

Agricultural Policy, Investment, and Marketing Efficiency in India

Marketing services are the wholesale and retail trade services used to bring domestically produced goods from the producer to the point of sale for intermediate and final demand. In India's agricultural and food markets, the marketing chain typically consists of a primary market where farmers sell their product, wholesale markets where wholesalers who purchase from primary markets sell to processors and retailers, and retail markets where retailers sell to consumers. In many cases, additional intermediaries may be present in supply chains, including village collectors who purchase from farmers and sell in primary markets or subwholesalers who operate between wholesalers and retailers. Many, if not most, of the intermediaries in India's agricultural supply chains are small-scale, nonintegrated marketing enterprises operating in the "unorganized" sector, for which little official data are available.

Inefficient marketing systems tax producers by placing downward pressure on farm gate prices and tax consumers by raising retail prices, thus representing a potentially important target for reform. In India, agriculture accounts for about 18 percent of gross domestic product (GDP) and 58 percent of employment, and food accounts for about 47 percent of consumer expenditure (Reserve Bank of India, 2007; Government of India, Ministry of Statistics and Programme Implementation, 2005, 2008). Thus, in India, like other developing countries, the economywide impacts of improved marketing efficiency on food demand, output, and trade are potentially larger than in more developed countries where agriculture and food account for smaller shares of the economy. Improved performance of agricultural marketing may also have desirable equity outcomes by reducing food costs for low-income rural and urban consumers, who tend to allocate the largest budget shares for food.

The significance of high marketing costs as a tax on farm output is evident in studies that have quantified government intervention in Indian agriculture, in which the combination of trade restrictions and high marketing costs often result in producer prices below import parity prices for many of India's major farm commodities (U.S. Department of Agriculture, 1994; Mullen et al., 2005). There is also strong evidence that an array of central and state government policies have tended to undermine incentives for private investment by farmers and agribusinesses. These policies may have contributed to an inefficient marketing system characterized by small-scale, nonintegrated marketing service enterprises (Landes, 2008; World Bank, 1999, 1997). These policy measures include the following:

- *Movement, storage, and pricing restrictions on food commodities.* The Essential Commodities Act allows central and state governments to administratively impose movement, storage, pricing, and quality restrictions on most food commodities. These restrictions are a major source of policy risk for agribusiness investment, particularly in larger scale firms that hold relatively large stocks or operate across state borders.

- *Agricultural marketing restrictions.* State agricultural marketing laws have historically required all farm produce to be sold in government-regulated markets and prohibited private investment in markets and vertical coordination or integration between agribusinesses and farmers. These rules are now in the process of reform but with full implementation in just a few states. Government-regulated markets continue to dominate agricultural marketing in most of the country.
- *Land tenure policies.* In addition to ceilings on land ownership, many states either prohibit farm land rental or provide insufficient legal protections to either party to a rental agreement to support an active rental market. These policies impede formation of larger operational holdings and farmer access to investment credit and complicate vertical coordination between growers, processors, and traders.
- *Scale limitations on agricultural processing firms.* Until the late 1990s, most agricultural processors were required to be “small-scale industries,” restricted to fixed capital assets of no more than 10 million rupees (Rs) (about \$247,000). Although most scale restrictions have been removed, agricultural marketing and processing remain dominated by small-scale firms.
- *Credit policies.* The high cost and limited availability of credit likely restricted new investment in agriculture and agribusiness during the 1990s. Terms and availability for institutional credit have improved significantly since 2000, but a large share of farmers and agribusinesses still depend on high-cost credit from traditional moneylenders.
- *Tax policies.* Until 2000, high excise tax rates of 8-16 percent on most processed agricultural products raised costs and deterred investment in food processing. These tax rates have been reduced sharply since 2001.

