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## Asymmetric Price Transmission in Rice: A Regional Analysis in Peru

Authors: Renzo Munoz-Najar, Cristina Wong, Daniel De La Torre Ugarte

Abstract: The literature on price transmission usually deals with asymmetries related to different commodities and/or the short and long term. The role of domestic regional differences and the relationship with asymmetries within a country are usually left out. This paper looks at the asymmetry in the transmission of rice prices from the international price to the farm gate prices in four northern regions of Peru for the last period 2001-2016. These regions are San Martín, Piura, Lambayeque and La Libertad. The relevance of the study lies in its ability to assess the need for policies aimed at improving the competitiveness of the market and ensuring the benefit of producers. There are differences in planting and harvesting dates, as well as in geographic location that justify the hypothesis of the existence of differences in the price transition asymmetries between these regions. Those differences are due to at least three factors geography, infrastructure development, and distribution systems. For this, the Threshold Vector Error Correction Model and the Autoregressive Vector Model with Threshold are used. Both models, collect asymmetric effects in the price adjustments. In this way, it is sought to verify that farm prices react more to falls than increases in international prices due to the high bargaining power of intermediaries. The results of the investigation suggest that the transmission of prices is significant only for Lambayeque and La Libertad. Likewise, the asymmetry in the transmission of prices for these regions is checked. However, these results are not met for San Martin and Piura, the main rice producers nationwide. A significant price transmission is verified only in the Lambayeque and La Libertad regions. San Martin and Piura, in spite of being the main rice producing regions of Peru, do not present a significant transmission of international prices; a high degree of self-sufficient supply might be at the center of the logic for this result. An additional finding is the short-term adjustment with respect to international prices, it is higher in La Libertad compared to Lambayeque, which could be explained by the greater bargaining power of intermediaries in the last-mentioned region due to the greater technological development in the mills.

Keywords: asymmetric price transmission, rice prices, price transmission, regional economics

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