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FOOD PRICE POLICY IN AN ERA OF MARKET INSTABILITY

A POLITICAL ECONOMY ANALYSIS

Edited by

Per Pinstrup-Andersen

UNU-WIDER STUDIES IN DEVELOPMENT ECONOMICS

Food Price Policy in an Era of Market Instability

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United Nations University World Institute for Development Economics Research (UNU-WIDER)

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Per Pinstrup-Andersen

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Foreword

Food price volatility is a major challenge facing the global agricultural system today, most vividly illustrated during the global food crisis of 2007–9 when prices spiked for key staple commodities such as wheat, rice, maize, and soybeans. Given the variety of reactions by countries experiencing food price shocks, the crisis offered an excellent natural experiment for generating knowledge on responses to price volatility in particular, and on the political economy of agricultural policy-making more generally.

In 2010, United Nations University World Institute for Development Economics Research (UNU-WIDER) along with collaborating partners—Cornell University and the University of Copenhagen—enthusiastically welcomed Per Pinstrup-Andersen's proposal to direct a broad-ranging research project on fourteen low- and middle-income countries to uncover which political economy factors, ranging from the constellation of different interest groups to the nature of political institutions, explain variations in policy responses across countries.

The in-depth academic research is valuable for at least three target audiences. First, it informs international organizations and donors about which types of policy interventions can mitigate price volatility and whether this is feasible given a country's political economy context. Second, it helps policy makers to better understand the trade-offs of certain policy interventions. Third, it generates knowledge about the agricultural policy-making process in developing countries, which remains incredibly scarce despite the importance of agriculture to these countries' economies.

This book is the distilled essence of the large, multi-disciplined academic project condensed into a compact form for the reader to enjoy and absorb the policy implications.

I hereby express my sincere appreciation and admiration of the academic skills of Per Pinstrup-Andersen, along with his three senior advisors, Philip Abbott, William Lyakurwa, and Robert Paarlberg, and fellow coordinator Danielle Resnick, formerly of UNU-WIDER, for directing the project, building a top-notch research team, upholding highest-quality academic standards on all fronts, and finally gathering the research to a rich harvest.

UNU-WIDER gratefully acknowledges the financial contributions to its research programme from the governments of Denmark, Finland, Sweden, and the United Kingdom. This publication is supported by an agreement with Cornell University Division of Nutritional Sciences under Subagreement No. 60891-9461.

Finn Tarp

Helsinki, February 2014

Preface

In 2007–8, international market prices for rice, wheat, and corn all spiked sharply upward. By April 2008, the price of maize (corn) available for export had doubled compared to two years earlier; rice prices had tripled in just three months; and wheat reached its highest price in 28 years. Riots broke out in a number of developing countries, and it seemed that hunger was certain to increase as well. The *New York Times*, in a lead editorial, declared these surprising changes to be a 'World Food Crisis'. Robert Zoellick, President of the World Bank, warned that high food prices were particularly dangerous for the poor, who must spend half to three-quarters of their income on food. 'There is no margin for survival', he said.

A global financial crisis in late 2008 to early 2009 caused international food prices to fall briefly, but then in 2010 wheat prices increased sharply once more, and just as this second food price spike seemed to be passing a severe summer drought in the USA in 2012 sent international corn prices spiking upward yet again.

This unusual series of international food price spikes between 2007 and 2012 reset global expectations and debates over food. The spikes were not just disruptive on their own terms, they called into question what had been a comforting assumption among most economists that over the long term agricultural commodity prices would fall rather than rise, and that international food markets would be a reliable source of supply.

Controversies persist over both the causes of these commodity price spikes and their impacts on poverty and malnutrition worldwide. In their recent *State of Food Insecurity in the World* (2012), the Food and Agriculture Organization (FAO) reduced their estimates of the incidence of malnutrition due to the 2007–8 food crisis, noting that 'Some large countries were able to insulate themselves from the crisis through restrictive trade policies and functioning safety nets, but trade restrictions increased prices and volatility on international markets'. Moreover, some import-dependent small countries, especially in Africa, were exceptionally hard hit. A key distinguishing feature was the success of food security policy implementation to mitigate the effects of world markets on domestic outcomes.

Most countries pursued a wide range of policies to stabilize their food prices at home. Import tariffs were reduced; exports were taxed or banned; parastatals imported grain; buffer stocks were released; domestic prices and production were subsidized; and safety nets were expanded. Policies typically utilized existing institutional mechanisms, designed more often to address production shortfalls rather than world price spikes, with few innovations in policy regime noted. It was also easier to expand existing safety nets than to institute new programmes. Political decision-making at times hampered the need to change or expand the scope of those institutions. As a consequence, a wide variety of outcomes was observed, due as much to problems of implementing existing policies as to picking the right mechanisms.

Contemporary scholarship on this dangerous new market dynamic has long been hampered by a poor understanding of how national governments make policy decisions when caught in a suddenly destabilized international food price environment. Why do most cut tariffs, some subsidize imports, and a few ban exports? Why do some have domestic buffer stocks they can release, while others do not? When they release such stocks to keep domestic prices low, do they target the poor and vulnerable, or only the urban middle class and their own power base? Why do some try to keep domestic prices low for consumers under circumstances of shortage, when a price increase might be necessary to encourage more domestic farm production? Why can some governments quickly adjust policy settings to adapt to changing international circumstances, while others face problematic delays? Why do some countries focus on stabilization, helping consumers broadly, while others utilize safety nets to protect the poor? Reliable answers to these political economy questions are elusive because they require carefully structured comparisons of policy actions taken within dozens of separate political systems, something that can be accomplished only by a large and well-led international team of scholars, each with a different country specialty, but all asking the same questions under a common research template, applied over a common time period.

When the original price spikes of 2007–10 took place, it was Professor Per Pinstrup-Andersen, previously Director General of the International Food Policy Research Institute (IFPRI), who saw the research opportunity, assembled the necessary international team of scholars, and hammered out the common political economy template. The results of this careful effort are available to all in this newly published book. As advisors to this ambitious project, we knew it would be a one of a kind achievement that political economy scholars would be able to use for years as a valuable resource. We witnessed the diligence and commitment of the research team both in polishing

the separate country chapters and then in assembling and comparing the findings of these chapters to derive the larger generalizations that finally emerged. We commend the research team and its leader, and thank them for this important book.

