

Analysis of the Integration of Layer Chicken Egg Prices Between Traditional Markets in the Jember Regency

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ABSTRACT

Chicken egg prices are one of the strategic food commodities that frequently fluctuate due to changes in demand, supply, and distribution. Differences in price movements across markets can indicate the level of price integration and transmission within a marketing system. This study aimed to analyze the short-run and long-run integration of chicken egg prices and to analyze price transmission among traditional markets in Jember Regency. The study used secondary data consisting of daily chicken egg prices from January to December 2025 obtained from the East Java Food Availability and Price Development Information System (SISKAPERBAPO). The markets analyzed included Tanjung Market, Kreongan Market, Mangli Market, Tegal Besar Market, and Wirolegi Market. Data were analyzed using the Vector Error Correction Model (VECM) through the Augmented Dickey-Fuller (ADF) stationarity test, optimal lag selection, VAR stability test, Johansen cointegration test, Granger causality test, Impulse Response Function (IRF), and Forecast Error Variance Decomposition (FEVD). The results showed that all price variables were stationary at the first order of integration ($I(1)$) and exhibited cointegration, indicating long-run price integration. The VECM results indicated the existence of a price adjustment mechanism toward long-run equilibrium, while the Granger causality test showed that only several market pairs had significant causal relationships. The IRF analysis showed that price shocks in one market affected other markets with varying responses and tended to return to a stable condition over several periods. Meanwhile, the FEVD results showed that price variations were still predominantly explained by each market's own shocks, although the contribution of other markets increased in the long run. Therefore, chicken egg prices among traditional markets in Jember Regency demonstrated short-run and long-run price integration as well as price transmission among markets, although the speed and magnitude of price adjustments were not uniform across all markets.

Keywords: *market integration, chicken egg, VECM, traditional market, information efficiency*