

Original article

# Price stabilization in the Taiwan hog and broiler industries: Evidence from a STAR approach<sup>☆</sup>

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## Abstract

The paper examines the effectiveness of the price stabilization mechanism for the broiler and poultry industry in Taiwan during the period 1999–2008. After presenting some background information on the domestic marketing system and price stabilization mechanisms for the broiler and pork industry in Taiwan, the paper discusses the smooth transition autoregressive (STAR) methodology. Monthly hog and broiler price data from 1999 to 2008 at farm, import and retail levels are analyzed using the nonlinear, non-symmetric logistic STAR model in order to determine price transmission structure. A price threshold parameter is used so that price transmission levels can vary, thereby allowing an examination of the efficacy with which the hog and broiler price stabilization mechanisms take effect.

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**Keywords:** Broiler industry; Pork industry; Price stabilization; Domestic marketing system; Smooth transition autoregressive (STAR) methodology

## 1. Introduction

Successful food price stabilization is a key target for policymakers who are required to manage the risk associated with food price volatility. Sudden large fluctuations in food prices can lead to high costs for consumers and production losses for producers. Over-production in conjunction with import price transmission can pose serious risks of food price volatility. For small countries such as Taiwan, these threats are especially prevalent, and developing an effective price stabilization mechanism takes on increased importance.

While studies pertaining specifically to hog and broiler price stabilization are rare, some useful insights can be gained from previous studies regarding grain commodity price stabilization policies. Wright and Williams [14] show that the use of buffer stocks can be an effective method for stabilizing food prices, an approach which in the past has often been preferred to relying on trade mechanisms (Bigman and Reutlinger [2]). Athanasiou et al. [1] show that a government can stabilize commodity prices through a strategy of releasing or increasing commodity storage by small

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