Philip Abbott, William Lyakurwa, and Robert Paarlberg

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Per Pinstrup-Andersen

Cornell University

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Contents

List of Figures xvii
List of Tables xxi
List of Abbreviations xxiii
Notes on Contributors xxix

Part I. An Overview

1. The Political Economy of Food Price Policy: An Overview 3
Per Pinstrup-Andersen

Part II. Synthesis of Findings from Country Studies

2. International to Domestic Price Transmission in Fourteen Developing Countries during the 2007–8 Food Crisis 21
Kenneth Baltzer

3. A Cacophony of Policy Responses: Evidence from Fourteen Countries during the 2007–8 Food Price Crisis 51
Shane Bryan

4. Policy Processes and Food Price Crises: A Framework for Analysis and Lessons from Country Studies 76
Suresh Chandra Babu

5. A Political Economy Synthesis: The Food Policy Crisis 102
Derrill D. Watson II

Part III. The Political Economy of Food Price Policy in Low-income Landlocked Countries

6. The Political Economy of Food Price Policy in Ethiopia 133
Assefa Admassie

7. The Political Economy of Food Price Policy in Malawi 153
Ephraim W. Chirwa and Blessings Chinsinga

8. The Political Economy of Food Price Policy in Zambia 174
Antony Chapoto

Part IV. The Political Economy of Food Price Policy in Low-income Countries with Limited Dependence on Food Imports

9. The Political Economy of Food Price Policy in Kenya 197
Jonathan Makau Nzuma

10. The Political Economy of Food Price Policy in Mozambique 215
Virgulino Nhate, Claudio Massingarela, and Vincenzo Salvucci

Part V. The Political Economy of Food Price Policy in Low- and Middle-income Countries Heavily Dependent on Food Import

11. The Political Economy of Food Price Policy in Bangladesh 231
Selim Raihan

12. The Political Economy of Food Price Policy in Egypt 253
Ahmed Farouk Ghoneim

13. The Political Economy of Food Price Policy in Nigeria 275
Aderibigbe S. Olomola

14. The Political Economy of Food Price Policy in Senegal 296
Danielle Resnick

Part VI. The Political Economy of Food Price Policy in Large Exporters

15. The Political Economy of Food Price Policy in Vietnam 319
Nguyen Manh Hai and Theodore Talbot

16. The Political Economy of Food Price Policy in India 339
Kavery Ganguly and Ashok Gulati

17. The Political Economy of Food Price Policy in China 362
Jikun Huang, Jun Yang, and Scott Rozelle

18. The Political Economy of Food Price Policy in Brazil 384
Bernardo Mueller and Charles Mueller

19. The Political Economy of Food Price Policy in South Africa 407
Johann F. Kirsten

Part VII. The Political Economy of Food Price Policy in High-income Countries

20. US Policy Contributions to Agricultural Commodity Price Fluctuations, 2006–12 433
Gordon C. Rausser and Harry de Gorter

21. Food Price Volatility and EU Policies 457
Johan Swinnen, Louise Knops, and Kristine van Herck

Part VIII. Conclusions and Recommendations

22. The Political Economy of Food Price Policy: Key Policy-related Lessons 479
Per Pinstrup-Andersen

Index 489

List of Figures

2.1 Maize prices in Brazil and South Africa 32
2.2 Rice prices in Brazil 33
2.3 Wheat prices in Brazil and South Africa 34
2.4 Rice prices in China, India, and Vietnam 35
2.5 Wheat prices in India 36
2.6 Rice prices in Bangladesh and Senegal 37
2.7 Wheat prices in Egypt 39
2.8 Maize prices in Kenya and Mozambique 40
2.9 Maize prices in Ethiopia and Nigeria 42
2.10 Maize, wheat, and teff prices in Ethiopia 43
2.11 Maize prices in Malawi and Zambia 45
4.1 The stages of the policy process 79
4.2 A stylized framework of policy process in developing countries 83
6.1 Inflation and time line of incidences 134
6.2 More recent trends in inflation 137
6.3 Domestic and world price of wheat and maize 139
7.1 Trends in nominal maize prices, 2001–11 159
7.2 Price band and average maize prices, 2000–10 162
8.1 Zambia's exchange rates and inflation rate, 2001–11 183
8.2 Nominal price trends 2001–11: Lusaka maize grain, breakfast meal, roller meal, and FOB US maize gulf prices, in ZMK 187
8.3 Lusaka nominal retail maize grain prices, US Gulf FOB white maize grain prices and Zambia general inflation rate 188
9.1 Monthly trends in food prices, 2007–11 (January 2007=100) 204
9.2 Maize price trends, Kenya 204
9.3 Percentage changes in food price indices, Kenya 205
10.1 Wheat imports and consumption, 1996–2006 217

10.2 Rice price trends, 2002–9 218
10.3 Wheat price trends, 2002–9 219
10.4 Trend of growth of the economy in Mozambique 222
11.1 World price and domestic retail price of rice during 2001–9 233
11.2 Wholesale and retail prices of wheat flour during 2001–9 234
12.1 Food inflation in domestic and international markets 257
12.2 Increase in Egypt's food import prices (percentage change, over the period July 2006–June 2008) 258
12.3 Food subsidies in Egypt during the period 2005/6–2011/12 259
13.1 International wheat price transmission in Nigeria 277
13.2 International rice price transmission in Nigeria 279
13.3 International maize price transmission in Nigeria 279
13.4 Production trend of food staples in Nigeria, 2005–9 280
14.1 Timeline of events, 2007 302
14.2 Timeline of events, 2008 302
15.1 The policy-making process in Vietnam 323
15.2 Rice exports, 1989–2010 326
15.3 Price trends: paddy and milled rice, 2008 and 2009 327
15.4 Local rice prices (nominal Vietnamese dollar) per kilo, 2005–9 328
15.5 Free on board rice prices: pass-through relative to the world market prices 329
15.6 Timing of policy interventions 334
15.7 Rice price policies, 2001–11 334
16.1 Percentage change in wholesale price index of food articles and manufactured food products 343
16.2 Contribution of various commodities in total food inflation 344
16.3 Trends in wholesale price index of rice 345
16.4 International and domestic price movements of rice 346
16.5 Percentage change in monthly wholesale price index of wheat 347
16.6 Percentage change in monthly wholesale price index of maize 347
16.7 Composition of public expenditure in agriculture: 1993–4 to 2009–10 351
16.8 Procurement of rice and wheat for the central pool 353
16.9 Stocks of rice and wheat with the central pool (up to October 2012) 354

