DISCUSSION PAPER

Anticompetitive practices and food-price inflation

The South Asian context

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Acronyms and abbreviations

ADB	Asian Development Bank
APMC	Agriculture Produce Marketing Committee
BSFIC	Bangladesh Sugar and Food Industries Corporation
CAA	Consumers Affairs Authority
CCI	Competition Commission of India
CMIE	Centre for Monitoring Indian Economy
CPI	Consumer Price Index
CRB	Commodity Research Bureau
DAP	Di-Ammonium Phosphate
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCI	Food Corporation of India
FDI	Foreign Direct Investment
FPS	Fair Price Shop
FTCA	Fair Trading Commission Act
GDP	Gross Domestic Product
IFPRI	International Food Policy Research Institute
IMPACT	International Model for Policy Analysis of Agricultural Commodities and Trade
LPG	Liquefied Petroleum Gas
MRTP	Monopolies and Restrictive Trade Practices
MSP	Minimum Support Price
NFC	Nepal Food Corporation
NLC	National Logistics Cell
OECD	Organisation for Economic Co-operation and Development
PDS	Public Distribution System
PPA	Pakistan Poultry Association
PVMA	Pakistan Vanaspati Manufacturers' Association
RBI	Reserve Bank of India
TFP	Total Factor Productivity
UNIDO	United Nations Industrial Development Organization
US	United States
USDA	United States Department of Agriculture

Contents

Executive summary

The food industry comprises food production and processing. The food processing industry is of enormous significance for economic development because it links economy, industry and agriculture efficiently and effectively. Hence, from a microeconomic point of view, the structure of the food market is responsible for determining the price of food products. Any distortions in terms of its competitiveness leads to market failure and thereby price instability.

However, when markets fail, competition policy and law are the tools used to bring about efficient workings of markets and alleviate market failures. This paper investigates how competition regulation might help to contain price rise and instability in the food sector in South Asia.

In South Asian countries, traditionally, government policy and intervention in agriculture markets were motivated by the need for food security. But after policy makers began to realize the drawbacks of interventionist policies, including spiralling costs, consistent inefficiencies, leakages and corruption in the food management system, they started liberalizing food policies, with Sri Lanka leading the way followed by Bangladesh, India, Nepal and Pakistan.

Literature reveals the coexistence of organized and unorganized structures in the food retail sector in the region. In South Asian agriculture markets, especially in food retailing, mostly unorganized in nature, traders enjoy more market power than either farmers or consumers. It works in two ways: traders wield monopsony and/or oligopsony power in their transactions with farmers, and have the position of monopoly and/or oligopoly in their transactions with consumers. This strong position on both sides of the transaction allows them to be price fixers both ways.

The organized retail is very small in size compared to the unorganized one. Structural transformation like the emergence of supermarkets is taking place to make the food market more competitive as a consequence of food market liberalization. But this segment makes up less than 1 percent of the entire structure. Distortions, therefore, persist in the market mechanism, spawning anticompetitive practices and fuelling price inflation. Thus, it can be argued that food inflation is a structural problem in South Asia.

Cross-country literature reveals that there exist imperfections in the marketing system in the food sector due to the presence of intermediaries. This distortion leads to anticompetitive practices which consequently result in food-price inflation. In Bangladesh, for example, farm-gate and retail-market prices differ by 60–150 percent, and this price discrepancy is driven by collusion of middlemen and intermediaries.

A similar case is reported by the tax department of India about the existence of cartels in onion trade across the states of Maharashtra, Punjab and Haryana. The farm-gate prices of onion are between Rs 25–30 per kg whereas the retail prices of the commodity hover around Rs 70–

80 although the mark-up from wholesale to retail should be just Rs 5–6 for storage and transport. Clearly, the money is being pocketed by unscrupulous traders.

As these kinds of anticompetitive practices are arising primarily because of the informal behaviour of the marketing chain in the sector, competition regulation can play a vital role. Through proper regulation, such behaviour can be controlled.

Further, a number of case studies in South Asian countries reveal that anticompetitive practices and features like cartels and barriers to entry are present in the food-processing industry that lead to price rise. This is the case in the poultry and ghee and cooking oil industries of Pakistan, and the sugar industry of Bangladesh.

Distortions in the food market lead to anticompetitive behaviour and can cause both high domestic trade margins and high storage and transport costs. These tend to increase the price differential between the farm gate and the retail level in South Asian countries. Typical distortions include: barriers to entry in domestic trading services, barriers to intra-country commodity movements, state interventions in the market, and inadequate marketing and transport infrastructure. South Asian countries suffer from all four problems in different degrees. Such anticompetitive practices are prevalent due to the absence of effective competition regulation. Competition regulation can play an important role in containing food-price rise, especially by addressing supply-side factors. It is useful in the form of both competition policy and competition law.

Chapter 1

Introduction

1.1 Context

The countries of South Asia introduced deep economic reforms in the context of what came to be known as the Washington Consensus, including far-reaching trade and financial liberalization, privatization and a new fiscal discipline, in the belief that this would be enough to ensure stability, economic growth and increased well-being. The structural heterogeneity of markets in these economies leads to instability in the real macro economy. This includes the differing capacity for action and reaction of the agents typically found in different market segments (e.g., large versus small businesses, high- versus low-skilled workers, productive or gross domestic product (GDP)-generating investors versus financial investors or buyers of existing assets, productive investors versus consumers) and the asymmetries between their respective responses to the instability of economic activity and macro prices.

South Asian countries are dominated by agro-based industries. Food and food-processing industries play a vital role in this region. Hence, their structure, conduct and performance are largely responsible for macroeconomic stability in the countries and the region. The national competition laws are the main regulator of the conduct or the behaviour of industries. Although competition laws and regulations clearly concentrate on conduct, it is safe to assume that the laws have also affected industry structure and performance (Marion 1978).

The food industry plays a unique role in expanding economic opportunity as it is universal to human life and health. This industry operates at multiple levels of society—for example, families grow crops for their own consumption, local companies transform domestic crops for local markets, communities trade fresh produce and home-processed goods, and international corporations purchase commodities globally to deliver products across the world.

Hence, from a microeconomic point of view, the structure of the food market is responsible for price determination of a food product, and any distortion in terms of its competitiveness leads to market failure and hence price instability. However, when markets fail, competition policy and law are the tools used to bring about the efficient workings of markets and alleviate market failures. Therefore, it is worth investigating how competition regulation helps to contain price instability in the food sector.

When markets fail, competition policy and law are the tools used to rectify the failure.

Food prices carry considerable weight in consumer expenditure baskets used to construct the Consumer Price Index (CPI) in developing Asia, and there is a strong correlation between food-price inflation and general CPI inflation (ADB 2008a). Hence, food-price instability leads to macroeconomic instability and decreases the welfare levels of most households, especially the poor ones, for whom food consumption constitutes a relatively large share of total expenditures.

1.2 World market scenario

The current global food crisis is largely shaped by volatility of food prices, low growth in agriculture productivity, and severe constraints on access to investment capital for agriculture (Robles *et al.* 2009). In February 2011, the World Bank Food Price Index[1] reached its 2008 peak while the World Bank Agriculture Price Index[2] became 17 percent higher (Figure 1.1). The price rise took place across food categories. In 2009, prices of cereals, edible oils and dairy products peaked to about 2.5 times their respective 2006 prices. The rise in cereal prices was even more than the general food-price inflation. Between 2005 and 2009, rice and maize prices tripled and wheat prices more than doubled (World Bank 2010a).

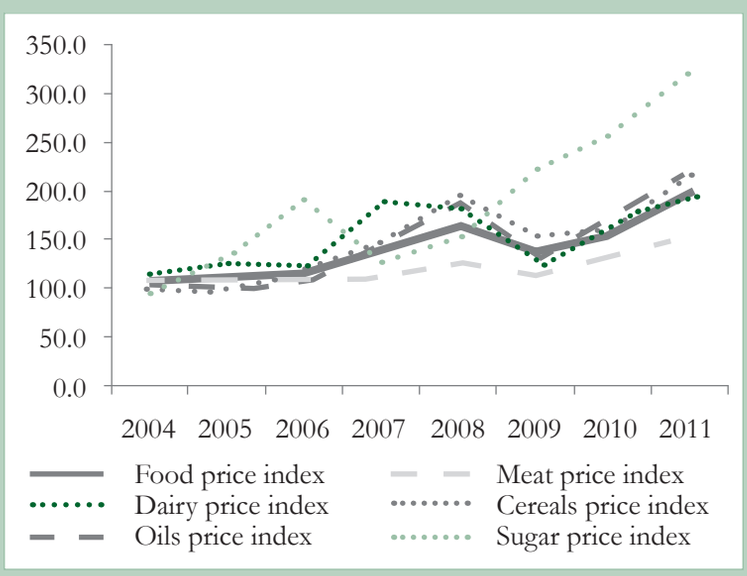
International food prices have not only become higher but also more volatile in recent years.

From June 2010 to February 2011, global food prices increased by 40.4 percent. Prices of sugar increased by 85.9 percent, cereals by 67.9 percent, edible oils by 65.9 percent, dairy products by 13.2 percent and meat by 11.2 percent. As for the two key staple cereals that are produced and consumed in Asia, the international rice price rose to US$554.33 per metric tonne in February 2011 from US$474.60 per metric tonne in June 2010, or an increase of 16.8 percent, while international wheat prices rose from US$181.4 per metric tonne to US$362.00 per metric tonne during the same period, or almost doubled (ADB 2011).

All major agriculture outlooks (of the Organisation for Economic Co-operation and Development, the Food and Agriculture Organization of the United Nations, the United States Department of Agriculture, and the World Bank) forecast that at least until 2019 international food prices will remain above the prices in the previous decade, influenced by a complex interplay of different factors.[3]

International food prices have not only become higher but also more volatile in recent years. Price volatility, which is an intrinsic characteristic of agriculture commodity markets, has increased markedly over the last six years. International grain price variability (around its mean price) doubled during the period between 2005 and 2010 relative to the period between 1990 and 2005, while sugar price variability tripled and rice price variability was four times higher,[4] which is similar to the variability experienced in the 1970s (Gilbert *et al.* 2010). Climate change, greater linkages with more volatile oil prices, land and water constraints, and substantially higher commodity index investment flows place upward, not downward, pressure on price volatility (World Bank 2011b).

Figure 1.1 Food commodity price spikes since 2004



Source: FAO Statistics.

1.3 Food prices in select South Asian countries

The rising global food prices contributed to an acceleration of inflation across the Asia-Pacific region during 2007–2008, and in 2011 the further rise in food prices reached alarming proportions. As Figure 1.2 shows, there has been a sustained rise in food prices in South Asian countries since 2005.

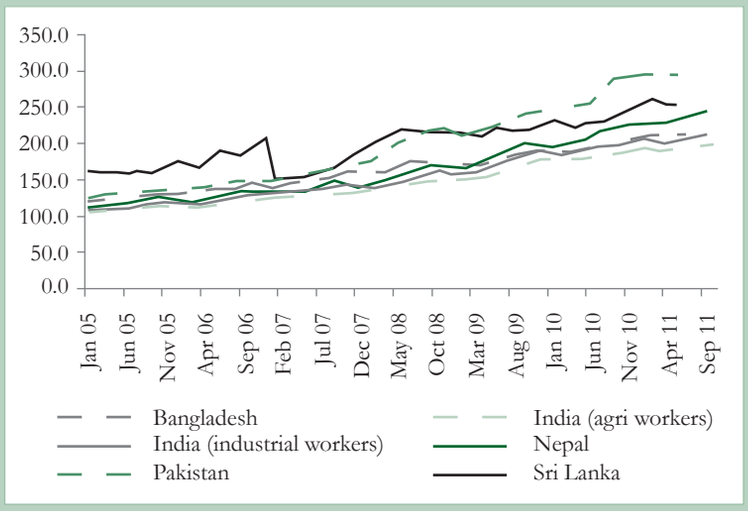
Looking at the trends in the countries[5] that are covered in the analysis (Table

1.1), it is found that in Bangladesh, food prices have increased by 7 percent annually since 2000 and by 8.3 percent in the last five years. In India, food prices have increased by 6 percent per annum since 2000 for industrial and agriculture workers, and by as high as 10.5 percent per annum in the last five years. Nepal has witnessed a significant rise in food prices by 8 percent per annum throughout the period under consideration, but in the last five years, food-price inflation has been almost 13.3 percent per annum. Pakistan has seen food-price inflation as high as 15.4 percent in the last five years with an overall rate of 11 percent since 2000. Sri Lanka has recorded a 10 percent increase in food prices annually in the last five years, with an overall increase of 8 percent since 2000.

