Lanka Tea Board, the Central Bank of Sri Lanka and the Central Bank of Kenya. A Vector Autoregressive model of order 3 was utilized for data analysis using EViews software package. Results of the Wald test revealed that tea export volume in previous periods ($F=25.09$, $p<0.05$), FOB ($F=3.39$, $p<0.05$), tea production ($F=4.06$, $p<0.05$) and exchange rate of Sri Lanka ($F=3.02$, $p<0.05$) impact the tea exports. Granger Causality test reveals uni-directional causality from production (Chi-square=12.18, $p<0.05$), FOB (Chi-square=10.17, $p<0.05$) and exchange rate (Chi-square=9.05, $p<0.05$) to tea exports in Sri Lanka. Impulse response analysis shows that the response of tea exports varies through negative and positive values, for a shock given to other variables. In the short run, the forecast error variance of tea exports is mostly explained by tea exports itself. The contribution of production, exchange rate and tea exports of Kenya increases when moving to the future. Moreover, the exchange rate of Sri Lanka explains the forecast error variance of the competitor's tea exports. The findings emphasize the importance of production, exchange rates and the competitors' performance in determining tea exports of Sri Lanka. The complex interactions revealed by the study are useful for policymakers and industry stakeholders in developing strategies to enhance Sri Lanka's position in the global tea market.

Keywords: *Tea exports, Tea production, Exchange rates, Vector Autoregression*