17.1 Rice, wheat, maize, and soybean prices in China and the international markets (at border), 2000–10 365
17.2 Number of reports on food price issues per month in the four selected newspapers during 2007–8 373
17.3 Graphical analysis of international and domestic monthly prices of rice, wheat, and maize, January 2005–December 2010 379
18.1 Total inflation and food inflation, 2007–11 391
18.2 Consumer price increase for selected food items 392
18.3 Prices received by farmers in Brazil vs. world market prices 393
18.4 Price of basic staples for a typical family 394
18.5 Timeline of the food crisis in Brazil 397
18.6 Price increase incidence curve: net effect, Brazil 400
18.7 Price increase incidence curve: net effect, rural areas 400
18.8 Price increase incidence curve: net effect, urban areas 401
18.9 Poverty and inequality in Brazil, 1990–2009 402
19.1 Opening stocks for maize and wheat 411
19.2 The exchange rate of the South African Rand against US$, January 2000–December 2010 412
19.3 A timeline showing price peaks and policy responses between 2000 and 2011 416
19.4 Newspaper articles on food prices in South Africa, January 2000–December 2010 427
20.1 Oil, ethanol, and corn prices, January 2004–September 2006 440
20.2(a) Corn prices catching up to ethanol production capacity 441
20.2(b) Ethanol prices leading ethanol production capacity 441
20.3 US corn and ethanol prices 442
20.4 Corn and wheat price developments 443
20.5 Wheat and rice price development 444
20.6 Rice and corn price development 445
21.1 Evolution of EU 27 and global price indices (2005=100; real prices) 459
21.2 Coefficient of variation for global and EU food prices 460
21.3 Evolution of the ratio of cereal over fertilizer prices and the ratio of milk over animal feed prices in the EU27 460

21.4 Evolution of real gross domestic product (GDP) and unemployment in the EU27 462
21.5 Evolution of social expenditures in the EU27 463
21.6 International food aid by the EU 465
21.7 Agricultural support in the EU 467
21.8 Index of real farm income per annual working unit 470

List of Tables

3.1 Intervener price policies 54
3.2 Observer price policies 59
3.3 Dabbler price policies 60
3.4 Dabbler output policies 63
3.5 Intervener output policies 64
3.6 Observer output policies 67
3.7 Intervener safety net policies 71
3.8 Observer safety net policies 72
3.9 Dabbler safety net policies 73
4.A1 Models of policy process: a summary of their characteristics and use 98
5.1 Policy priorities of the country-study governments 104
7.1 The roles of stakeholders in policy-making processes in Malawi 157
9.1 Transmission of SAFEX maize prices to domestic prices in Kenya 207
9.2 Timeline of government responses to the food price crisis 207
10.1 Transmission of international rice and wheat prices to domestic markets in Mozambique 220
10.2 Transmission of food prices in Maputo to other markets in Mozambique 221
11.1 A timeline of the events and responses 240
12.1 Distribution of total benefits across quintiles, 2008/9 262
12.A1 Exchange rate between the EGP and US$, 1985–2010 272
13.1 Policy process of the Nigerian 2007–8 food crisis response 288
14.1 Identifying key domestic stakeholders and policy preferences 308
17.1 Views and opinions reported in four selected newspapers in China, 2007–8 376
19.1 Time line of price changes on selected food items 415

List of Abbreviations

ADB	Asian Development Bank
ADF	Augmented Dickey-Fuller unit root test
ADMARC	Agricultural Development and Marketing Corporation
AFAN	All Farmers Association of Nigeria
AFC	Agricultural Finance Corporation
AfDB	African Development Bank
AFF	agriculture, forestry, and fishery
AGRA	Alliance for a Green Revolution in Africa
AGRICOM	Agriculture Competences
AL	Awami League
AMIS	Agricultural Market Information System
AMR	Assistance au Monde Rural
ANC	African National Congress
APRU	Agricultural Policy Research Unit
ASCOSEN	Association of Senegalese Consumers
ATM	automated teller machines
BB	Bangladesh Bank
BDR	Bangladesh Rifles
BIDS	Bangladesh Institute of Development Studies
BNDES	Banco Nacional do Desenvolvimento
BRICS	Brazil, Russia, India, China, and South Africa
bu	bushel
CAADP	Comprehensive Africa Agriculture Development Programme
CAB	Consumers' Association of Bangladesh
CACP	Commission for Agricultural Costs and Prices
CAMA	Consumers Association of Malawi
CET	Common External Tariff
CFA	Communauté Financière Africaine

CIEM	Central Institute for Economic Management
CIF	cost, insurance, and freight
CII	Confederation of Indian Industry
CNCR	National Council of Rural Consultation and Cooperation
CNES	National Confederation of Senegalese Employers
COFCO	China National Cereals, Oil and Foodstuffs Import and Export Corporation
COMTRADE	Commodity Trade Statistics Database (UN)
COSATU	Confederation of South African Trade Unions
CPC	Communist Party of China
CPD	Centre for Policy Dialogue
CPI	consumer price index
CPU	Central Planning Unit
CPV	Communist Party of Vietnam
CRR	cash reserve requirement
CSA	Central Statistical Agency
CSO	Central Statistical Office
CSC	Centre for Social Concern
CSI	Center for Social Innovation
CSOs	civil society organizations
DFID	Department for International Development (UK)
DO	demand order
ECM	error correction model
ECX	Ethiopian Commodity Exchange
EDRI	Ethiopian Development Research Institute
EEA	Ethiopian Economic Association
EGTE	Ethiopian Grain Trade Enterprise
EP	European Parliament
EPA	Environmental Protection Agency
EPRDF	Ethiopian People's Revolutionary Democratic Front
ESA	Eastern and Southern Africa
ESF	exogenous shocks facility
EU	European Union
FAO	Food and Agriculture Organization
FAOSTAT	Food and Agriculture Organization Statistics Division
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry

FCI	Food Corporation of India
FDI	foreign direct investment
FEC	Federal Executive Council
FEWS	NET Famine Early Warning Systems Network
FIRJAN	Federação da Indústria do Rio de Janeiro
FISP	Farm Input Subsidy Programme
FMARD	Federal Ministry of Agriculture and Rural Development
FMAWR	Federal Ministry of Agriculture and Water Resources
FOB	freight on board
FPMC	Food Pricing Monitoring Committee
FRA	Food Reserve Agency
FSTG	Food Security Thematic Group
FUM	Farmers Union of Malawi
FY	fiscal year
G8	Group of 8
G20	Group of 20
GASC	General Agency for the Supply of Commodities
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GIEWS	Global Information and Early Warning System
GMP	guaranteed minimum price
GOANA	Grand Agricultural Offensive for Food and Abundance
GOE	government of Egypt
GTAM	Grain Traders Association of Malawi
GTAZ	Grain Traders Association of Zambia
IAPRI	Indaba Agricultural Policy Research Institute
ICM	Institute of Cereals of Mozambique
IDSC	Information and Decision Support Centre
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IFSS	integrated food security strategy
IMF	International Monetary Fund
INR	Indian rupees
IPSARD	Institute of Policy and Strategy for Agriculture and Rural Development
JCTR	Jesuits Centre for Theological Reflection
KIHBS	Kenya Integrated Household Budget Survey