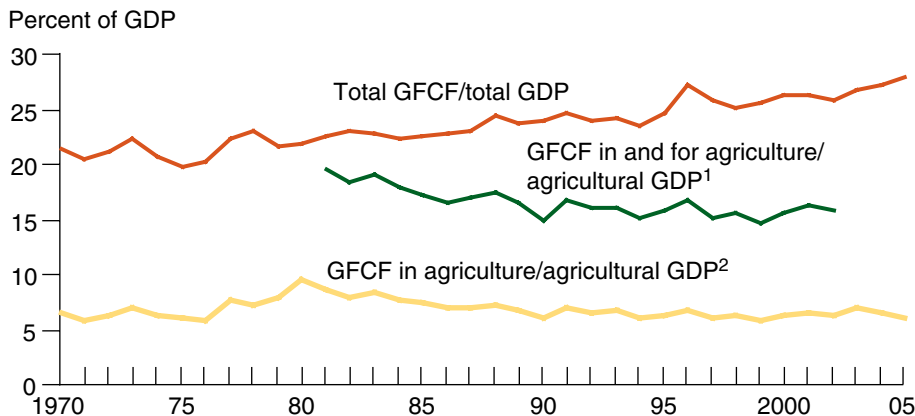
This policy environment, although changing since the late 1990s, has continued to be unfriendly to private investment in agricultural marketing and processing firms, particularly larger, integrated agribusinesses, and has corresponded with sluggish investment in Indian agriculture and agribusiness. During 2003-05, the share of investment in India’s GDP was 27 percent for the economy as a whole. The share of agricultural investment in agricultural GDP was just 6 percent for investment in production agriculture and 15 percent for investment in production agriculture and agricultural marketing infrastructure (fig. 1).³ Further, while total investment in the Indian economy has been accelerating and grew about 6.5 percent annually in real terms during 1997-2004, investment in agriculture has been slowing and grew just 2.2 percent annually during the same period. Additional evidence of the low levels of investment in Indian agribusiness includes the following:

- Although more than 90 percent of India’s food grains receive primary processing, mostly in medium- or small-scale mills, relatively small shares of other food products are processed. About 2.2 percent of fruit and vegetable production receives any processing, about 35 percent of milk is processed (mostly as packaged fluid milk), and between 6 and 21 percent of poultry and meat is processed (U.S. Department of Agriculture, 2008).

³Intercountry comparisons are complicated by data limitations and differences in definitions. If one uses comparable broad definitions of investment in agriculture, India’s agricultural investment-to-GDP ratio of 15 percent for 2003-05 falls well below Brazil’s 48 percent. If one uses comparable narrow definitions, India’s investment-to-GDP ratio of 7 percent also falls below China’s 10 percent (Landes, 2008).

Figure 1

Gross fixed capital formation (GFCF) in India as share of gross domestic product (GDP)



¹Includes onfarm investment and off-farm investment in agriculture-related infrastructure.

²Includes only on-farm investments.

Source: Reserve Bank of India, *Handbook of Statistics on the Indian Economy*, Government of India, Ministry of Agriculture, 2003.

- The scale of most of India’s soybean-processing plants is in the range of 170 tons/day, far below the average capacity of U.S. plants (2,700 tons/day) and the even larger average capacity of new plants in Brazil and Argentina (Reca, 2003).
- Only 1-2 percent of food products are sold through modern chain retail establishments (U.S. Department of Agriculture, 2006).

The strong expansion of consumer food demand, along with improved national tax and credit conditions and implementation of agricultural marketing reform in some states, has improved the climate for investment in Indian agriculture since 2001. There is evidence of increased investment in modern food retailing by domestic and multinational firms (Landes, 2008; Reardon and Gulati, 2008). Findings from research on Indian agricultural markets indicate that these new private-sector initiatives could significantly improve marketing efficiency:

- Vertical integration in India’s broiler industry is improving efficiency in production and, particularly, marketing. Variable production costs averaged 10 percent lower and producer-to-retail marketing margins 60 percent lower in regions where vertical integration accounted for the largest shares of production (Landes et al., 2004).⁴
- Domestic markets for wheat and rice are inefficient because of large numbers of intermediaries, high physical losses, and disincentives for private investment (World Bank, 1999). The average producer-to-retail markup for unprocessed, ungraded, bulk wheat is estimated at 52 percent of the producer price in the private sector, with the producer-to-wholesale markup for the public-sector Food Corporation of India (FCI) estimated at 51 percent of the producer price (Gandhi and Koshy, 2007). Reducing the role of the FCI and increased investment by the private

⁴The marketing margin is the difference between the retail and farm price.

sector have the potential to increase marketing efficiency and reduce costs (Jha et al., 2007).