Such food-price inflation not only leads to macroeconomic instability but also pushes millions of people below the poverty line. In South Asia, most households, including those who are living in rural areas, are net buyers of food. As food takes up close to half of the total spending for the average household, they are likely to suffer welfare losses from increases in food prices. Moreover, households previously living just above the poverty line have fallen below the line as a result of food-price inflation. Rising food prices have also aggravated food insecurity in the developing world, including South Asia (World Bank 2010b).

The crisis, however, renewed focus on food and agriculture in national and global agendas after decades of policy neglect and underinvestment in agriculture science, rural infrastructure and rural institutions. A transformation is taking place in food markets, particularly in Asia, in terms of market structure towards a more competitive framework with inclusiveness (Gulati and Reardon 2007). Hence, the role of competitive regulation becomes important in a changing market structure to combat inflation and protect consumers, particularly those who are poor and severely hurt by market distortions.

Figure 1.2 Growth of consumer food price index



Source: FAO Statistics.

1.4 Objective

Against this backdrop, the objective of this paper is to discuss the role of competition regulation in containing food-price rise in South Asia.

To address this objective, the paper concentrates on the following issues by discussing the cases of the five largest South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka:

- Causes and consequences of food-price rise in South Asia;
- Competitive characteristics and competition issues in the agro-food sector; and
- Anticompetitive practices and the role of competition policy and laws in curbing such practices in the food sector of South Asia.

Most households in South Asia are net buyers of food, and hence negatively affected by rising food prices.

Table 1.1 Growth rates[6] of consumer food price index in South Asia

Countries	Growth rates* (in percent)	
	2000–2011	2007–2011
Bangladesh	7.0	8.3
India	6.0	10.5
Nepal	8.0	13.3
Pakistan	11.0	15.4
Sri Lanka	8.0	10.0

** Significant at 5 percent level of significance.*
Source: FAO Statistics.

The remainder of this paper is organized as follows. Chapter 2 reviews literature on competition policy, food market issues and inflation in South Asia. Chapter 3 describes the causes and consequences of rising food prices in South Asia. Chapter 4 explores competition characteristics and anticompetitive practices in the food sector in South Asia with a discussion of the role of competition policy and laws in curbing these. Chapter 5 concludes and provides recommendations.

Chapter 2

Literature review

In general, competition policy is concerned with three issues: the *diffusion of market power* (e.g., to avoid threats from monopolies and cartels), the *protection of market competition* (e.g., from predatory pricing, discrimination), and the *enhancement of economic welfare* (e.g., through allocative and productive efficiency).[7] According to Porter (1990), inter-firm rivalry can create and upgrade the competitive advantages of a nation's firms. He argues that a strong competition policy is essential for a robust economic performance of an industry, with a particular emphasis on the monitoring of horizontal mergers, collusive behaviour (e.g., price fixing, market sharing) and strategic alliances.[8]

In the behavioural context, competition policy refers to those policies pursued by the government that directly affect the behaviour of enterprises, the structure of industry, and the overall economic environment in general. Therefore, competition policy encompasses both the economic policies aimed at enhancing competition in the domestic market (i.e., trade and industrial polices, exchange rate policy, privatization, foreign direct investment (FDI) policy and overall macroeconomic policies) and competition law designed to prevent anticompetitive business practices by firms and unnecessary government intervention in the economy.

Competition policy attempts to put in place a set of policies that promote competition in the market, such as liberalized industrial policy, trade policy, free entry and exit and reduced domestic controls (Chakravarthy 2006). Another important aspect of competition policy is law and its effective enforcement to prohibit anticompetitive behaviour of firms, prevent abuse of dominant position, regulate anticompetitive mergers and reduce unwarranted regulatory controls by the government. Thus, competition law and policy are required to ensure fair play of market forces in delivering efficient outcomes.

Mehta *et al.* (2011) argue that in India, the Competition Law (Competition Act, 2002) emphasizes the behavioural aspects of the firm after fully embracing liberalization and market-oriented reforms, in contrast to the structuralist antimonopoly Monopolies and Restrictive Trade Practices (MRTP) Act, 1969. The Act essentially has four components: anticompetitive agreements, abuse of dominance, combinations regulation, and competition advocacy. While competition law prohibits and penalizes anticompetitive behaviour of enterprises, competition policy aims at creating a framework of policies and regulations to facilitate competitive outcomes in the market (Government of India 2007).

Competition policy encompasses both economic policies and competition law.

India's Competition Act lists the following factors to be taken into account in determining whether an agreement or practice has appreciable adverse effects on competition:

- Creation of barriers to new entrants in the market;
- Existing competitors driven out of the market;

- Foreclosure of competition by hindering entry into the market;
- Adverse effects on accrual of benefits to consumers;
- Adverse effects on improvements in the production/distribution of goods or the provision of services; and
- Adverse effects on promotion of technical, scientific and economic development.

Actions that are considered anticompetitive and illegal in the context of agreements are also illegal if undertaken by a dominant firm. These would include unfair pricing and restrictions on quantities, markets and technical development. Discriminatory behaviour and any other exercise of market power leading to the prevention, restriction or distortion of competition would obviously be included. Under this Act, the Competition Commission of India (CCI) has been established to make an enquiry into any alleged contravention of the provisions contained in the Act. The CCI has been entrusted with the duty to eliminate practices having adverse effects on competition, promote and sustain competition in markets, protect the interests of consumers, and ensure freedom of trade carried on by other participants.

The Competition Ordinance, 2007 of Pakistan is a modern law, with a focus on conduct, rather than structure.

According to Raihan (2007), Bangladesh is yet to have a competition law, though a number of economic policies affect the competitive environment in the domestic market. Ellis and Singh (2010) provide an overview of the competition law and policy framework of Bangladesh. The country does not have a competition law and policy framework that is being applied, although the MRTP Ordinance enacted in 1970 by the Government of the then Pakistan when Bangladesh was a constituent part of East Pakistan remains on the legislative books. However, neither the government nor the private sector has ever attempted to invoke this law. It is indeed striking that Bangladesh, while having in place well-articulated and effective industrial, trade, privatization and regional development policies, lacks a coherent competition policy. A draft Competition Act 2008 has been prepared by the Ministry of Commerce and is currently being considered by the Bangladeshi government. The Bill is based on international good practices. The existing Consumers Association of Bangladesh has not been very effective in raising the concerns of consumers. Civil society groups acting on behalf of consumers are almost non-existent in Bangladesh (Rahman and Eusuf 2006). There is a National Food Policy (2006) and its associated Plan of Action (2008–2015) to provide food security. The objectives of the National Food Policy are: adequate and stable supply of safe and nutritious food, increased purchasing power and access to food of the people, and adequate nutrition for all individuals, especially women and children (Ministry of Agriculture, Bangladesh 2010).

Prior to the current Competition Ordinance, 2007, Pakistan had the Monopolies and Restrictive Trade Practices (Control and Prevention) Ordinance, 1970, aimed at regulating undue concentration of economic power and monopoly power. The Competition Ordinance, 2007, is a modern law, with a focus on conduct, rather than structure, aimed at controlling abuse of market dominance and certain types of anticompetitive agreements (Mehta *et al.* 2011).

In Sri Lanka, competition legislation was introduced only in 1987 with the enactment of the Fair Trading Commission Act (FTCA). A liberal trade regime had been used as a proxy for competition policy during the early years of liberalization. The wide scope of the FTCA covers the power to control monopolies, mergers and anticompetitive practices, and the formulation and implementation of a national price policy. The implementation of the Act is entrusted to the Fair Trading Commission, which is a quasi-judicial body that comes under the Ministry of Commerce and Consumer Affairs. In line with the behavioural (as opposed to structural) approach in Sri Lanka's competition legislation, anticompetitive practices are considered illegal

only if it is proved that they are contrary to the public interest (Knight 2004).

The Consumer Affairs Authority (CAA) is the apex government organization mandated to protect consumers' interests and ensure fair market competition in Sri Lanka. It has been established under the Consumer Affairs Authority Act No. 09 of 2003. The Act has laid down the legal provisions empowering the CAA to take necessary actions to safeguard the interests of consumers while maintaining effective competition among suppliers of goods and services.[9]

In Nepal, the Competition Promotion and Market Protection Act was enacted in 2007 to make the economy more open, liberal, market-oriented and competitive by maintaining fair competition between and among persons or enterprises. The law focuses on the core areas of anticompetitive agreements, restrictive business practices, abuse of dominance, merger and acquisitions, and monopolies. Further, there is a provision for an independent authority (named Competition Promotion Commission) to implement the Competition Act.

OECD (1996) attempts to examine the current coverage and enforcement of competition policies in the agro-food sector and offer some observations on the links between competition policy and agriculture policy reform. This paper is based on the enforcement of competition policies in the agro-food sector in OECD countries. A summary of the findings of this study would be helpful to understand the role of competition policy in the food sector. According to this study, more competitive markets in the agro-food sector might more readily be achieved through a coherent policy approach by addressing the causes of market distortions (e.g., price support, import controls associated with government intervention) as well as by enhancing the coverage or enforcement of competition laws. There are some exemptions, partial exemptions and special rules applied to the agro-food sector under competition laws. Outright exemptions tend to be restricted to agriculture production and, in some cases, primary processing, and are generally associated with the implementation of agriculture policy. Standards applied to the enforcement of anticompetitive disciplines and merger controls in downstream agro-food industries vary across OECD countries, reflecting the evolving state of competition policy and enforcement procedures.

A number of studies have highlighted the structure of food markets in South Asian countries. The studies reveal the commonalities in the structure and the conduct of markets in South Asian countries. We review some studies on India, Bangladesh and Pakistan to understand the structure of the food market in the region.

Hussain and Ara (2004) have given a structure of the retail food sector in Bangladesh. According to the study, there are broadly four types of retail food market in Bangladesh:

- Roadside shops: These small grocery shops are visible throughout the country and constitute around 75 percent of the retail sector.
- Municipal Corporation markets: These shops are located in semi-urban and urban areas. Imported foods and processed food items are available, but they are limited to those purchased by the middle class. This category represents about 20 percent of the food retail sector.
- Convenience stores: These are located mostly in well-to-do urban areas. These stores are major outlets for imported food items and high-quality local products, and represent about 5 percent of the retail sector.
- Supermarkets: They are recent additions to the retail sector in Bangladesh. They make up less than 1 percent of the retail sector.

More competitive markets in the agro-food sector might more readily be achieved through a coherent policy approach.

The organized retail outlets (Figure 2.1) are relatively few and remain concentrated in major cities. Organized sector retailers normally maintain established supply

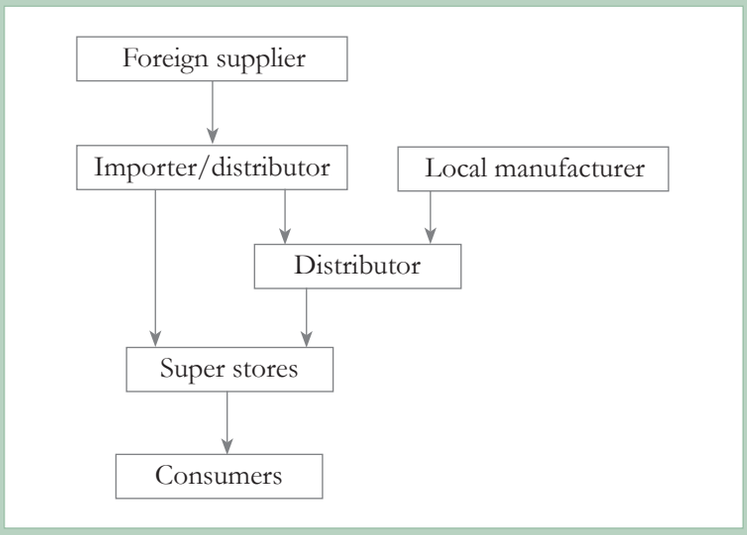
lines (drawing from establishments with storage capacity) for imported products, and access both established and casual supply lines for local products. Included in this category of food retailers are three relatively large supermarkets, around 30 medium-sized super stores, and 200–250 other convenience stores located in the posh areas of Dhaka and other big cities.