KIPPRA	Kenya Institute for Public Policy Research and Analysis
KKV	Kazi Kwa Vijana (cash-for-work programme)
KNBS	Kenya National Bureau of Statistics
KRDS	Kenya Rural Development Strategy
KTDA	Kenya Tea Development Authority
LAB	Land Agricultural Bank
L/C	letter of credit
LG-FE	Leading Group—Finance and Economy
LG-RW	Leading Group—Rural Works
LOASP	Agricultural, Forestry, and Livestock Act
LOP	law of one price
MAL	Ministry of Agriculture and Livestock
MARD	Ministry of Agriculture and Rural Development
MAZ	Millers Association of Zambia
MCCI	Metropolitan Chamber of Commerce and Industry
MCP	Malawi Congress Party
MDGs	Millenium Development Goals
MGNREGS	Mahatma Gandhi national rural employment guarantee scheme
MiFID	Markets in Financial Instruments Directive
MMD	Movement for Multi-party Democracy
MoA	Ministry of Agriculture
MoAFS	Ministry of Agricultural and Food Security
MoC	Ministry of Commerce
MoFDM	Ministry of Food and Disaster Management
MoFED	Ministry of Finance and Economic Development
MoFNP	Ministry of Finance and National Planning
MOIT	Ministry of Industry and Trade
MOST	Ministry of Science and Technology
MOU	memorandum of understanding
MPS	Monetary Policy Statement
MSPs	minimum support prices
MT	metric tonne
MTBE	methyl tertiary-butyl ether
NA	National Assembly
NAAIAP	National Accelerated Agricultural Input Access Programme
NADP	National Agricultural Development Programme

NAMBOARD	National Agricultural Marketing Board
NAMC	National Agricultural Marketing Council
NASFAM	National Association of Smallholder Farmers of Malawi
NBE	National Bank of Ethiopia
NBER	National Bureau of Economic Research
NBR	National Board of Revenue
NCAP	National Centre for Agricultural Economics and Policy Research
NCPB	National Cereals Produce Board
NDP	National Democratic Party
NDRC	National Development and Reform Commission
NEC	National Economic Council
NFCRP	National Food Crisis Response Programme
NFRA	National Food Reserve Agency
NFSA	National Food Security Act
NFSM	National Food Security Mission
NGO	non-governmental organization
NIB	National Irrigation Board
NISER	Nigerian Institute of Social and Economic Research
NPC	National People's Congress
NRA	nominal rates of assistance
NSPS	National Social Protection Strategy
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OMS	open market sale
OPC	Office of the President and Cabinet
OTS	one-time settlement scheme
PAPA	Plan for Action for Food Production
PASA	Structural Adjustment Programme for the Agricultural Sector
PBDAC	Principal Bank for Development of Agricultural Credit
PDS	Parti Démocratique Sénégalais
PMC	Price Monitoring Cell
PPP	purchasing power parity
PRSP	Poverty Reduction Strategy Papers
PS	Parti Socialist du Sénégal
PSE	Producer Support Estimate
PSNP	Productive Safety Net Programme

R&D	research and development
RDP	Reconstruction and Development Programme
REVA	Return to Agriculture programme
RFS	Renewable Fuel Standard
RIFAN	Rice Farmers Association of Nigeria
RKVY	Rashtriya Krishi Vikas Yojana
SACP	South African Communist Party
SADC	Southern African Development Community
SAFEX	South African Futures Exchange
SAPs	structural adjustment programmes
SFP	single farm payment
SGA	State Grain Administration
SGR	Strategic Grain Reserves
SOE	state-owned enterprise
SPIDS	Union of Professionals of Industries and Mines
SRA	Strategy for Revitalization of Agriculture
SSA	sub-Saharan Africa
STATS	SA Statistics South Africa
TCB	Trading Corporation of Bangladesh
TRAINS	Trade Analysis and Information System
UEMOA	West African Economic and Monetary Union
UNACOIS	National Union of Traders and Industrialists of Senegal
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNU-WIDER	United Nations University—World Institute for Development Economics Research
URAA	Uraguay Round Agreement on Agriculture
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VAT	value added tax
VFA	Vietnam Food Association
WFP	World Food Programme
WITS	World Integrated Trade Solution
WTO	World Trade Organisation
ZACA	Zambia Consumer Association
ZNFU	Zambia National Farmers Union

Notes on Contributors

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Part I
An Overview

1

The Political Economy of Food Price Policy

An Overview

Per Pinstrup-Andersen

1.1 Introduction

How do governments respond to abrupt food price changes and why do they respond as they do? Answers to these two questions are important to help us understand policy-making, to predict how policy makers are likely to respond to future food price volatility and to support policy makers as they confront such volatility. This book, which is based on a three-year research project, provides such answers for fourteen developing countries, the European Union, and the USA. Syntheses across country studies draw lessons expected to be useful among and beyond the study-countries. The project was undertaken by a network of researchers, including the chapter authors, supported by three senior advisors (Philip Abbott, William Lyakurwa, and Robert Paarlberg) and coordinated by Per Pinstrup-Andersen, Cornell University, and Project Director with United Nations University World Institute for Development Economics Research (UNU-WIDER); Derrill Watson, Cornell University; Finn Tarp, UNU-WIDER; Danielle Resnick, previously UNU-WIDER, now International Food Policy Research Institute (IFPRI); and Henrik Hansen, University of Copenhagen. The network researchers, advisors, and collaborators met at three workshops and interacted frequently through reviews and revisions of draft versions of the working papers posted on the UNU-WIDER website. The chapters of this book are based on revised and shortened versions of these working papers.

Food price volatility since 2007 provides a natural experiment for the research. While much has been written about the nature, content, and causes of these food price fluctuations (e.g., Trostle 2008; Abbott, Hurt, and Tyner

2009; Abbott 2009; Dawe and Slayton 2010; Headey and Fan 2010; Abbott and Borot de Battisti 2011; FAO et al. 2011; Wright 2011; Martin 2012; de Gorter, Drabik, and Just 2013), little is known about the political processes that led to the policy responses and the relative power, behaviour, and influence of the participating stakeholder groups. Understanding how and why governments responded as they did will help enhance existing knowledge of the political economy of food price policy and assist governments in their policy-making as they confront future food price fluctuations.

Although price fluctuations in the world market may influence expectations and related action at the national level, the response by national governments to world market food price fluctuations will depend largely on the extent to which the prices are transmitted or expected to be transmitted to national markets. Thus, an analysis of the degree of price transmission is an important first step towards understanding the political economy issues at the national level. Such an analysis is undertaken in each country study (Chapters 6–21) and synthesized by Baltzer in Chapter 2. In addition to price changes transmitted from the world market, domestic food prices are influenced by domestic factors and domestic policies will respond to both. The policy responses are synthesized by Bryan in Chapter 3. The policy process will influence the choice of policy interventions and the interventions will influence the processes. The processes are presented in each country study and synthesized by Babu in Chapter 4. Political economy aspects, the focus of this book, are analysed in each country study and synthesized by Watson in Chapter 5. An overview of the content of the book is presented in this chapter and the last chapter (Chapter 22) draws the main generalizable lessons from the research and suggests policy recommendations in preparation for future food price increases and food price volatility.