- Oilseed and product marketing costs in India are inflated because the scale, technology, and capacity utilization rates of oilseed-processing plants are well below international standards. Efficiency gains associated with deregulation of marketing and processing of India's major oilseeds have been estimated at 22-44 percent (World Bank, 1997).
- The efficiency of India's horticultural product markets is impeded by high logistical costs, produce wastage rates of 20-40 percent, and low domestic quality standards. Indian growers, on average, receive 12-15 percent of the retail price of horticultural produce, compared with 30-40 percent in the United States, despite the little value that is added in the Indian market (Matoo et al., 2007).

Potential Implications of Marketing Efficiency Gains

The relatively low levels of efficiency in India's agricultural marketing chains tax the output of Indian producers and the consumption of Indian consumers, but also offer a potential source of improved agricultural competitiveness and income growth over the longer term. Deregulation of agricultural markets, such as removal of private movement and storage restrictions, can benefit both producers and consumers by improving incentives for private investment in market infrastructure, new technology, and more efficient horizontally or vertically integrated agribusinesses. Producers stand to gain when improved marketing efficiency increases demand and prices for their products. Consumers can gain if more efficient wholesale and retail trade services reduce consumer prices.

The net effect of improvements in marketing efficiency on agricultural producer prices is, however, not clear cut. For producers, an efficiency-induced fall in the retail cost of food should increase quantity demanded and create upward pressure on producer prices. At the same time, this price increase could be offset by declines in producer prices as gains in marketing efficiency reduce the prices of intermediate agricultural inputs and therefore lower the costs of production. For consumers, purchase price declines associated with more efficient marketing could be offset by upward price pressure from increased quantity demanded, particularly if demand is highly responsive to changes in price (price-elastic demand) and/or expanding supply through production or trade is inhibited by technical or resource constraints (price-inelastic supply). Across commodity sectors, marketing efficiency gains are likely to affect prices, output, and demand differently, depending on the sectors' use of marketing services and potential for efficiency gains.

The total—or economywide—impacts of increasing the efficiency of agricultural and food marketing may be substantial in a developing country like India because the agricultural sector accounts for a large share of economic activity and food accounts for a large share of household budget expenditures. Gains in farm output associated with higher farm prices may significantly affect aggregate supply of agricultural goods as well as all other goods and services and agricultural trade. Lower food prices for consumers can lead to potentially large economywide changes in consumption expenditures for food and other goods and in household savings and investment.

In addition to the potential for important impacts on aggregate production, consumption, and investment, more efficient agricultural and food marketing services also have the potential to benefit low-income consumers in particular. The distribution of benefits across income groups depends on differences in food budget shares across low- and high-income households, whether their food basket is composed of commodities associated with more or less use of marketing services, and differences in household income sources. A relatively large number of India's poorest households are in rural areas, spend a relatively large share of income on food, and earn most of their income as either farmers or farm laborers. To the extent that improved marketing efficiency boosts farm prices and farm output, net sellers of food tend to gain. All net buyers of food tend to gain as consumer prices of food fall and labor demand and wages rise. Lower income rural and urban households, which tend to allocate the largest shares of income to food and depend on wage income, stand to benefit more from marketing efficiency gains than higher income households. However, higher income households can also benefit from more efficient food marketing because they tend to purchase more of the types of foods associated with intensive use of marketing services, such as processed or retail convenience foods.