

---

Matthias Kalkuhl • Joachim von Braun •  
Maximo Torero  
Editors

# Food Price Volatility and Its Implications for Food Security and Policy

---

# Contents

## Part I Introduction

- 1 **Volatile and Extreme Food Prices, Food Security, and Policy: An Overview** ..... 3  
Matthias Kalkuhl, Joachim von Braun, and Maximo Torero

## Part II Food Price Volatility at International Food Commodity Markets

- 2 **Volatile Volatility: Conceptual and Measurement Issues Related to Price Trends and Volatility** ..... 35  
Eugenio Díaz-Bonilla
- 3 **Drivers and Triggers of International Food Price Spikes and Volatility** ..... 59  
Getaw Tadasse, Bernadina Algeri, Matthias Kalkuhl, and Joachim von Braun
- 4 **The Effects of Southern Hemisphere Crop Production on Trade, Stocks, and Price Integration** ..... 83  
Joseph W. Glauber and Mario J. Miranda
- 5 **Food Price Changes, Price Insulation, and Their Impacts on Global and Domestic Poverty** ..... 101  
Will Martin and Maros Ivanic
- 6 **Alternative Mechanisms to Reduce Food Price Volatility and Price Spikes: Policy Responses at the Global Level** ..... 115  
Maximo Torero
- 7 **Worldwide Acreage and Yield Response to International Price Change and Volatility: A Dynamic Panel Data Analysis for Wheat, Rice, Corn, and Soybeans** ..... 139  
Mekbib G. Haile, Matthias Kalkuhl, and Joachim von Braun
- 8 **Food Crisis and Export Taxation: Revisiting the Adverse Effects of Noncooperative Aspect of Trade Policies** ..... 167  
Antoine Bouët and David Laborde Debucquet

### **Part III Commodity and Financial Market Linkages**

- 9 Directional Volatility Spillovers Between Agricultural, Crude Oil, Real Estate, and Other Financial Markets ..... 183**  
Stephanie-Carolin Grosche and Thomas Heckeles
- 10 A Roller Coaster Ride: An Empirical Investigation of the Main Drivers of Wheat Price ..... 207**  
Bernardina Algieri
- 11 Relative Prices of Food and the Volatility of Agricultural Commodities: Evidence for a Panel of Developing Economies ..... 239**  
Carlos Martins-Filho and Maximo Torero
- 12 How Strong Do Global Commodity Prices Influence Domestic Food Prices in Developing Countries? A Global Price Transmission and Vulnerability Mapping Analysis ..... 269**  
Matthias Kalkuhl
- 13 Transmission of Food Price Volatility from International to Domestic Markets: Evidence from Africa, Latin America, and South Asia ..... 303**  
Francisco Ceballos, Manuel A. Hernandez, Nicholas Minot, and Miguel Robles

### **Part IV National and Regional Responses to Food Price Volatility**

- 14 India's Food Security Policies in the Wake of Global Food Price Volatility ..... 331**  
Shweta Saini and Ashok Gulati
- 15 The Costs and Benefits of Regional Cooperation on Grain Reserves: The Case of ECOWAS ..... 353**  
Lukas Kornher and Matthias Kalkuhl
- 16 Regional Trade and Volatility in Staple Food Markets in Africa ..... 385**  
Ousmane Badiane and Sunday Odjo
- 17 ASEAN Food Reserve and Trade: Review and Prospect ..... 413**  
Irfan Mujahid and Lukas Kornher
- 18 When Do Prices Matter Most? Rice, Wheat, and Corn Supply Response in China ..... 435**  
Jan Brockhaus, Jikun Huang, Jiliang Hu, Matthias Kalkuhl, Joachim von Braun, and Guolei Yang
- 19 Consistency Between Theory and Practice in Policy Recommendations by International Organizations for Extreme Price and Extreme Volatility Situations ..... 457**  
Maximo Torero

---

**Part V The Micro-Economics of Price Risk, Volatility  
and Price Shocks: Households, Firms  
and Communities**

- 20 Access to Information and Price Expectation Errors  
of Smallholder Farmers: Theory and Empirics ..... 513**  
Mekbib G. Haile and Matthias Kalkuhl
- 21 Coping with Food Price Shocks  
in Afghanistan ..... 543**  
Anna D'Souza and Dean Jolliffe
- 22 Hedging Seasonal Food Price Risks:  
The Impact of Cereal Banking in the Gambia ..... 583**  
Raymond Jatta
- 23 Stocks and Storage Behavior of Traders in Ghana:  
Insights from a Trader Survey ..... 603**  
Lukas Kornher and Felix A. Asante