The unorganized and traditional retail market segment (Figure 2.2) constitutes 95 percent of the retail sector in Bangladesh. Retailing of imported food items in this market is very limited. This is the preferred market for about 80 percent of the urban population and all of the rural population, as it is considered the best source for fresh food, especially vegetables, fish, meat and fruits.

The unorganized and traditional retail market segment constitutes 95 percent of the retail sector in Bangladesh.

Hossain *et al.* (2010) report some features of the food processing sector of Bangladesh. The sector contributes 2 percent of GDP, accounts for 22 percent of total manufacturing production and engages 20 percent of the national labour force. Though the number of such enterprises (5,737 in 2007) is high, total factor productivity (TFP) growth is negligible or negative. The study reveals that more globally integrated enterprises, such as those with foreign investment and export-oriented firms, have higher TFP; and small and medium-sized firms are more productive than large ones.

Figure 2.1 Bangladesh market structure: Organized



Source: Hussain and Ara (2004).

Acharya (2004) discusses the market structure, marketing system and marketing institutions of the Indian food and agriculture sector. The market orientation of Indian farmers has increased manifold in terms of forward and backward linkages. Wholesale assembly and trade in food grains are handled by more than 2 million wholesalers. In retailing, there are more than 5 million private retailers and around the same number of fair price shops under the public distribution system (PDS). The demand for value-added services and processing has increased the role of processors. The processing sector of the food market (including fruits, vegetables and livestock products) has been growing rapidly and attracting investment since the launch of economic reforms in 1991.

The structural characteristics of the Indian agro-food market are:

- Market size is large and expanding;
- The market is dominated by the private sector;
- The unorganized small sector is larger than the organized sector although the share of the organized sector is increasing; and
- Due to infrastructure bottlenecks and excessive regulatory framework, efficiency is very low, adversely affecting farmers and consumers.

The marketing channels of agriculture commodities vary from commodity to commodity, but broadly can be divided into four groups:

- Direct, from farmers to consumers;
- Through public agencies or cooperative organizations;
- Through private wholesalers and retailers; and
- Through processors.

Specialization of traders in agriculture marketing has shown an increasing trend.

To eliminate intermediaries, direct marketing by farmers has been encouraged during the last one decade. Several states took the initiative and established farmers' markets such as *Apni Mandi* (Punjab), *Kisan Mandi* (Rajasthan), *Hadaspur Vegetable Market* (Pune), *Rythu Bazaars* (Andhra Pradesh) and *Krushak Bazaars* (Orissa). The establishment of such farmers' markets has helped both consumers and farmers. Actual buying and selling of commodities mainly take place in market yards and sub-yards (primary and secondary wholesale markets) and rural periodic markets (*haats*) spread throughout the country. As far as marketing institutions are concerned, depending on their objectives and roles, they can be grouped as public sector organizations, cooperatives and other formal/informal bodies (Acharya 2004).

In the food sector, public sector organizations include Food Corporation of India (FCI); Commodity Boards; Agricultural and Processed Food Products Export Development Authority; State Trading Corporation; Marine Products Export Development Authority; Commission for Agricultural Costs and Prices; Directorate of Marketing and Inspection; Departments of Food and Civil Supplies; State Agricultural Marketing Boards; Central and State Warehousing Corporations; and Agricultural Produce Market Committees. The roles and functions of each of these differ and include policy formulation, implementation, supervision, facilitation and direct entry in the market.

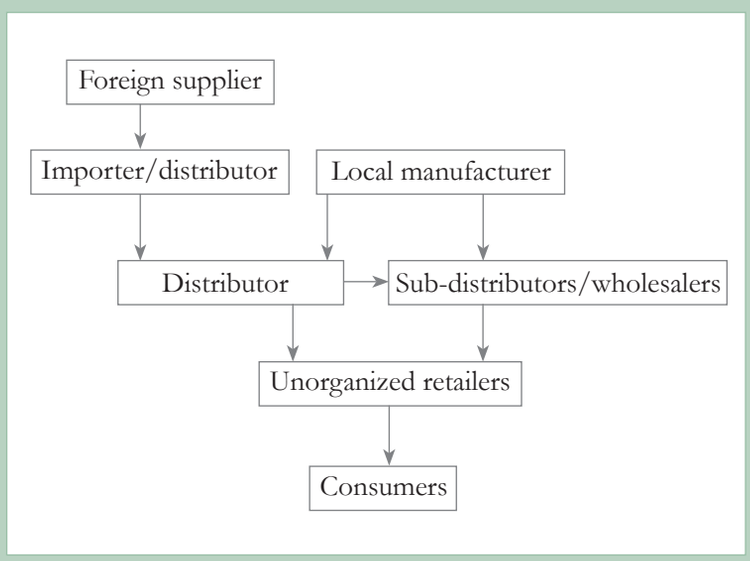
Kumar *et al.* (2007) have given stylized characteristics of India's food-grain management system. The existing system of food-grain management is characterized by the dominant presence of the government in all the basic aspects of marketing, namely procurement, storage, transport and distribution, with all these operations being bundled and carried out by the FCI, the nodal parastatal agency. The FCI procures food grains in the form of wheat or paddy directly from farmers and in the form of rice from rice millers. The price at which it procures is the procurement price (wheat/paddy) or the levy price (rice).

The procurement/levy price is set by the Commission for Agricultural Costs and Prices based on considerations of cost of production and includes a "fair" return to land and family labour of farmers. It is essentially an open-ended procurement system[10] under which the FCI is obligated to buy all the grains that farmers offer to sell at the prescribed procurement price as long as the grains meet a certain quality standard.

With regard to rice, the millers are obligated to sell a certain fraction of their produce to the FCI at the levy price. The operations of the FCI are aided by a paraphernalia of self-serving legislation, rules and guidelines, the most important of which are the monopoly control over international trade in food grains, and internal movement and storage restrictions on private traders. The former insulates the government from movements in world prices and allows it to pursue a domestic price policy of its own will. The latter, by not allowing any other option to farmers, enables the FCI to procure grains from surplus states.

To eliminate intermediaries, in India, direct marketing by farmers has been encouraged during the last one decade.

Figure 2.2 Bangladesh market structure: Unorganized



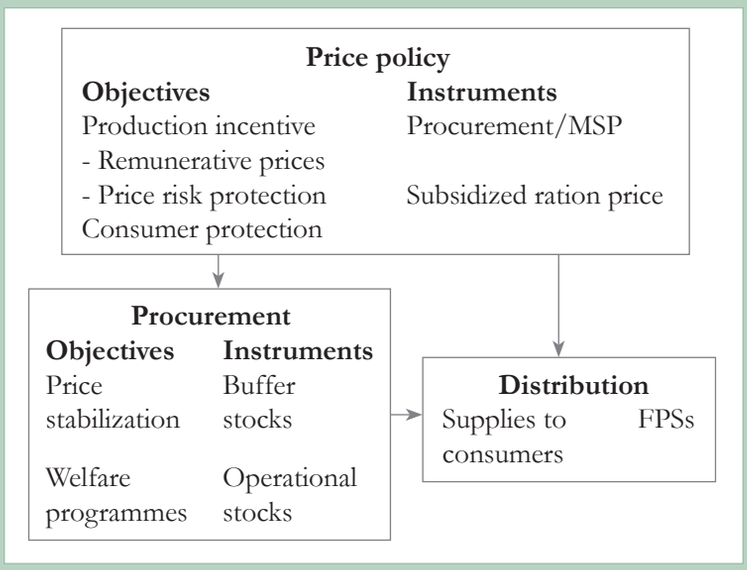
Source: Hussain and Ara (2004).

The grains so procured are used by the government to maintain a buffer stock and to meet the needs of the PDS and various other welfare programmes that it runs. The PDS involves a network of fair price shops through which grains (and a few other commodities) are sold at a subsidized price. The FCI is responsible for storing, transporting and distributing grains to fair price shops. As will be seen in subsequent chapters, the FCI and other state-level parastatal agencies involved in food-grain management have been observed to be highly inefficient.

The unorganized sector comprises 95 percent of all of Pakistan's food retail outlets.

The existing system of food-grain management not only bundles several operations with the FCI, but also several objectives (Figure 2.3). In terms of objectives, the existing system seeks to be simultaneously an incentive mechanism to farmers for promoting modern technologies for achieving self-sufficiency in food-grain supply; a consumption subsidy scheme for consumers through the operations of the PDS; an income support scheme for farmers by offering a minimum support price (MSP) that now includes a certain minimum return to farmers; and a price and supplies stabilization programme through procurement and buffer stock operations.

Figure 2.3 Food-grain management system in India



Source: Kumar et al. (2007).

The third and fourth objectives are to counter the production and price volatility natural to agriculture. The procurement operations of the FCI aim to meet the first and third objectives, while the storage and distribution operations of the FCI aim to meet the second and fourth objectives. Satisfying the conflicting objectives of farmers (who want higher prices) and consumers (who want cheap food) is not an easy task, especially given the uncertainties in predicting swings in output and prices. Past experience shows that the government, faced with resource constraints, often compromises on one or the other of its objectives.

Raja (2011) has given a description of the structure of the food retail sector of Pakistan, which has two components: the unorganized and the organized. The unorganized sector comprises 95 percent of all of Pakistan's food retail outlets. It is largely dominated by traditional independent small "mom and pop" stores. These stores are locally known as *kiryana* shops. The overall share of imported food products in *kiryana* shops is about 1 percent. *Kiryana* shops are located in all parts of the country with an average floor area of 3,000–6,000 square feet.

The second component is the modern retail chains, which have been introduced into Pakistan in the past several years and have elicited a positive customer response. These larger stores make up 5 percent of all Pakistan's retail food stores. There are two segments of modern food markets: one dominated by international groups and the other comprising domestic food retailers that are also utilizing modern retail formats. For example, large food retail stores (Metro, Makro and Carrefour) comprise about 2 percent of all Pakistani food retail outlets with an estimated annual turnover of US$176 million. The overall share of imported food products in large retail stores is about 5.6 percent. On the other hand, domestic convenience stores (e.g., utility stores, canteen stores) comprise about 3 percent of all Pakistani food retail outlets with an estimated annual

turnover of US$200 million. The overall share of imported food in convenience stores is about 6 percent.

Rupsena (2002), in a study of the food marketing structure of Sri Lanka, reveals the presence of a large number of intermediaries in post-harvest activities due to disorganized production and distribution systems. Weerahewa (2010) provides a market structure of food grains (paddy market) in Sri Lanka. In the marketing system, both the private sector and government play a role, but the level of their operations has changed significantly over the years. After liberalization, the private sector began to handle nearly 80 percent of rice marketing in Sri Lanka. Government involvement is now mainly confined to farm and retail. At the farm level, paddy purchases are made by assembly agents, brokers, small traders and rice millers. Assembly agents or assemblers are the first buyers of paddy, often referred to as collectors. Some assemblers are producers, input suppliers and grocery traders. The private marketing channel that developed following liberalization is shown in Figure 2.4.

The literature does not provide a definitive picture of the market structure for paddy in Sri Lanka. According to Rupsena (2002), the major reason for low farm-gate prices is that buyers do not compete in pricing: as the number of paddy collectors or millers is small than the number of paddy suppliers, the former may enjoy oligopsony power. Hence, competition is limited in farm markets in Sri Lanka due to the dominance of a few traders.

