



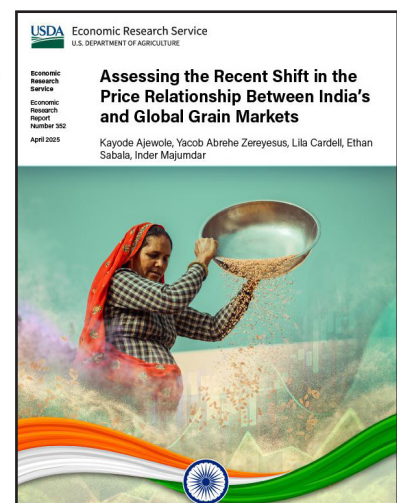
Assessing the Recent Shift in the Price Relationship Between India's and Global Grain Markets

Kayode Ajewole, Yacob Abrehe Zereyesus, Lila Cardell, Ethan Sabala, Inder Majumdar

What Is the Issue?

India's commodity prices have risen more rapidly in recent years compared to increases prior to the Coronavirus (COVID-19) pandemic. To mitigate the effect of unprecedented food price inflation, the Government of India implemented new policies after the occurrence of the COVID-19 pandemic (2020–2024) for rice, wheat, and soybeans to protect domestic markets from global food price inflation. These new policies included distributing rice and wheat to consumers at no cost or reduced cost, limiting wheat and rice exports, and increasing soybean product imports. This study investigated whether the prices of staple cereals and oilseeds in India's domestic market have become more or less influenced by global grain market prices before and after the implementation of India's food policies. By analyzing how international grain price fluctuations influence domestic grain prices in India, we aimed to understand the potential changes to the relationship of India's domestic grain prices and global grain prices associated with India's trade policy changes implemented during and after the COVID-19 pandemic. This analysis is particularly relevant as India's Government adjusts its trade policies in response to domestic market price movements. For example, the Government of India relaxed its rules for importing soybean meal sourced from genetically engineered soybeans in 2021 when India was experiencing a lower domestic supply of animal feed in the poultry industry and increased feed prices.

India plays an important role in the global food market, and its staple food commodity policies may cause market distortions and shifts in global prices. India's position as a major grain producer and consumer is critical to the global supply and price stability of major food grains. Moreover, India accounted for roughly 40 percent of global rice exports in 2022. Since the COVID-19 pandemic and the subsequent food inflation crisis, India has implemented several trade restrictions, most notably export bans and taxes on rice and wheat. India's rice trade policies have had a significant effect on the global rice market, as demonstrated by the nonbasmati white rice export bans that started in July 2023 and the 20-percent export tax on parboiled rice exports that started in August 2023. Similarly, the ban on wheat exports that began in May 2022 was implemented to address concerns about food security and domestic price stability.



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What Did the Study Find?

This report's analysis revealed a substantial change in the long-term relationship between domestic grain prices in India and international grain prices. This study's findings include:

- India's domestic prices for rice, wheat, corn, and soybeans exhibited a significant long-term dependence on international prices before the introduction of new food policies.
- After the implementation of the new food policies, this long-term dependence became insignificant for all grains, but not for soybeans.
- India's retail soybean prices continued to show significant dependence on international soybean prices after the new food policies were implemented. This suggests that the price relationship remained unchanged from the prepolicy period (2011–2019). Moreover, the connection between domestic soybean prices and international soybean prices strengthened during periods of increased soybean product imports.
- The Indian-U.S. exchange rate (Indian rupees per U.S. dollar) primarily affected heavily traded commodities. It significantly affected rice prices before and after the policy changes. However, the exchange rate's effect on soybean prices was more pronounced after the trade policy changes, which coincided with India's record soybean meal imports.

How Was the Study Conducted?

This study analyzed trends in domestic and international grain prices (rice, wheat, corn, and soybeans) in India. We employed an autoregressive distributed lag (ARDL) model to empirically investigate the price relationship between India's and global markets before and after the implementation of India's new food policies. Monthly domestic grain prices in India's retail markets were obtained from the Unified Portal for Agricultural Statistics (UPAg) of the Government of India's Directorate of Economics and Statistics, Ministry of Agriculture. Monthly international prices, including Thailand's 25-percent broken rice, U.S. hard red winter wheat, U.S. No. 2 yellow corn free on board (FOB) U.S. Gulf ports, U.S. Gulf Yellow Soybean No. 2, and crude oil prices, were collected from the May 2024 World Bank Commodity Price Data (The Pink Sheet). Monthly average real exchange rate values were sourced from the USDA, Economic Research Service Macroeconomics dataset.