1.2 The Global Food Market

The global food market entered an era of instability in 2007. Large and abrupt fluctuations in the world market prices of wheat, rice, and maize combined with an increasing food price trend, raised concerns about future food supplies, prices, and household food security. Except for a small upward blip in the middle of the 1990s, real food prices in the world market decreased very significantly from the middle of the 1970s to the end of the 1990s. Beginning in 2000, a very slow real food price increase continued until the middle of 2007, when the world market prices of wheat, rice, and maize began a very rapid increase. The increase lasted for 8–12 months, depending on the cereal, after which they experienced an abrupt fall. Since then, two more price spikes have occurred (2010–11 and 2012). The tripling of rice prices between

October 2007 and April 2008 is particularly interesting because it was 'not caused by adverse shocks to rice production or low rice stocks' (Dawe and Slayton 2010: 17). This is an illustration of the powerful effects of national trade policies and irrational or poorly informed expectations and resulting behaviour by the public and private sector or as stated by Dawe and Slayton (2010: 25) in the case of rice: 'government policy decisions were decisive in sparking and fuelling the crisis'. Estimates by Headey (2011) and Martin and Anderson (2012) found that 45–50 per cent of the rice price increase during 2007–8 was due to export restrictions.

Several developments contributed to both fluctuations and the increasing price trend.[1] As prices continued to fall during the period 1975–2000, agricultural development was all but ignored by governments, international development banks, and bilateral donors. Public investment in developing countries' agriculture, rural infrastructure, and agricultural research fell and the falling prices made private investment less interesting and feasible. Relatively little new land was brought under cultivation, primarily because the necessary infrastructure investments were not made. A large share of smallholders chose off-farm labour over investments in improved farm productivity and many became net buyers of food. The rate of yield growth for wheat, rice, and maize slowed while population and income growth and the diet transition continued to increase the demand for food and feed. Expansion of the production of biofuel from sugar, maize, oil palm, rapeseed, soybeans, and jatropha competed with food production for land and water, and excess demand reduced cereal stocks. Extreme weather events, which caused drought, floods, and increased production fluctuations in several countries, reduced supplies. Fluctuations in oil prices and the dollar exchange rate further contributed to food price fluctuations. Thus, excess demand, which was covered by stock drawdown, was amplified by decreasing and fluctuating supply during the beginning of the 2000s.

Food prices are very sensitive to changes in the supply–demand balance (both supply and demand are very price inelastic in the short run). Therefore, even small changes in supply and demand, caused by, for example, extreme weather events and expanded biofuel production, respectively, may cause large price changes, particularly if stock levels are low. As international cereal prices began to increase, some of the news media painted various degrees of doomsday scenarios[2] and investors became more interested in the futures

[1] The importance of differentiating between food price increase and price volatility for the choice of policy interventions is discussed in Chapter 22.

[2] While the news media can be extremely useful in promoting transparency in the action by both the public and the private sector, a large share of the media reporting during the food price increases in the world market from the middle of 2007 to the middle of 2008, and again in the subsequent food price spikes, exaggerated the expected consequences by failing to differentiate between a price spike and a long-term price increase. When prices fell during the second half of

market for cereals, particularly wheat and maize. Irrational expectations by investors who interpreted upward prices as a long-term trend rather than a spike, added to price volatility. Export bans and other restrictions by cereal exporters, reduced import tariffs by importing countries, and removal of VAT on food in several countries placed additional pressures on the supply–demand situation in the world market.

While as mentioned above, much has been written about the causes of the food price volatility and the increasing food prices since 2007, there is no consensus in the literature about the relative importance of each of the factors mentioned above. Attempts to apportion cause to each of the relevant factors are hampered by the interaction among them. However, there seems to be widespread agreement that export restrictions were very important. Sharma (2011) found that one-third of the 105 countries he surveyed used export restrictions for cereals during the period 2007–11. As mentioned above, Headey (2011) and Martin and Anderson (2012) found that 45–50 per cent of the increase in the world market price for rice during 2007–8 was caused by export restrictions. Bouët and Laborde Debucquet (2010) estimated that 30 per cent of the increase in the international price for wheat was caused by export restrictions. Expanded biofuel producton is estimated by Rosegrant et al. (2008) and Abbott, Hurt, and Tynes (2011) to account for 30–40 per cent of the cereal price increase during 2007–8. De Gorter and Just (2007), de Gorter (2008), and Collins (2008) concluded that biofuel policies were the principal cause of the cereal price increases.

Sanders et al. (2008), Wright (2009), and Martin (2012) reason that speculation on the futures market was not a significant contributor to cereal price fluctuations while Ghosh (2010: 72) concludes that 'The dramatic rise and fall of world food prices in 2007–8 was largely a result of speculative activity in global commodity markets'. Timmer and Dawe (2010: 7) conclude that 'the sudden spike in wheat and corn prices was due to financial speculation'. They further argue that increasing futures prices affect storage and hoarding behaviour by farmers and traders, which itself would affect supply and prices. Using data from the Chicago Board of Trade, Torero (2011: 4) reports that the volume of commodity index funds traded increased 'by 157 per cent, 200 per cent, and 169 per cent for maize, soybeans, and soft wheat during the period 2006–11 and that only 2 per cent of these futures contracts has resulted in the delivery of real goods'. He further states that the

2008, the media was very quiet. Predictions of continued rapid food price increases leading to a situation of absolute global food scarcity and an implicit assumption of perfect price transmission of international cereal prices to low-income people in low-income countries lead much of the media and unfortunately also some international organizations to conclude that global food price fluctuations resulted in widespread increases in poverty, food insecurity, and malnutrition, developments that, in fact, did not happen.

volume of maize futures traded worldwide 'is more than three times greater than the global production of maize'. Such statistics lends credibility to the argument that speculation had a major influence on the prices of three commodities.

Trostle (2008) and Wright (2011) conclude that imbalance between supply and demand resulting in stock drawdown to very low levels followed by supply expansions and stock build-up is the key explanation for the recent food price fluctuations. A large share of recent analyses supports the conclusion that market fundamentals, i.e., the supply–demand situation, are the primary cause of the recent food price volatility. However, in a world with poorly integrated food markets, the global supply–demand situation may say little about the situation in particular national and local markets. Enhanced export restrictions and reduced import restrictions reduce supplies and increase demand in the world market with resulting increasing prices, with the opposite effect in the participating countries. Variability in production and policies in a few major cereal exporters may result in large supply changes and associated price volatility in the world market, irrespective of what happens in the rest of the world.[3] As illustrated in the chapters to follow, the above mentioned factors are integrated with action by governments and the private sector based on lack of information, poor predictable ability, and irrational expectations. Conflicting goals and relative power among stakeholder groups have played an important role. An understanding of these and related political economy factors are essential to understand the behaviour of both the public and private sector.