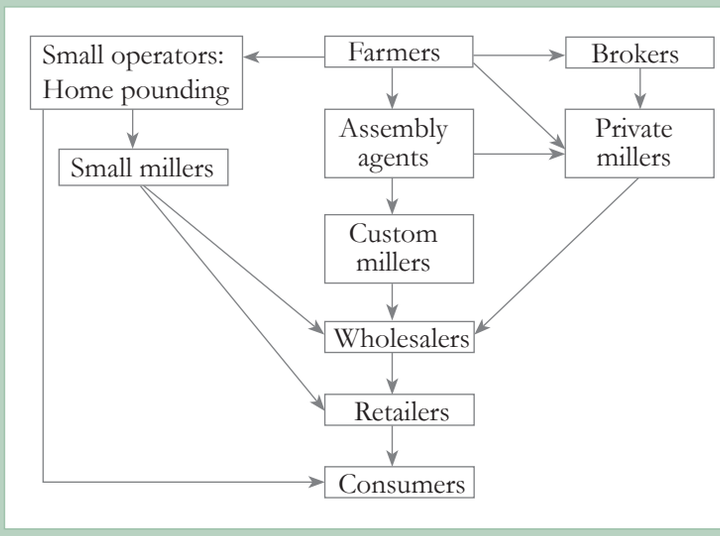
Nepal has been pursuing a market-oriented economic policy since 1990. To regulate economic activities according to the principles of market economy, a competition law has also been enforced. However, syndication and other anti-competitive practices have continued in Nepalese markets. Specially, the syndicate system continues to have a profound effect on the transport system in Nepal. The syndicate system in transport has resulted in a severe rise in transportation costs and ultimately in the rise in prices of essential goods (including food prices). However, actual data on the rise in prices due to the syndicate system are not available. Nevertheless, the seriousness of the problem can be inferred from the strong contempt of and protests against the system by the business community.[11]

Pyakuryal *et al.* (2010) provide a picture of the public procurement and distribution system in Nepal where the most important component is the Nepal Food Corporation (NFC). Traditionally, the NFC procured food from local markets or directly from farmers in food-surplus areas at a price equal to or above MSP. Following liberalization, the government discontinued MSP, so the NFC procured rice in the open market. NFC procurement of wheat and paddy at MSP was finally stopped in 2007, and since then it has procured food grains at market prices usually from traders and open markets. The losses of NFC are largely attributable to high marketing costs, mainly handling costs.

Competition is limited in farm markets in Sri Lanka due to the dominance of a few traders.

On the revenue side, NFC prices are lower than open-market prices. High administrative costs, interest charges on ac-

Figure 2.4 Paddy marketing channels in Sri Lanka



Source: Weerahewa (2010).

cumulated losses and a lower sales price have resulted in heavy losses for the NFC. Hence, given the higher efficiency of the private sector and its still limited role, there is a basis for exploring public-private partnership to ensure greater food security.

Let us now consider the literature related to food-price inflation in South Asian countries. According to World Bank (2011b), in Bangladesh, food-price inflation is the main driver of overall inflation. In January 2011, non-food inflation was 3.8 percent. Growth of monetary aggregates was high because of high growth in credit to public and private enterprises. Islam (2008) has identified a number of external and internal factors that have contributed to the current inflationary pressure in Bangladesh. Bangladesh is not self-sufficient in food production; the country depends on external markets for cereals (particularly wheat and rice), pulses, edible oil, milk products and other essentials. Further, internal demand for food is increasing proportionately more than supply. As the net domestic production of food such as cereals and edible oil is not sufficient to meet demand, the demand-supply gap is met through imports.

In Bangladesh, food-price inflation is the main driver of overall inflation.

Further, the market mechanism in Bangladesh is highly distorted. The gap between retail and wholesale market prices is substantial and it is widely believed that a group of traders controls the markets through syndication (oligopoly-type market).[12] In order to break the monopoly of commodity traders and unscrupulous businesspeople who are engaged in hoarding activities, the government has taken some stern actions. However, some of its measures have proven to be counter-productive and instigated price hikes. The drive against so-called unscrupulous businesspeople has greatly constrained commodity imports.

Rakshit (2011) points out that the mainstream theory of inflation has failed to explain inflationary behaviour in India. He argues that the source of inflation during the period 2006–2010 was not excess demand but rather sector-specific cost-push factors such as the price of fuel which determine Wholesale Price Index (WPI) inflation, or adverse supply shocks in agriculture output which determine CPI inflation. Mundle and Sen (2011), as discussed in Bose (2012), view that cost-push pressures originate from high international prices of metal, fuel and food, which in an open economy are transmitted to domestic prices.

A second view on cost-push factors perceives the problem as originating in the agriculture sector. Referring to the structuralist understanding of inflation, Balakrishnan (2011)—as discussed in Bose (2012)—argues that the trajectory of inflation in India over the past decade or so can be explained by the relative prices of agriculture products in general and the relative prices of food in particular. Chand (2010) pointed out that between 2004–05 and 2009–10, growth in food consumption on an average stood at 4.1 percent, whereas growth in food production remained at 3.1 percent, leading to a serious mismatch between demand and supply. A related point of concern is that record food production, as in 2010–11, is not bringing down agriculture prices. The higher costs of purchased inputs, which are increasingly used, do not allow producers to lower prices.

As reported by Bose (2012), Mridul Saggar of Reserve Bank of India (RBI) gives an explanation on the demand side. He argues that protein-based items in the consumption basket are rising both in urban and rural areas. Induced by high incomes, this is contributing to protein inflation and thereby food inflation.

Basu (2011), referring to the recent Indian experience, argues that while the government has steadily procured food grains, especially wheat and rice, it has not done equally well in releasing the grains when the need arises. Doing the former and not the latter has meant that the net effect has been to raise the average price of food. In that situation, a

good market intervention entails buying up when prices are low and selling when prices are high.

A World Bank study on food inflation in India (World Bank 2011b) explains that domestic inflation was lower than the regional average prior to international commodity-price boom. This may be because government policies protected consumers from higher international energy prices. Inflation started rising in mid-2009 because of the impact of deficient monsoon rains on agriculture production and food prices, and some delayed pass-through of higher oil prices. Indian inflation reached a high of 16 percent in January 2010, the highest in the region at the time, but has since declined to slightly below 10 percent, which is about average. Core inflation has been on a rising trend since mid-2009 and reached 8.9 percent in March 2011.

Abdullah and Khalim (2009) attempt to identify the determinants of food-price inflation in Pakistan. They use Johansen's cointegration technique to find out the long-run relationships among food-price inflation and its determinants. The results reveal that both demand- and supply-side factors determine food-price inflation in Pakistan. The authors conclude that food-price inflation is not a monetary phenomenon in Pakistan (money supply growth is statistically insignificant) while supply-side factors or structural factors have a dominant role in determining food prices. "Inflation inertia" is found to play a dominant role in determining food-price inflation both in the long run and in the short run in Pakistan.

The factors behind the inertia include inflation expectations, administered prices of energy (petroleum products, gas and electricity) and agriculture products, and government's monetary policy and fiscal policy. Support prices are the next major source of food-price inflation in Pakistan. Economic growth (increase in per capita GDP) is also contributing towards food-price inflation in Pakistan.

Turning to the case of Nepal, Nepal Rastra Bank (2007) identifies the following as major supply-side factors determining food-price inflation: near-stagnant supply of cereal; slow long-term productivity growth in major cereal crops with considerable yield gap; self-consumption-driven farming system; constraints related to crop area; and inefficient irrigation facilities combined with low accessibility to agriculture inputs.

According to a review of Nepal's food market (WFP 2009a), the major causes of food-price inflation are high reliance on imports at a time of rapidly rising global food prices, the 2007 Indian export ban on key food commodities, high transportation costs, reduced road access caused by natural disasters, civil unrest, and poor base stocks of food.

Nepal's agriculture market is poorly integrated. Large price differentials between remote districts and easily accessible districts and frequent supply constraints reflect the low degree of integration. Poor transport infrastructure under a difficult terrain in hills and mountains as well as low purchasing power among the rural population are the major factors contributing to the poor degree of market integration. The global food crisis led to a rapid price increase in the Nepalese market during 2007–2008 and the price rise continues. Nepal is vulnerable to shocks experienced by the international food market. However, despite the price deflation in the international food market during late 2008 and early 2009, prices in Nepal continue to increase. This is attributed to domestic factors, including poor domestic agriculture production; India enforcing a trade ban on various key commodities; high transportation costs due to poor infrastructure; non-market-based fuel pricing; poorly integrated markets; anticompetitive market behaviour; and frequent political unrest resulting in road and market closure (WFP 2009b).

Despite the price deflation in the international food market during late 2008 and early 2009, prices in Nepal continue to increase.

Finally, in Sri Lanka, according to data from the Department of Census and Sta-

tistics, average food prices were 40 percent higher in April 2008 than a year earlier. Food makes up 46.7 percent of the total CPI basket and contributed three quarters of the total annual increase in the CPI, which stood at 25 percent in April 2008. Due to the large weight of food in the CPI, food-price inflation is stirring up general inflation in the country (World Bank 2011a).

A study by the Central Bank of Sri Lanka (2008) identifies international factors as crucially driving domestic food-price inflation during 2007–2008. The international factors include world supply shortages of agriculture commodities, mainly wheat and milk products, created by crop failures in major producing countries due to bad weather conditions; and the diversion of major agriculture produce such as sugar, maize, wheat, corn and edible oil to bio-fuel production due to high oil prices. The study shows that the impact of these factors on inflation has been very severe for Sri Lanka because of its heavy dependence on imports for such items.

Issues for discussion

- How can the dichotomy between the organized and the unorganized food markets be addressed through effective competition policy?
- How can private sector participation in the food retail sector be enhanced to make it more organized?

Chapter 3

Causes and consequences of food-price rise in South Asia

3.1 The trajectory of inflation in recent years

Hunger and food crises are endemic to the modern world, and the eruption of a rapid increase in food prices provided a fresh window on this fact. The "agflation" that brought this crisis to the world's attention at the turn of 2008 saw the doubling of maize prices, wheat prices rising by 50 percent, and rice price increasing by as much as 70 percent, bringing the world to a "post-food-surplus era".[13]

Rising global food prices are getting transmitted into higher domestic food prices in developing Asian economies. For countries that import food, the extent of transmission from global to domestic prices is dependent on the exchange rate, trade policy, other policy measures, and the speed of adjustment (ADB 2008a). But global prices are only one factor influencing local food prices. For countries that are not heavily reliant on imports, market conditions—local crop conditions, supply costs and policy measures—are among the important determinants of domestic food prices (World Bank 2011a).

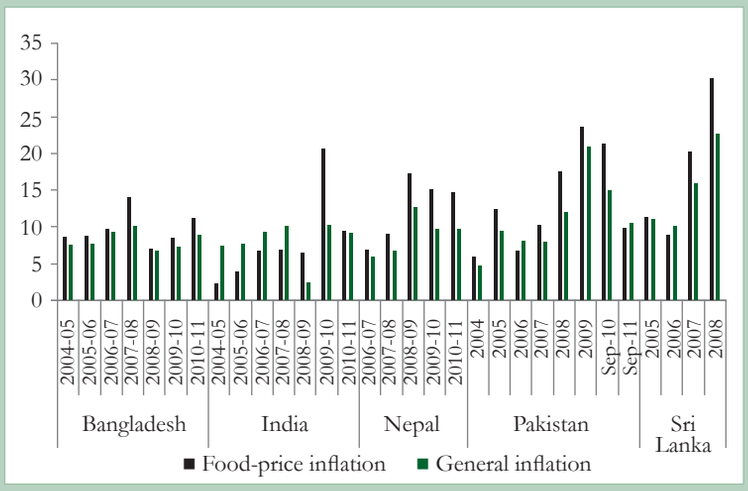
Inflation in most countries fell to low single digits towards the end of 2009. Since then, average inflation has been on an upward trajectory and reached 10 percent by the end of 2010. South Asian countries broadly share this rebound in inflation with other emerging-market countries because the rebound is driven in part by the trajectory of international commodity prices.

The rise in food prices varied significantly among countries (Figure 3.1). India was quite successful in shielding consumers from global food-price inflation, even if this success came partially at the expense of households who were net food sellers. Bangladesh, Nepal, Pakistan and Sri Lanka turned out to be much more vulnerable.

India was quite successful in shielding consumers from global food-price inflation.

