



भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA

वेबसाइट : www.rbi.org.in/hindi

Website : www.rbi.org.in

ई-मेल/email : helpdoc@rbi.org.in



संचार विभाग, केंद्रीय कार्यालय, शहीद भगत सिंह मार्ग, फोर्ट, मुंबई - 400 001

Department of Communication, Central Office, Shahid Bhagat Singh Marg, Fort, Mumbai - 400 001 फोन/Phone: 022 - 2266 0502

October 03, 2024

RBI Working Paper No. 08 / 2024: Vegetables Inflation in India - A Study of Tomato, Onion and Potato (TOP)

Today the Reserve Bank of India placed on its website a Working Paper titled, "[Vegetables Inflation in India: A Study of Tomato, Onion and Potato \(TOP\)](#)" under the Reserve Bank of India Working Paper Series¹. The paper is co-authored by Ranjana Roy, Sanchit Gupta, Harsh Wardhan, Suwendu Sarkar, Soumasree Tewari, Rohan Bansal, Shelja Bhatia and Ashok Gulati.

The paper presents a novel framework of constructing monthly balance sheets to capture supply-demand dynamics for analysing determinants of prices of tomato, onion and potato (TOP) and for forecasting inflation. The paper also assesses the value chains and estimates farmers' share in the final consumer price of TOP.

The major findings of the paper are:

- i) The paper estimates farmers' share in the consumer rupee to be around 33 per cent for tomato, 36 per cent for onion and 37 per cent for potato.
- ii) The empirical analysis using Autoregressive Distributed Lag (ARDL) models suggests a significant negative relationship between monthly availability/availability to usage ratio and consumer price index (CPI) of the three vegetables controlling for input costs, rainfall, and wages.
- iii) Seasonal Autoregressive Integrated Moving Average with Exogenous Variable (SARIMAX) models incorporating the balance sheet variables have a better forecasting performance over other models across different forecast horizons.
- iv) The analysis underscores the significance of the balance sheet variables in understanding the price dynamics of vegetables in India.

Press Release: 2024-2025/1214

(Puneet Pancholy)
Chief General Manager

¹ The Reserve Bank of India (RBI) introduced the RBI Working Paper series in March 2011. These papers present research in progress of the staff members of the RBI and at times also those of external co-authors, when the research is jointly undertaken. They are disseminated to elicit comments and further debate. The views expressed in these papers are those of the authors and not of the institution(s) to which they belong. Comments and observations may please be forwarded to the authors. Citation and use of such papers should take into account its provisional character.