Whether resulting from world market price changes or national factors, national governments and the private sector responded to the actual and expected food price changes in the world market in different ways. In some cases policy interventions, particularly trade interventions by large exporters and importers, and private sector action contributed to further price volatility in the world market while in others the effect was to dampen the volatility. Similarly, poorly implemented policy interventions and private sector action increased domestic price volatility in some cases, while they improved price stability in most. An understanding of the constellation, goals, and relative power of stakeholder groups—the political economy issues—and how they vary among countries is important to explain the observed differences in the response to food price volatility by the public and private sector. That is the focus of the rest of the book.

[3] According to Food and Agriculture Organization Statistics Division (FAOSTAT) (accessed 24 June 2013) the USA accounted for 50 per cent of worldwide maize export in 2010; the USA and Canada accounted for one-third of all wheat export; and Thailand and Vietnam accounted for about 50 per cent of all rice export (on a milled equivalent basis).

In Chapter 2, Baltzer provides a synthesis of the estimates of price transmission in the fourteen study-countries. He concludes that several of the countries are poorly integrated into world cereal markets and domestic food price volatility tends to result primarily from domestic supply shocks caused by extreme weather events, political turmoil, inappropriate macro policy, and mistrust and miscommunication between governments and the private sector. The price transmission from the world market to domestic markets in these countries tended to be low and in some countries the domestic price volatility exceeded the volatility in the world market. Low price transmission was also found in large middle-income countries such as China and India because of trade restrictions to maintain domestic price stability, while other large middle-income countries such as Brazil and South Africa allowed a high degree of pass-through of international prices of some cereals, notably rice and wheat, to the domestic markets. On the basis of an analysis of food price volatility in the world market and in 15 African countries during 2007–10, Minot (2012: p. v) found increased food price volatility in the world market but no evidence that 'food price volatility has increased in the region'. While high food price volatility in the world market may draw more attention by the news media and decision makers, country-specific factors such as extreme weather events and adverse policy interventions, may have much more serious implications for domestic food prices and household food security.

Most of the study-countries experienced large food price fluctuations during the period 2007–12, whether transmitted from the world market or caused by national factors. As synthesized by Bryan in Chapter 3, their policy responses varied widely. Bryan concludes that the responses were often uncoordinated, sometimes contradictory, poorly targeted, and sometimes mismanaged. The policy outcomes varied among countries but were frequently disappointing. Attempts to manage the supply of cereals on the domestic markets through procurement and release from storage and trade policy were unsuccessful in some countries but successful in others, notably China and India. Export bans and removal of import tariffs were effective in reducing price fluctuations in some countries but contributed to price increases in the world market by reducing supplies and increasing demand. Food and fertilizer subsidies implemented in several countries were difficult to manage and the fiscal costs were high. Where targeting was attempted, leakage was large. Expansions of existing social safety net programmes successfully helped to compensate low-income people for higher food prices in some countries, notably Brazil and South Africa. Bryan draws four lessons from the synthesis: First, consider costs before deciding on policy action; second, consider trade-offs between short-term emergency measures and measures with longer term effects; third, base the crisis responses on evidence

from experience from past policies; and fourth, spend the time between food price crises to generate the evidence needed to make evidence-based policy decisions.

In Chapter 4, Babu discusses various frameworks for analysing policy processes and concludes that a combination of such frameworks is required to describe the processes and how the various stakeholder groups participate in them. The policy response to the food price fluctuations in a particular country depends on the existing policy process as well as the resources available, experience from past policies, and the policies currently in place. The policy process followed was influenced by the nature and degree of decentralization as well as the size of the country, the existing institutions and the degree of participation in policy-making. On the basis of the country studies, Babu concludes that democratically elected governments are more likely to select policies that benefit or at least do not antagonize powerful stakeholder groups over first-best policies from an efficiency point of view. The news media, the private sector, and non-governmental organizations (NGOs) played an important role in the choice of policies. As might be expected, authoritarian regimes tended to take action to maintain political stability and promote economic growth, taking into account the wishes of non-government stakeholder groups only as needed to achieve those two goals. The policy process tends to be different in a period of crisis than between crises. The capacity by governments and other stakeholder groups to engage in the design and implement interventions to deal with future food price crises should be strengthened. In particular, there is a need for more action-oriented research to enhance the evidence base for future policy interventions.

In Chapter 5, Watson combines the diverse policy responses and processes reported in Chapters 6–21, and synthesized in Chapters 3 and 4, with political economy theories in order to address the key question of this book: Why did governments take the action they took? Three models of government behaviour underlie the country-level analyses. The first, which Watson calls the 'naive model', is based on the assumption that the government is a unitary, benevolent entity that aims to maximize social welfare in the most efficient way. While a large share of economic analysis of government decision-making is based on that assumption, it is rarely found. The second model, which represents the behaviour reported in several of the country studies, deviates from the first by including fragmented government, self-interested government actors, and path dependence. The third model, which is reflected in the behaviour of some of the governments studied, is what is normally referred to as the rent-seeking model. It aims to maximize a weighted social welfare function in which the weights reflect the relative power and goals of the various stakeholder groups. Fragmented government decision-making resulting in contradictory policy interventions; uncertainty and incorrect estimates

and forecasts; rent-seeking by policy makers and private sector groups; and mutual mistrust between governments and the private sector, contributed to policy failure to varying degrees in most of the countries. Path dependence, i.e., modifying existing policies and institutions rather than designing and implementing new ones, was characteristic of the policy responses to the food price volatility in virtually all the countries. Similarly, even when the evidence showed that the rural poor suffered more than the urban poor from the food price volatility, existing urban bias in policy-making was enhanced. Protection of government legitimacy trumped poverty alleviation. Contrary to the heavy-handed dictates by the international community forcing national governments to take specific action during the period of widespread economic adjustment, policy responses by national governments to the food crisis were rarely dictated, but rather supported, by donors and international organizations.

While the above mentioned syntheses attempt to draw generalizable lessons from the country studies, a more complete understanding of the political economy of food price policy is obtained from in-depth country-specific analyses reported in Chapters 6–21. The country studies are presented according to the degree to which each country is expected to be integrated with world food markets. Low-income landlocked countries (Chapters 6–8) are followed by other low-income countries with limited dependence on food import (Chapters 9–10). Then follow low and middle-income countries heavily dependent on food imports (Chapters 11–14). Major food exporters, including Vietnam and four of the five BRICS (Brazil, Russia, India, China, and South Africa) countries are presented in Chapters 15–19 and selected political economy issues in the USA and the European Union (EU) expected to affect developing countries are discussed in Chapters 20 and 21.