During the 2007–2008 food crisis, food-price inflation became the main driver of general inflation in most countries of South Asia (Table 3.1). Although in the second half of 2008, the role of food-price increases in overall inflation diminished in most countries of the region after global prices came down, in 2010 food prices again became the main

Figure 3.1 Inflation in South Asia (year-on-year change in percent)



Source: Data from Bangladesh Bureau of Statistics; Reserve Bank of India & Office of Economic Advisor, India; Nepal Rastra Bank; State Bank of Pakistan; Central Bank of Sri Lanka.

Table 3.1 Inflation in South Asia (year-on-year change in percent)

Country	Year	Food-price inflation	Non-food price inflation	General inflation
Bangladesh	2004–05	8.7	5.3	7.4
	2005–06	8.8	5.7	7.5
	2006–07	9.8	8.3	9.2
	2007–08	14.1	3.5	10.0
	2008–09	7.2	5.9	6.7
	2009–10	8.5	5.5	7.3
	2010–11	11.3	4.2	8.8
India	2004–05	2.3	4.6	7.4
	2005–06	3.9	-5.5	7.5
	2006–07	6.9	1.3	9.2
	2007–08	7.0	12.9	10.0
	2008–09	6.6	13.7	2.3
	2009–10	20.6	20.4	10.2
	2010–11	9.5	25.9	9.0
Nepal	2006–07	7.0	4.9	5.9
	2007–08	9.0	4.1	6.7
	2008–09	17.3	8.9	12.6
	2009–10	15.1	4.9	9.6
	2010–11	14.7	5.4	9.6
Pakistan	2004	6.0	3.6	4.6
	2005	12.5	7.1	9.3
	2006	6.9	8.6	7.9
	2007	10.3	6.0	7.8
	2008	17.6	7.9	12.0
	2009	23.7	18.4	20.8
	Sep-10	21.3	10.5	14.9
	Sep-11	9.9	10.9	10.5
Sri Lanka	2005	11.4	5.6	11.0
	2006	8.9	5.6	10.0
	2007	20.3	6.0	15.8
	2008	30.3	7.7	22.6

Source: Bangladesh Bureau of Statistics; Reserve Bank of India & Office of Economic Advisor, India; Nepal Rastra Bank; State Bank of Pakistan; Central Bank of Sri Lanka.

factor driving general inflation in some countries, including India, Nepal and Pakistan (World Bank 2010b).

3.2 Causes of food-price inflation

The causes of this high food-price inflation can be analysed under the headings of external factors and internal factors (Chart 3.1). External factors can be structural or cyclical, and can also be analysed in terms of demand- and supply-side issues. However, it is difficult to distinguish structural and cyclical factors from demand- and supply-side issues as there exist close interrelationships among them. The nature of internal factors is more or less the same in all South Asian countries due to their common colonial heritage (excluding Nepal) and the universality of the problems. In this section, we explain the general external factors that have caused or contributed to food-price rises in South Asia in recent years. As regards internal factors, we explore country-specific issues as well as factors common to South Asia as a whole.

3.2.1 External factors

Structural and cyclical factors

As discussed earlier, a surge in international food prices gets transmitted into the region and into individual economies depending upon their degree of openness. There are some structural factors that are responsible for international food-price inflation. The major structural factor is the fall in food stocks in major grain-producing countries due to natural calamities. Weather-related shocks not only include familiar patterns of short-term weather variability but also the potential long-term effects of climate change on agriculture production.

For example, droughts in Australia, the US, the European Union (EU), Canada, Russia and Ukraine, and flooding in South Asia led to stagnation in production and supply in 2007–2008. Production growth fell below consumption growth for several years. Since June 2010, the weather has become more clearly a major factor than in 2008, resulting in a reduction in production and stocks. The covariant risk in global agriculture was highlighted in the simultaneous production losses in Canada, Russia, Ukraine and the EU, which fed into world price expectations by September 2010. In addition, weather-related shocks in Austra-

lia and Argentina due to *La Nina* added to impacts from a reduction in expected supplies from the southern hemisphere. Following production declines, cereal stocks of traditional developed-country exporters are estimated to have fallen by nearly 25 percent in 2010.[14]

More generally, the number of reported droughts, floods and extreme temperatures seems to be increasing (Figure 3.2). In 2010 alone, a record number of 19 nations set temperature records. The Russian heat wave was only one of many recent extreme weather events, from dry weather in Brazil to flooding in Australia, Pakistan and West Africa. Weather variability, possibly due to climate change, is having a significant impact on international food prices and hence on domestic prices in South Asia.

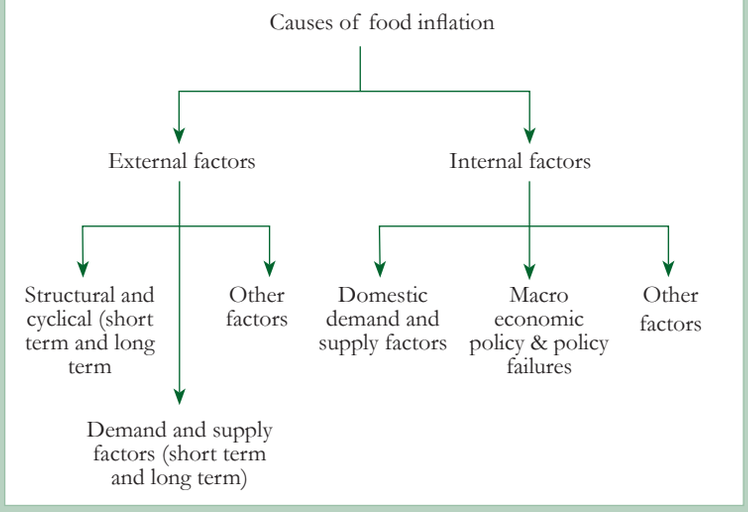
Another important structural factor is the rising scarcity of oil that led to a sustained increase in oil prices. Due to a close relationship between oil and food prices, a hike of the former has an added positive impact on the latter (ADB 2008a). The increases in fuel prices have also increased costs not only of agriculture inputs, most importantly fertilizers, but also of transportation (Figure 3.3).

The increase in energy prices has been very rapid and steep, with the Reuters-CRB energy price index more than doubling over a period of three years since the middle of 2004. Freight rates have also doubled, mainly within a one-year period beginning February 2006. In addition, FAO analysis has shown interesting upward correlation between higher fuel and food prices (Schmidhuber 2008). These structural and cyclical factors made international prices more volatile.

Aggregate demand- and supply-side factors

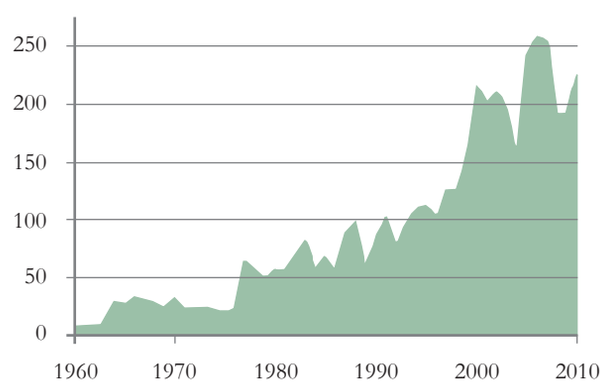
Demand-side factors include growing world population, strong income growth in emerging economies and a changing pattern of diet, away from staple food towards the consumption of processed food and meats. On the supply side, a major driver of the global food-price rises has been the rising cost of energy. Higher energy prices are transmitted into increased costs of fertilizers and costs of fuel for transportation and machinery. Furthermore, higher energy prices lower the production of food items because of competition for land from the production of crops for biofuel (Box 3.1).

Chart 3.1 Factors explaining food-price inflation



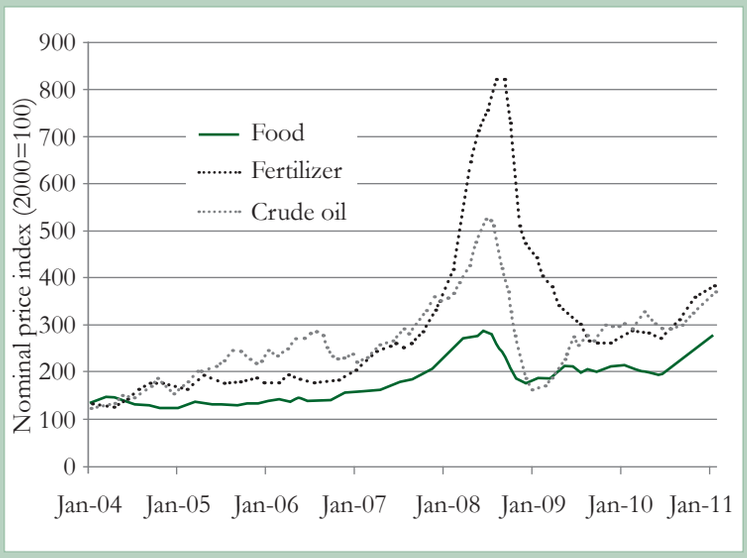
Source: Author's compilation.

Figure 3.2 No. of reported droughts, floods and extreme temperature events



Note: The share of actual events that are reported per year has significantly increased in recent years, but the growth rate may overstate the actual increase, reflecting both better reporting and increased occurrences.
Source: www.emdat.be, as quoted in World Bank (2011a).

Figure 3.3 Co-movement of fertilizer and oil prices



Source: World Bank (2011a).

Biofuel demand is rising and leading to diversion of grain, soybeans, sugar, and vegetable oil from use as food or feed. Cropping patterns away from food to biofuels may also reduce the available supply of land devoted to food. Growing urbanization and competing demand for land for commercial as opposed to agriculture purposes is also an important factor behind the recent food-price rise.

Increased speculation in agriculture commodity futures markets also played a vital role in food-price inflation.

In the case of South Asia, governments regulate domestic energy prices and hence the pass-through of international prices is limited. Therefore, the contribution of domestic energy prices to food-price inflation has been limited so far. In India, the prices of diesel, kerosene and liquefied petroleum gas (LPG) are regulated, while petrol prices have recently been deregulated in principle but still are adjusted only partially. Bangladesh and Sri Lanka allow gasoline prices to adjust over time, but keep diesel heavily subsidized to protect their farmers.

In Nepal, government cross-subsidizes diesel and LPG losses through the profits made by the public-sector natural monopoly on sales of petrol and airline fuel. Only Pakistan has a formula-based price adjustment mechanism for both diesel and gasoline. Governments in the region are providing electricity at subsidized prices to the agriculture sector. In India, many farmers receive free, unmetered electricity. Thus, energy prices do not play a major role in food-price inflation in South Asian countries (World Bank 2011b).

Other factors

Increased speculation in agriculture commodity futures markets also played a vital role in food-price inflation. There is now clear evidence that increased speculation in agriculture commodity futures markets by many hedge funds and mutual funds pushed up not only futures prices, but also lifted the spot prices of wheat, rice, maize and soybeans (Cooke and Robles 2009; Robles *et al.* 2009).[15]

Further, market-oriented policies are gradually making agriculture markets more transparent. Derivatives markets-based agriculture markets offer an expanding range of financial instruments to increase portfolio diversification and reduce risk exposures. The abundance of liquidity in certain parts of the world, reflecting favourable economic performances—notably among emerging economies, matched with low interest rates and high petroleum prices—makes such derivatives markets a magnet for speculators for spreading their risk and pursuing more lucrative returns. This influx of liquidity is likely to influence the underlying spot markets to the extent that they affect the decisions of farmers, traders, and processors of agriculture commodities.

Further, trade policy responses raised the amplitude of the grain price spikes in 2011 (World Bank 2011b). Policy responses to world food-price spikes have created more unpredictable trade distortions. Export bans and tactical reductions in import duties were used by many countries in 2008 and accounted for an estimated 45 percent of the world price increase for rice and 29 percent of the increase for wheat. These impacts

were compounded in 2008 by governments aggressively building up grain stocks in the face of high and escalating prices. According to the International Food Policy Research Institute, export restrictions may have been responsible for around 30 percent of the increase in the food price index during the first six months of 2008 (Rosegrant 2008).

3.2.2 Internal factors

Domestic demand- and supply-side factors

Considering the food-grain supply situation, it is evident that supply has increasingly lagged behind demand in South Asia (Table 3.2). Except in Pakistan and Sri Lanka for rice, consumption growth of wheat and rice in South Asia has exceeded production growth by substantial margins. The gap between consumption and production growth is especially large for wheat in India and Pakistan, and rice in India during 2000–2008. Considering the South Asia region as a whole, food-grain production growth (1 percent) is much lower than consumption growth (2.3 percent). This leads to a severe supply shortage in the region.

Demand pressure on cereals is relatively lower as demand is shifting towards a higher-protein diet. Higher-protein food products, fruits and vegetables were the main drivers of food inflation since 2008. The shift to higher-protein food is noticeable across the region.

Box 3.1 Impact of biofuel production on food inflation

Most studies that have looked at the causes of food-price inflation seem to agree that the demand for biofuels has been an important factor in keeping food prices at relatively high levels compared to those prevailing before 2006. Available data strongly suggest that increased demand for biofuels has diverted the use of maize away from food and feed towards biofuels (Abbott *et al.* 2008).

The increased demand for biofuels also severely affects world grain stocks. For example, according to the US Department of Agriculture, between 2001–02 and 2006–07, world stocks of maize had decreased by 28 percent. Similarly, between 2001–02 and 2007–08, wheat stock levels declined by 45 percent. Between 2004–05 and 2006–07, global maize production stayed roughly constant. However, there is no universal opinion regarding the relative contribution of biofuel demand to food-price increases.

The International Food Policy Research Institute (IFPRI), based on simulations with its International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) model, estimates that increased biofuel demand alone was responsible for at least 30 percent of global food-grain price increases in 2008 (IFPRI 2008). The contribution was 75 percent, according to Mitchell (2008), and 40–70 percent, according to Lipsky (2008). Rosegrant *et al.* (2008) estimate that biofuel demand was responsible for up to 47 percent of the maize price increase. IFPRI has projected that maize prices in 2020 will be 26 percent higher than under a scenario that keeps biofuel production at 2007 levels.

Source: World Bank (2010b).

Table 3.2 Average annual growth rates of production and consumption of rice and wheat in South Asia (2000–2008)

	Bangladesh	India	Nepal	Pakistan	Sri Lanka	South Asia
Production growth (%)						
Wheat	-8.8	0.3	2.1	0.3	0	1.6
Rice	2	1.5	0.2	1.8	2.2	0.2
Total	1.5	1	0.8	0.8	n.a	1
Consumption growth (%)						
Wheat	0	1.9	2.2	1.2	2	2.2
Rice	2.6	2.6	0.4	-1	0	2.4
Total	2.3	2.3	0.9	1	1.6	2.3
Population growth (%)	1.6	1.7	2.3	2.6	0.9	1.9

Source: World Bank (2010b).

Box 3.2 Policy instruments adopted to deal with food-price inflation

	Economic policies			
	Reduce taxes on food grains	Stock management	Export restrictions	Pricing policies
Bangladesh	Yes	Yes	Yes	Yes
India	Yes	Yes	Yes	Yes
Nepal	No	Very low	Yes	No
Pakistan	No	Yes	Yes	Yes
Sri Lanka	Yes	Govt. is considering establishment of a strategic rice reserve.	No explicit ban on rice exports although trade protection and other measures kept domestic prices relatively high.	Yes Cap on rice price. Farm-gate price of fertilizer kept constant (subsidy increased)
	Safety net programmes			
	Food for work	Food ration/stamps	School feeding	Rural employment schemes
Bangladesh	Yes	Yes	Yes	Yes
India	Yes	Yes	Yes	Yes
Nepal	Yes	No	Yes	No
Pakistan	No	No	Yes	No
Sri Lanka	No	Yes	Limited reach of school feeding programme.	No

Source: World Bank (2010b).

Policy failures have also played an important role in food-price inflation by causing market failure.

Short-term domestic supply shocks have also contributed to food-price inflation in some countries of South Asia. In India, food prices started rising again in mid-2009 after deficient monsoon rains. Unseasonal rains and transport disruption in November 2009 were also some noticeable causes of this inflation. In Pakistan, wheat price was soared due to crop damage from flooding during August-September 2010. This led to a jump in year-on-year food inflation to 21.2 percent in September 2010.

The impact of higher wheat prices was particularly large since wheat is the main grain staple. In Sri Lanka, vegetable prices surged after devastating floods in early January 2010. Bean prices rose 55 percent and coconut prices 70 percent compared to 2009. Some non-essential foods that are the preferred additions to dishes rose even more—red onions by 245 percent and chillies by 77 percent (World Bank 2010b).

Macroeconomic policy and policy failures

The main driver of inflation in South Asia is food inflation. But core inflation has been rising since 2009, pointing to general demand-side pressures. Current account deficits are also widening in the region. The deterioration in the current account balance also reflects the real appreciation of regional currencies, with the rising inflation rate differential between South Asian countries and their trading partners. South Asian governments have widened their macroeconomic policy stances to boost up their aggregate demand. With regard to monetary policy, monetary aggregates expanded in line with the economic recovery in most countries despite low policy rates compared to other regions.

Policy failures have also played an important role in food-price inflation by causing market failure. For example, Pakistan

and India completely banned wheat and rice exports as a policy measure to check domestic food inflation. But these policy decisions led to an adverse impact on the domestic prices of Bangladesh. Export restrictions not only dampen the incentive for local producers domestically, but also worsen the market conditions for import-dependent countries. They also increase price volatility as they make the international market smaller, stimulate smuggling and the formation of cartels, undermine trust in trade, and encourage protectionism. From a global perspective, such kind of *ad hoc* and sudden trade interventions are examples of policy failure which played a major role in huge spikes in food-grain prices (Childs and Kiawu 2009; Wright 2009). Box 3.2 lists the policy instruments employed by South Asian countries in response to food-price inflation.

Other factors

Food management is one of the important factors of food inflation. This issue is particularly important because there exists a gap between desired and actual action in the food sector. For instance, in India, during the first week of July 2008, a serious fall in sugarcane acreage was indicated. But export of sugar continued despite this signal. Between April and September 2008, India exported sugar worth US$960 million and in the following six months (October 2008–March 2009) it imported sugar worth US$127 million.

The situation turned precarious during 2009, and India imported sugar worth US$306 million during the first half of 2009–10 (CMIE 2009, 2010). In a short span of time, the price paid for imported sugar turned out to be more than double the price fetched by exports. Timely release of cereal stocks held by the FCI could have reduced prices substantially. Such instances necessitate a look at the weaknesses in food management strategies and policies (Chand 2010). Box 3.3 discusses food inflation as a structural problem in India.

Box 3.2 Food inflation as a structural problem in India

In India, stubbornly high food prices have called attention to inefficient market systems, weak storage infrastructure and stagnant productivity. The high income elasticity of food and rising income levels were good explanations for the faster growth in food demand. What is significant about the high food inflation in 2010 and much of 2011 is that there were several commodities which contributed to high prices: pulses, sugar, milk, eggs, fruit and vegetables. An important feature of several of these commodities is their short shelf-life.

On multiple fronts, the union government is proceeding to forge new compacts with the private-sector food industry, whether global, regional or national. Marketing arrangements in the supply chain thus have regained policy attention as farm prices have risen. FDI in retail is only a pointer to the rising importance of marketing chains for perishables in agriculture policy. A paper on FDI in multi-brand retailing has been circulated to generate informed discussion on the subject which will "enable the government to take appropriate policy decision at the appropriate time". The poor logistics of retail chain is one of the current structural problems in the Indian retail sector that is leading to an "inefficient market mechanism". Although India is the second largest producer of fruits and vegetables in the world (about 180 million tonnes), its retail sector does not have adequate integrated cold-chain infrastructure.

Further, it is evident that "intermediaries dominate the value chain", often flouting *mandi* norms, and their pricing lacks transparency. According to the union government, wholesale regulated markets governed by state Agriculture Produce Marketing Committee (APMC) Acts have developed a monopolistic and non-transparent character. Indian farmers are said to realize only one third of the total price paid by the final consumer, as against two thirds by farmers in nations with a higher share of organized retail (Goswami 2010). The APMC Acts have failed to put a proper regulatory mechanism for agriculture markets in place. The laws have not always been helpful instruments for market regulation. Thus, the concept of legally mandated regulation of agriculture markets, aimed at encouraging the orderly growth of farm marketing infrastructure and ensuring fair-trade practices, has not worked as intended.

There is also a big question mark on the efficacy of the public procurement and PDS set-up and on the rising bill of food subsidy. The Department of Industrial Policy has said that despite heavy subsidies, "overall food-based inflation has been a matter of great concern". It blames the "absence of a 'farm-to-fork' retail supply system" for being responsible for forcing consumers to "pay a premium for shortages and a charge for wastage".

Source: Goswami (2010); Bhide (2012).

3.3 Consequences of food inflation

Food-price inflation has intensified the food insecurity problem in South Asia.

The short-term consequences of food-price rises are both positive and negative. Large farmers, thanks to the transmission of world prices to them, are relatively better off despite the fact that rising petroleum prices have also significantly increased production and marketing costs. The consequences for small farmers in developing countries depend on whether they are net-food-surplus producers, and on whether world prices are transmitted to them. Consequences for poor urban consumers in developing countries are unequivocally negative in the short run.

In the longer run, improved farm incomes tend to push up rural and urban wages, which to some extent could mitigate longer-term price impacts. In South Asia, surveys show that rising inflation expectations and escalating food inflation are encouraging workers to demand higher wages, which contributes to higher core inflation. For instance, in Sri Lanka, the minimum wage for formal private-sector employees increased, and contributed to a 32 percent increase in the overall nominal wage rate index for the whole sector in 2010. Informal-sector wages in the agriculture and construction sectors also increased by 9.1 percent and 7.3 percent, respectively, in 2010. In Bangladesh, the monthly minimum-wage hikes for government workers was 80.4 percent with effect from July 2010 and in India, the average wage rates in the Indian Railways increased by 30.2 percent in 2009–10. Pakistan experienced a 50 percent wage hike for civil servants (World Bank 2010a).

The evidence from the 2008 food-price spike suggests that in most countries poverty increases when food prices rise substantially, even in rural areas, because both rural and urban poor are typically net consumers of food (Ivanic and Martin 2008). In 2010–11, the rise in food prices was seen across a larger range of commodities than in 2008.

Food-price inflation has thus intensified the food insecurity problem in South Asia. The poorest households who spend nearly four fifths of their incomes on food remain the most vulnerable to a sharp rise in prices of staple food items. Studies suggest that sharp rises in food prices increase poverty in many developing countries (Chaudhry and Chaudhry 2008; Ivanic and Martin 2008).

Issues for discussion

- How can policy failure be addressed to reduce the negative consequences of food-price inflation?
- What regional cooperation initiatives are needed to mitigate some of the causes of rising food prices?

Chapter 4

Competitive characteristics of the agro-food sector in South Asia

4.1 Competitive characteristics of the agro-food sector

In South Asian countries, government policy and intervention in agriculture markets was traditionally motivated by the need for food security. But policy makers began to realize the drawbacks of interventionist policies, including spiralling costs, persistent inefficiencies, leakages and corruption in the food management system. Governments in the region started liberalizing their food policies, with Sri Lanka leading the way, followed by Bangladesh, India, Nepal and Pakistan.

Distortions in the food market lead to anticompetitive behaviour and can cause both high domestic trade margins and high storage and transport costs. These tend to increase differences between farm-gate and retail prices. Typical distortions include: barriers to entry in domestic trading services, barriers to intra-country commodity movements, state intervention in the market, and inadequate marketing and transport infrastructure. South Asian countries suffer from all four problems in different degrees.

High domestic trade margins arise due to a highly concentrated trading sector where trading services are dominated by a few traders who act as price makers in the food market. Hence, the market structure is oligopsonistic and/or monopsonistic—traders effectively dictate the price. Similarly, transactions between traders (wholesalers/retailers) and final consumers can be described as oligopolistic and/or monopolistic—again, traders are the price makers. Consequently, it is quite common to find a low farm-gate price and a high retail price for the same commodity.