As reported by Admassie for Ethiopia (Chapter 6), Chinsinga and Chirwa for Malawi (Chapter 7), and Chapoto for Zambia (Chapter 8), the government food policy of these landlocked African countries focused on maize. This is so because of the importance of maize in the diet of people in these countries and because maize availability and prices are key factors in maintaining government legitimacy. The price transmission from the world market was low and weather-related production fluctuations and policy interventions were the primary causes of domestic food price fluctuations. Malawi and Zambia were successful in expanding maize production and storage facilities were stretched to the limit and beyond. However, maize prices did not fall. Malawi introduced price controls, domestic trade restrictions and export bans which all failed because of lack of implementation capacity by the parastatals and opposition by private traders. In Zambia, large farmers and millers benefitted from direct access to high-level policy makers. Chapoto reports that Zambia's response to increasing maize prices was a clear illustration of path

dependence void of policy innovation. Policy implementations were delayed and in some cases ineffective because of mutual mistrust between the government and the private sector, adverse behaviour by traders and millers, and opposing self-interests among key stakeholder groups. Rent-seeking behaviour was common.

Admassie (Chapter 6) found that increasing aggregate food demand in excess of supply expansions placed upward pressures on domestic food prices in Ethiopia and made the market more susceptible to abrupt fluctuations caused by adverse weather and policies. Admassie found that the executive branch of the Ethiopian government was all powerful. Neither the opposition parties nor other stakeholder groups, such as the private sector, NGOs, and the news media, appear to have had significant impact on the design and implementation of the policy responses.

Many of the political economy issues found in the two countries characterized as low-income countries with limited dependence on food import (Kenya and Mozambique) are similar to those found in the three landlocked countries discussed above. Although they imported significant amounts of cereals, they experienced low levels of price transmission from the world markets to domestic markets. Both of them experienced large food price fluctuations caused primarily by weather events and policy interventions. Ethiopia and Kenya (Nzuma, Chapter 9) followed a similar set of policy responses, which included export bans and reduced import tariffs for cereals, release of cereal stocks, subsidies for agricultural inputs, and social safety nets for urban consumers in Kenya and the rural poor in Ethiopia. Avoiding social unrest and maintaining legitimacy appear to have been important goals. According to Nzuma, the policy responses in Kenya suffered from several policy reversals, ineffective export restrictions and post-election political turmoil. Kenya experienced massive production shortfalls due to drought and political turmoil. Uneven distribution of power with the Kenyan government and a weak policy-making process contributed to the reversals and inefficiencies. Both countries pursued policy interventions to increase agricultural productivity, with emphasis on subsidies for fertilizers and other inputs. While, as mentioned above, such policies resulted in large production increases in Malawi and Zambia, the impact is less clear in Ethiopia and Kenya and, according to Nhate, Massingarela, and Salvucci, they failed to increase productivity in Mozambique (Chapter 10).

Four of the study-countries (Bangladesh, Egypt, Nigeria, and Senegal) depend heavily on rice and wheat import. The food price transmission from the world market to domestic markets would be expected to be high but, as discussed by Baltzer in Chapter 2, the degree of transmission varied among the countries due to differences in foreign trade policy. While self-sufficiency in rice has long been a national objective in Bangladesh, domestic production

has fluctuated widely because of weather-related calamities and policy interventions causing large fluctuations in import demand (Raihan, Chapter 11). During the period 2007–8, the country was run by an unelected caretaker government backed by the military and the role of other stakeholder groups, including the private sector and NGOs, was very limited. Similar to the case of Kenya, the distribution of power in the Bangladeshi government was very uneven, with the Ministry of Finance having overall decision-making power over food and agricultural policy initiatives. This, together with extortions and unofficial payments in the supply chain caused delays and inefficiencies. The government undertook several initiatives to promote agricultural development such as fertilizer and fuel subsidies as well as expanded funding of agricultural research and agricultural credit. The impact of these measures is yet to be measured.

Ghoneim (Chapter 12) estimates that 30–40 per cent of the price fluctuations in the world market were transmitted to Egypt's food market. This is less than what might be expected in view of the country's heavy dependence on food imports and is a result of the Egyptian government's heavy intervention in the food sector along with fragmented markets, anti-competitive behaviour, and inefficiencies in the subsidy system. Declining real wages, increasing poverty, inefficiencies in the social safety net, and increasing media attention, together with increasing and fluctuating food prices have placed pressures on the government to focus on food policy. By reducing import tariffs on various food commodities and banning rice exports while maintaining large fuel and food subsidies without effective targeting, the action by the Egyptian government illustrates the path dependence discussed by Watson in Chapter 5. Although the fiscal costs of these policies are very high and possibly unsustainable in the longer run, Ghoneim concludes that the current political leadership favours the status quo to avoid negative social and political repercussions from any reform, particularly because of the political uncertainties following the recent revolution.

In Chapter 13, Olomola reports that, contrary to Ethiopia, Vietnam, China, and other countries with a highly centralized policy-making arrangement, Nigeria's policy response was heavily influenced by several stakeholder groups including the federal government, politicians, the news media, and producer associations. Because of the conflicting stakeholder goals and desires, the development of a policy agenda was slow and difficult, although the output from a meeting of the state governors and the president resulted in a set of policy interventions (release of cereals from reserves, import of half a million tons of rice for distribution at subsidized prices, and suspension of import tariffs on rice) that were approved and implemented within a short period of time. Producer associations, the news media, and millers played important roles in the design and implementation of the policy responses. Although the

influence by consumers is unclear, they benefitted from the policy interventions, such as expanded rice import and the import tariff waiver, because they were successful in reversing food price increases. A guaranteed minimum price aimed to compensate farmers for the potential income loss from that reversal.

Resnick (Chapter 14) reports that Senegal was particularly vulnerable to food price increase in the world market because of its heavy dependence on imports coupled with two seasons of poor cereal production. The price transmission from the world market to the Senegalese market was particularly high for rice but also significant for other food commodities such as wheat and dairy products. A lack of an agricultural strategy to expand domestic food production and the urban population's preference for imported food added to the severity of the impact of the global food price fluctuations. In response to demands and pressures from various stakeholder groups including consumer groups, trade unions, the news media, and five major street demonstrations, the government introduced an array of policy interventions such as consumer subsidies, social protection schemes, and suspension of import duties and value added taxes at very high fiscal costs. The government also launched a high-profile agricultural initiative which, according to Resnick, was too focused on achieving short-term goals rather than long-term structural changes to the agricultural sector needed to achieve the stated goal of food self-sufficiency. In an attempt to satisfy the broad range of well-organized stakeholder groups that advocated for specific interventions, Resnick concludes that the government failed to properly target and implement the many policy interventions and forfeited the opportunity to devise a financially viable, social protection programme and a long-term agricultural strategy.