There is a need for serious regulatory intervention to address market failure and the resulting price instability. India has stepped forward to enact APMC[16] Acts to regulate food-market distortions, but till date the enforcement of the law has not been effective. Other South Asian countries are slow in terms of formulation or enforcement of competition regulations to curb food inflation.

It is quite common to find a low farm-gate price and a high retail price for the same commodity.

Lack of marketing infrastructure is another source of distortion in domestic trade. Large-scale markets involving many agents are rare in South Asian countries and hence this infrastructure barrier perpetuates dominance by a few large traders. This fosters spatial isolation of markets dominated by localized monopolies or monopsonies.

Another commonly observed distortion is direct state intervention[2] in markets through parastatal agencies or commodity boards. These agencies may be granted monopoly powers by law; in many cases, their large size and fiscal resources tend to make them dominant players, liable to distort commodity markets.

Thus, when trade liberalization opens up opportunities for farmers, parastatal agencies often prevent effective transmission of price signals to local markets,

keeping prices artificially low and perpetuating disincentives to farmers[18] (Kumar *et al.* 2010).

The food and agriculture systems in the South Asia region are moving rapidly towards market-driven systems with a greater reliance on input markets and growth of post-production enterprises. The role of the private sector is becoming increasingly important, small-holder farming is becoming commercialized, and the impact of the agro-industry in general and the food industry in particular on economic and social development is increasingly being felt.

The structure of the food industry is continually changing and evolving as food suppliers, manufacturers, and retailers adjust to meet the needs of consumers, who are increasingly demanding a wider variety of higher-quality products. Having first-hand knowledge of consumer preferences and purchase habits, food retailers are positioned to transmit this information upstream to other segments of the supply chain.

An increasing degree of vertical integration is visible within the food and agribusiness network.

In the quest to meet consumer demands for variety, affordability, safety and quality, the food retail sector is constantly evolving and generating innovative sale formats. The structural transformation of the retail sector that has taken place in South Asia can be analysed in terms of the changes of the characteristics of the exchange itself—such as location and volume, and demand and supply.

The diversification of diets towards high-value agriculture products such as fruits and vegetables, milk, meat and fish, and the rapid rise of organized retail in food (i.e., the emergence of supermarkets) are two main demand- and supply-side trends that have played a vital role in this structural transformation. These trends share some common drivers (income growth and urbanization), reinforce each other (as supermarkets build and extend markets for processed and semi-processed products like dairy, processed horticulture products and meat) and transform each other as consumers press for quality and safe produce. Supermarket chains transform their supply chains for better coordination and traceability.

In practice, however, an increasing degree of vertical integration is visible within the food and agribusiness network. Vertical integration in the food sector is one of the decisive factors influencing market structure and competitiveness in terms of forward and backward linkages. In India's food industry (food production, processing and distribution), for example, the reach of powerful transnational and national food conglomerates is expanding. They are investing heavily in deep forward and backward integration of crop production, food trade, storage, processing and retail. This, along with the growth of agriculture commodity markets, provides the background to steady inflation in staple food baskets (Goswami 2010).

The power of transnational firms within the global food system is growing along with agriculture, energy and financial market integration on a global scale. This poses significant threats to global food security, despite the advanced production and communication systems these firms bring (Wise and Murphy 2012).

Schutter (2010), on the same issue, points out: "Disproportionate buyer power, which arises from excessive buyer concentration in food supply chains (among commodity buyers, food processors and retailers), tends to depress prices that food producers at the bottom of those chains receive for their produce. This in turn means lower incomes for these producers, which may have an impact on their ability to invest for the future and climb up the value chain, and it may lead them to lower wages that they pay the workers that they employ. There is thus a direct link between the ability of competition regimes to address abuses of buyer power in supply chains, and the enjoyment of the right to adequate food." This excessive buyer power harms both ends of the food distribution chain, the

(usually small) direct producers and the final consumers (Ganesh 2011).

The extreme concentration in the middle of global supply chains is already a matter of major concern. Such concentration gives these large companies considerable power to set the terms, condition and prices of the produce they acquire from farmers. This can even deprive farmers of the ability to earn enough income to feed their households. Schutter (2010) argues that it is, therefore, necessary for national competition authorities as well as global legal regimes to be in place to prevent such rampant abuse of power.

4.2 Case studies on anticompetitive practices

4.2.1 Vegetable prices in Dhaka[19]

The vegetable market in Dhaka, Bangladesh provides us with an interesting insight. Table 4.1 provides a vivid picture about the difference between farm-gate and retail-market prices. Farmers are losing as they fail to cover the cost of production. The end consumers are suffering because they have to pay substantially higher prices. Who are responsible for this discrepancy?

The main culprits are the *foria* (intermediaries). They collude among themselves and offer a low price to farmers. They collect vegetables at low prices from the rural parts of Bangladesh. These intermediaries again collude with wholesalers in big-city markets. Unofficial sources report that these wholesalers are the principal agents. They have the financial clout to dictate terms and conditions to the intermediaries. The intermediaries borrow money from these big-city wholesale agents to buy products from rural marketplaces. Since vegetable products are perishable items, the risk is high. This fact makes the *foria* more dependent on and vulnerable to the big-city wholesale agents. Farmers across the country face a substantial amount of loss due to the absence of an efficient market mechanism and government policy support. According to Tarikul Islam, a farmer in Kudalia village in Sadarupazila of Jessore, growing cabbage on 33 decimals of land cost him about Taka 12,000, but he received only Taka 7,000 for around 50 percent of the produce. Transport cost has risen substantially after the recent appreciation of subsidized fuel prices across the country. This is one issue which is affecting the market adversely. However, one cannot ignore the anticompetitive practices adopted by businesspeople. Producers and consumers bear the brunt while traders profiteer.

Table 4.1 Vegetable prices in Bangladesh

Vegetable (kg/piece)	Farm-gate price (Taka)	Retail-market price in Dhaka (Taka)
Potato	4–6 per kg	14–16 per kg
Brinjal	10–12 per kg	25–30 per kg
Cauliflower	3–6 per piece	10–15 per piece
Cabbage	3–6 per piece	10–15 per piece
Beans	10–12 per kg	20–25 per kg
Tomato	6–10 per kg	20–25 per kg
Radish	1–3 per kg	10–12 per kg
Water pumpkin	15–20 per piece	35–40 per piece
Garlic	45–50 per kg	60–80 per kg
Onion	8–10 per kg	15–16 per kg

Source: www.thedailystar.net/newDesign/news-details.php?nid=220057

4.2.2 Sugar industry in Bangladesh[20]

Sixteen state-owned mills and four private-sector refiners are the players in the sugar market in Bangladesh. Domestic sugar production is entirely dependent on state subsidies to state-owned mills.

Sugar consumed by individuals comes from three main sources: private-sector sugar refiners, which import raw sugar and process it; the government-run Bangladesh Sugar and Food Industries Corporation (BSFIC) that mills domestically grown sugarcane; and imports. Table 4.2 shows the sugar market shares of different participants.

At the time of the study, there were four private companies in the market involved in the refining of imported raw sugar. All are conglomerates (i.e., sugar is only one

Farmers across Bangladesh face a substantial amount of loss due to the absence of an efficient market mechanism and government policy support.

of their products) and are companies with a long heritage in the edible items market. According to evidence based on interviews, they are also profitable. The largest has an estimated 46 percent market share. As these four refiners are large conglomerates, they have access to well-established distribution channels, which they also use to distribute other edible products that they manufacture. In this close oligopolistic structure, a new entrant would face difficulties accessing distribution channels that may represent a barrier to entry.

However, according to a newspaper report, another conglomerate did enter the sugar market in 2009,[21] which indicates that this company is likely to already have had a developed distribution network. There have also been newspaper reports suggesting collusion within the sugar market, with allegations that private refineries and/or the wholesalers were restricting supply in order to increase prices.[22] It has been suggested that this has been facilitated by the industry association, to which all four refineries belong.[23] This reveals a strong anticompetitive behaviour and is an issue that a Competition Authority could investigate, if one is established in Bangladesh.

Collusion among conglomerates has kept sugar prices high in Bangladesh.

BSFIC is an apex body which manages and controls 16 state-owned sugar mills that buy sugarcane from farmers in Bangladesh and process the same. The level of sugar production per hectare (1.4 tonnes) is relatively low in Bangladesh. This is because of inefficiencies in the growing of cane and in the processing of cane into sugar. Inefficiencies in the growing of cane can be attributed to the fact that Bangladesh's sugar-growing regions are characterized by many smallholder farmers, which reduces scale economies in production and contributes to low yields. This also increases transaction costs associated with coordinating cane supply from many farmers. Inefficiencies in the milling of cane can be attributed to the use of outdated milling machinery and poor management. Traditionally, the government makes formal contracts with mill-zone sugar producers to produce and sell all of their production to government sugar mills. The government heavily subsidizes the price of BSFIC sugar which is likely to be necessary if BSFIC sugar is to compete with sugar from private refineries. BSFIC data reveal that the mills in Bangladesh have been making losses consistently since at least the beginning of the 1990s. The ongoing subsidization of BSFIC sugar is increasingly recognized as being unsustainable.

Table 4.2 Shares of key players in the Bangladesh sugar market

Participants	Estimated share (in percent)
BSFIC	10–15
Direct import	5–10
Private-sector refiners	80

4.2.3 Onion cartel in India[24]

The Government of India's tax department has found the existence of cartels in onion trade in Maharashtra, Punjab and Haryana which are cornering the price-sensitive vegetable market across the country. The presence of cartels was discovered during raids the department conducted in December 2010. A top trade official in Maharashtra admitted the presence of black marketers who had taken advantage of the shortage to hike prices. A farmer gets around Rs 25–30 per kg of onion even as retail prices of the commodity hover around Rs 70–80 when the mark-up from wholesale to retail should be just Rs 5–6 for storage and transport. It is clear that the money is being pocketed by some unscrupulous traders.

Ruing the prevalence of certain forms of "implicit cartels" among onion traders, the then finance ministry's chief economic advisor, Kaushik Basu, said that they virtually block the entry of new players and attributed the price rise to this phenomenon. Despite the differ-

ences between the retail prices of onion in major cities and the farm-gate prices, there was a conspicuous absence of new market intermediaries, he noted. The CCI ordered a probe into the possible cartelization by onion traders that might have led to the spike in the prices of the commodity, a staple in most Indian diets.

4.2.4 The wheat market of north India

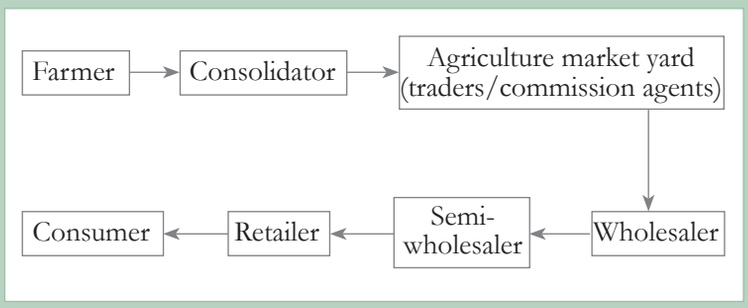
Based on the survey of a regulated wheat market in Narela (Delhi), Banerji and Meenakshi (2004) observe that the wheat market had a high degree of buyer concentration and collusion and thus cannot be characterized as competitive. The auction process is as follows: during the peak season, there were about 50 purchasers of wheat, most of them having small market shares.

The three largest buyers accounted for about 45 percent of market arrivals. The market also appeared to be characterized by collusion between the top three traders and a miller. Casual observation suggested that when one of the three traders bid, the other two did not. These players bought approximately the same quality wheat. So it is not a case of tacit coordination over quality differences.

4.2.5 Marketing of tomato in Bangalore, India

Anticompetitive practices in the tomato marketing chain in Bangalore, India result in a huge difference between farm-gate prices and retail prices. The marketing chain for tomato in Bangalore is presented in Chart 4.1. Table 4.3 depicts price mark-ups and wastage in the tomato market in Bangalore. Distortions in the marketing channel lead to a 48 percent wastage in total. The overall price mark-up is 310 percent. The retail-to-firm-gate ratio, i.e., the ratio of price paid by the consumer to the price received by the producer, is 4.1, which is one of the highest in the world.