The policy response to the global food price volatility differed among the five major food exporting developing countries included in this book (Vietnam and the four BRICS countries). Three of the countries (China, India, and Vietnam) protected domestic food markets from the price fluctuations in the world market through trade policies (primarily export restrictions) that reduced price transmission. By keeping domestic food prices lower than they would have been with full pass-through, consumers gained while producers lost. In all three countries, rapidly increasing prices of the main staples (particularly rice and wheat) might lead to political instability and the main goal of the policies to reduce price transmission was undoubtedly related to political legitimacy, dressed formally as a food security goal. The other two major exporters (Brazil and South Africa) continued exports and permitted international prices to reach domestic markets, thus benefitting farmers while expanding existing subsidy schemes and other social safety nets to compensate low-income consumers. Both Brazil and South Africa have strong farmer

associations with direct access to the policy-making process. Brazilian consumers were partially protected by a strong currency appreciation.

Although the political power in Vietnam is relatively centralized, Nguyen and Talbot (Chapter 15) report that there is political space for other stakeholder groups, including civil society, international organizations, research institutes, and the news media. Although the central government sets quantity goals for rice export, several government entities are involved in policy implementation and Nguyen and Talbot found a mismatch between policy instruments implemented by two distinct sets of actors with two distinct objectives: to insulate consumers from increasing rice prices and to ensure profits for rice farmers. Such mismatch may result from the government's attempt to balance the competing interests of consumers and producers. Lack of information and deficient forecasting for rice production led to policy reversals.

India's export bans for wheat, common rice and large stocks of cereals basically de-linked world market prices and domestic prices for rice and wheat during 2007–8 (Ganguly and Gulati, Chapter 16) and added significantly to price volatility in the world market. Domestic prices remained stable until mid-2009 when severe droughts caused production shortfalls and rapidly increasing prices. Ganguly and Gulati conclude that the Indian government's heavy emphasis on policy interventions, such as food subsidies and rural employment guarantee programmes, expected to have short-run impact, diverts public funds away from investments in agriculture and rural infrastructure, which would have a much greater impact on poverty alleviation and economic growth in the longer term.

In response to the rapidly increasing world market prices for cereals, the Chinese government decided to stabilize domestic food prices and did so very successfully (Huang, Yang, and Rozelle, Chapter 17). A set of policy interventions consisting of the release of government cereal stocks, long-term futures contracts with exporting countries, increasing agricultural subsidies, support of farmers' risk management, higher food subsidies and enhancement of the social safety net for urban consumers, the suspension of any expansion of biofuel production which competed with food production and increased investment in agricultural technology, and water availability, served both the rural and urban populations well while strengthening the government's legitimacy. The highly centralized governance system, amply supported by relevant evidence of expected impact of alternative policy interventions, was able to respond rapidly and effectively to the emerging food crisis. Together with the Indian trade policies mentioned above, the Chinese policy interventions amplified the food price increase and volatility in the world market. To avoid such beggar-thy-neighbour policies Huang, Yang, and Rozelle suggest that a new global

governance system is needed to coordinate actions among major food importers and exporters.

According to Mueller and Mueller (Chapter 18), past inequalities and hyperinflation have guided the Brazilian government to prioritize fiscally sound social inclusion. The international food price increases in 2007–8 might therefore be expected to cause concern because they might undermine both social inclusion and price stability. Yet, the policy response and the reaction by society were very limited. Domestic cereal prices did increase during 2007–8, but much less than the increase in the world market. Rather than restricting cereal exports to control domestic prices, as done in China, India, and Vietnam, exports were continued at the higher world market prices. Farm incomes increased and increasing wages of the rural labour force largely compensated for the higher food prices. The existing extensive system of social protection targeting transfers to low-income people was expanded to compensate for higher food prices and no new policies or programmes were designed. According to Mueller and Mueller, the global food price volatility caused very limited disagreements among the various stakeholder groups.

Similar to Brazil, South Africa (Kirsten, Chapter 19) did not implement any major policy change in response to the international food price volatility beginning in 2007. Existing trade policy for food and agricultural commodities (basically undistorted) were not changed. The comprehensive social welfare programme that had been in place since 1998 was expanded to compensate for the negative effects of price increases, but no new policies were designed. Lobbying by farmers may have been instrumental in maintaining an unfettered trade regime for agricultural commodities and lobbying by trade unions and consumer groups probably contributed to the expansion of the transfer programmes. Although the news media was actively engaged in the debate about the food price volatility, Kirsten concludes that it had very little or no policy impact.

As in the case of Brazil and South Africa, the USA's direct response to the international food price increase and volatility was very limited, but the impact of US policies, particularly the biofuel policies, on international food prices, was very significant (Rausser and de Gorter, Chapter 20). Although the direct effect was on maize and soybean prices, spill-overs to wheat and rice were large. Several stakeholder groups within the USA including growers' associations, fuel transporters, biofuel producers, and some environmentalists, and the energy security community supported the promotion of biofuel while others, including livestock producers and food processors, opposed. Rausser and de Gorter suggest that US macroeconomic policies as well as energy and sugar policies also contributed to global food price volatility.

The common agricultural policy of the EU had little or no impact on food price volatility in the world market since 2007 and the potential for

influencing the world market prices is very limited. Food prices in the EU followed the changes in world market prices, but the scale of change was much smaller (Swinnen, Knops, and van Herck, Chapter 21). Average prices for EU producers increased by less than 20 per cent in real terms during the first price spike and less during the second spike. Real consumer prices for food increased by only 5 per cent during 2005–12, with very little volatility. Food price changes triggered several policy initiatives within the EU, including increased social spending to protect poor consumers and revisions of the EU biofuel policies to reduce the use of food crops for biofuel. Instead of expanding food aid to developing countries, the EU established a €1 billion food facility and supported initiatives by G20 to reduce price volatility and improve market information.

In Chapter 22, Pinstrup-Andersen presents a brief summary of the major policy lessons from the work reported in the book. The objective is to complement rather than repeat the many lessons reported in the synthesis chapters by Baltzer, Bryan, Babu, and Watson. Recommendations about specific policy interventions and their political feasibility are likely to be most successful if made within the specific political economy context. However, on the basis of the findings reported in this book, some policy recommendations are likely to be relevant for many countries. Eight such recommendations are presented in Chapter 22. They are: the strengthening of the policy-relevant evidence base; the appropriate use of trade policy and limiting the interference in price signals; the reduction in fiscal costs of short-term interventions; investments to increase the food supply elasticity; facilitating effective risk management tools; improving the management of public sector grain stocks; making the demand for raw materials for biofuel price-related; and improving the collaboration between the public and private sectors.

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Part II

Synthesis of Findings from Country Studies