Chart 4.1 Tomato marketing chain in Bangalore



4.2.6 Cartel in poultry industry in Pakistan[25]

The poultry industry in Pakistan can be thought of as a consolidation of many industries that are interconnected and have a stake in one another. Generally, a poultry industry would comprise the following sectors: feed manufacturers, breeders, hatcheries, broiler farms and layer farms.

The wheat market in north India has a high degree of buyer concentration and collusion.

The main end-user products of the poultry sector are broiler chicken meat and layer eggs. Some of the poultry companies in Pakistan are fully vertically integrated, having businesses that encompass all aspects of the poultry sector, starting from feed production and going down till the retail of the value-added product. Other undertakings are partially vertically integrated.

The Pakistan Poultry Association (PPA) is a representative of all sectors of the poultry industry in Pakistan and is reg-

Table 4.3 Mark-ups and wastage in tomato market

Marketing chain	Price/commission	Wastage (%)
Farmer	Rs. 2	20
Consolidator	10%	8
Agriculture market yard (trader/commission agent)	1–2%	-
Wholesaler	Rs. 2.50	5
Semi-wholesaler	Rs. 3.33	5
Retailer	Rs. 8.20	10
Overall price mark-up	310%	

Source: CUTS-CCIER (2007); Raghunath and Ashok (2004).

istered under the Trade Organizations Ordinance 2007. In July 2010, an anticompetitive practice was reported to the Competition Commission of Pakistan regarding cartelization in all markets of day-old chicks, poultry feed, broiler chicken, eggs and grandparent stock. The various sub-committees and wings of PPA, along with their members, have deliberately decided and announced the prices and mechanism for the sale of their respective poultry products. This kind of cartelization destroys competition and imposes an undue cost on consumers and the economy.

4.2.7 Cartel in ghee and cooking oil in Pakistan[26]

A manufacturers' association behaves like a cartel in the ghee and cooking oil sector in Pakistan.

A comprehensive study by the Competition Commission of Pakistan on the ghee and cooking oil sector identified features that prevent, restrict or distort competition in the sector. The Commission was apprised, through a working paper, of suspected anticompetitive activities of ghee and cooking oil manufacturers and their association—the Pakistan Vanaspati Manufacturers' Association (PVMA). Price is immediately increased when the price of edible oils goes up in the international market, but it is not reduced in the wake of a decline in edible oil prices in the international market. However, manufacturers can easily cut the price when the government intervenes.

The forum of PVMA is used to take a collective decision and set the price uniformly at a pre-determined level for all brands of ghee and cooking oil**.** PVMA appears to be playing the lead role to negotiate and fix the price with the government and such decisions of the association are binding on its member mills. PVMA has transgressed its mandate as an association and taken a lead role in the business decision-making process of its member mills.

Instead of member mills having a direct business relationship with their suppliers, PVMA enters into negotiations with edible oil transporters and National Logistics Cell (NLC) and decides the transport rates for its member mills. Such arrangements/agreements between PVMA and All Pakistan Oil Tankers Owners Association, Edible Oil Carriage Contractors Association and NLC to fix the transport rates for PVMA units restricts competition among the members of a transporters' association and also distorts competition between members of different transporters' associations and NLC.

PVMA is the dominant service provider for invoice verification. PVMA charges different rates to members and non-members for the same service without any objective justification.

4.3 Role of competition regulation in containing anticompetitive practices

The food-grain or the staple-food sector is mainly government-regulated as it is concerned with food security. Other sectors, including perishable food, are completely market-driven, with the informal sector dominating the food supply chain. Due to its informal nature, competition regulation is unable to play an effective role in this segment.

As the case studies suggest, the association of a particular organized agro-food sector is often engaged in anticompetitive practices, leading to price distortions in the market. In such cases, competition laws and regulations can be able to stabilize price hikes and volatility caused by anticompetitive practices.

The recent food-price inflation is a structural problem in South Asian countries. The case studies and the competitive characteristics of the food market implicitly reveal the fact that such anticompetitive practices are prevailing due to the absence of effective competition regulation. The food market distortions due to state intervention, and monopsonistic and monopolistic behaviour in domestic trade can be addressed by effective competition policy and regulation and institutional framework.

Further, the growing participation of the private sector in the food supply chain (e.g., supermarkets) is increasing buyers' concentration. This leads to an increase in the market power of large companies to set the terms, condition and prices of the produce they acquire from farmers. This harms both ends (i.e., farmers and consumers) of the food distribution chain. Although the presence of organized supermarkets is less in South Asian countries, it is likely to increase with liberalization of trade. Hence, formulation of a comprehensive competition policy to enhance the competitiveness of these private participants is required. Competition regulation can play an important role in containing food-price rises, especially by addressing factors arising on the supply side.

Issues for discussion

- How will a restructuring of the food market through competition policy and/or regulation help diffuse market power?
- How can regional integration help in the adoption of an effective competition policy and/or regulation to address food-price instability?

Chapter 5

Conclusion

The existence of an oligopolistic market structure with high concentration and market power points to competition law enforcement as a potential instrument to curb anticompetitive practices. The literature and the case studies indicate that imperfect market conditions are responsible for the anticompetitive behaviour. These market distortions lead to price distortions, as reflected in high domestic food prices, which hurt consumer interests.

As we have seen from the analysis of the market structure of the food sector, intermediaries are dominating the value chain of agriculture marketing. The domination of the unorganized sector is responsible for the high gap between farm-gate, wholesale and retail prices of food products. Competition policy is generally perceived as being applied less effectually in the agro-food sector. Agriculture markets in the region are performing inefficiently due to state intervention in pricing, entry barriers, and lack of effective regulation of retail sales. It is important to liberalize the entire chain of agriculture marketing to gain operational efficiency and to curb anticompetitive practices. Supporters of liberalization often argue that if the modern food retail sector is allowed a full round of liberalization, it may have positive outcomes, including a reduction in prices.

In India, high-powered policy groups brought back the agenda of permitting FDI in multi-product retail by arguing that the measure will help check food inflation in a significant manner (Times of India 2011). Retail chains for food and agro-products have gained increasing currency in a number of developing countries (UNIDO 2009; Shepherd 2005). The underlying rationale for promoting such global chains in retail trading of food and other agro-products rests on three broad economic arguments, namely economies of scale, globalized procurement and thereby expanded product choices, and reduced wastages. Together these bring higher levels of efficiency in a market sense. But it is imperative to note that global chains may continue to exclude the poor who, by and large, have remained outside the purview of market operations. An effective competition and regulation system is required.

Agriculture markets in the region are performing inefficiently due to state intervention in pricing, entry barriers, and lack of effective regulation of retail sales.

The agro-food sector in South Asia has remained a dominantly supply-driven system. Most producers remain de-linked from markets, emerging demand patterns and changing consumer preferences. The sector is characterized by small holdings, seasonality and a traditional production and management system. Thus, there is a need for imparting market orientation to the food and agriculture sector through dissemination of market information, establishing linkages between production and processing, and promoting competition and transparency in food markets.

In South Asian countries, particularly in India and Pakistan, the magnitude of government intervention in domestic grain markets continues to be large and fraught with serious inefficiencies. This type of government involvement in pro-

curement, storage and distribution is resulting in significant price distortions.

The Indian experience in intervening in grain markets highlights the problems with public procurement, stocking, and distribution at administratively fixed prices. If it aims to materially benefit the consumer, such a system will either impose an implicit tax on farmers or require enormous subsidies, which may not be fiscally sustainable.

Promoting competition will help improve resource allocation by farmers, as well as allow consumers to benefit from competitive prices of food.

Promoting competition, devoid of policy-induced distortions, will help improve resource allocation by farmers, as well as allow consumers to benefit from competitive prices of food. In a competitive environment, the private sector can also deliver in other spheres with a direct bearing on agriculture and food security, such as in agriculture extension services, value addition in agriculture, and the development of infrastructure.

Finally, considering the complex connections of food with longstanding and recent developments, addressing food inflation requires a strong governance of the food production and policy system.

The major challenge, therefore, for local, national and global actors is how to make governance work for all. Weak institutions and lack of effective coordination and participation at global, regional and national levels impede the implementation of sound food policies. Hence, it is becoming increasingly crucial to develop and implement adequate global food governance arrangements with the active involvement of major stakeholders.

Endnotes

1 The World Bank Food Price Index includes: wheat, maize, rice, barley, sugar, coconut oil, soybean oil, groundnut oil, palm oil, copra, soybeans, soybean meal, orange, banana, beef and chicken.

2 The World Bank Agriculture Price Index includes: the food price index, plus cocoa, coffee, tea, cotton, jute, rubber, tobacco and wood.

3 OECD and FAO (2010); USDA (2010); World Bank (2010).

4 Volatility is measured by the coefficient of variation, defined as a ratio of standard deviation to the average (mean) price. It is estimated using average monthly nominal international prices denominated in US$ for the period 1990–2010. The use of the standard deviation of the change in logarithmic prices, another frequently used measure of price volatility, confirms the increased price volatility post 2005, albeit at a slightly lower level.

5 We have considered five countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka, for our analysis.

6 Growth rate is calculated by fitting a semi-log linear trend equation: ln(price index)= a+b.t.

7 See Jacquemin (1990).

8 See Porter (1990).

9 http://www.caa.gov.lk/web/index.php

10 Although, in principle, the system is applicable to the country as a whole, effectively the system operates primarily in a few surplus states such as Punjab, Haryana, Uttar Pradesh and Andhra Pradesh. In these states, at least this open-ended procurement system effectively renders the procurement price to be a support price below which prices do not fall.

11 See Department of Commerce (2009).

12 We will see in chapter 4 a case study of Bangladesh which validates this point.

13 See Vidal (2007).

14 See FAO (2010).

15 Increased speculation in agriculture future markets has widely been attributed to falling worldwide stock markets and the subprime mortgage crisis in the United States that started in 2008 (World Bank 2010a).

16 Agriculture Produce Market Committees constituted as per the APMC Acts manage the markets. Over the years, to achieve an efficient system of buying and selling of agriculture commodities, most of the State Governments and Union Territories enacted legislation (Agriculture Produce Marketing (Regulation) Act) to provide for regulation of agriculture produce markets. Most of the wholesale markets and some of the rural primary markets have been brought under the regulation. Many of the regulated wholesale markets have a principal market with a large area and a relatively better infrastructure and a number of sub-yards attached to the principal market (Available at the website of the Ministry of Food Processing Industries, India).

[17] In South Asia, at the core of government intervention in food markets is an elaborate system of public procurement, storage and distribution created by a set of laws and institutions largely inherited from colonial governments. Over time, the public intervention system has been substantially rolled back in Bangladesh, Nepal and Sri Lanka in all its dimensions—procurement, storage and distribution—to reduce market distortions. Sri Lanka was an early starter in this process. Bangladesh has more or less done away with the system of rationing; public distribution is now limited largely to the military, the police force and public servants. Nepal too has restructured its food policies and has downsized the Nepal Food Corporation significantly and started placing greater reliance on open-market operations. India and Pakistan stand in contrast to this trend. Both countries maintain elaborate systems of public interventions in various aspects of grain marketing.

[18] Numerous agency problems plaguing the parastatals (such as incentive problems, job security for the employees without performance monitoring, lack of accountability and corruption) only reinforce these domestic market distortions.

[19] Information from *Daily Star*, "Gloomy winter for farmers", 02.02.12; and author's investigation.

[20] See Karen and Singh (2010).

[21] www.thefinancialexpress-bd.com/2009/04/05/63127.html

[22] *The Financial Express*, 13.09.09.

[23] However, the author has been unable to verify the validity of this report.

[24] Padmakshan, M and Ram Sahgal. "I-T dept. busts onion cartels across states; officials say prices dropped 15-31% post-crackdown", *Economic Times*, 12.01.11.

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South Asia Watch on Trade, Economics and Environment (SAWTEE) is a regional network that operates through its secretariat in Kathmandu and member institutions from five South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka. The overall objective of SAWTEE is to build the capacity of concerned stakeholders in South Asia in the context of liberalization and globalization.

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