

# Agricultural Producer Support Estimates for Developing Countries

## Measurement Issues and Evidence from India, Indonesia, China, and Vietnam

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This study analyzes the evolution of agricultural policies from 1985 to 2002 in India, Indonesia, China, and Vietnam and provides empirical estimates of the degree of protection or disprotection to agriculture in these four countries, both by key commodities and in aggregate. Although the agricultural sector and agricultural policies of these countries differ in many respects, in all four cases the governments initially intervened in markets to pursue simultaneously the goals of self-sufficiency and low food prices for consumers. Subsequently, they moved from an autarkic and state-led setting to a more deregulated market environment with greater integration into the world economy and a new and larger role for the private sector. The reforms have improved economic efficiency in agricultural production, processing, and marketing. Yet the outcomes in terms of levels of support provided to agriculture display clear differences among commodities and countries.

### FEATURES OF THE STUDY

The study reviews the conceptual and empirical measurement issues that arise in assessing agricultural protection or disprotection among developing countries, in which most of the effects arise from the gap between domestic and international output or input prices and not from direct farm support payments. Three measurement issues are highlighted: the appropriate choice of an international reference price to which domestic prices are compared; the importance of careful measurement of various transaction costs and product quality; and effects related to less-than-complete commodity coverage when drawing conclusions about aggregate support levels.

A brief overview is provided of the general economic situation in each country since the 1980s; of the pivotal role of the agricultural sector in output, employment, and trade; and of the international trade and domestic policy

regimes for agriculture. The coverage of specific commodities, budgetary expenditures, and other unique aspects of each analysis are described. Commodity-specific market price support (MPS) and producer support estimates (PSEs) are calculated, and total PSE measures are computed for each country. For India and China, the analysis is extended to evaluate the effects of exchange rate misalignment on agricultural price incentives and the measures of agricultural support.

### KEY FINDINGS

For India, the results, based on eleven main commodities, indicate that support for agriculture has been largely counter-cyclical to world prices. Agricultural support increased when world prices were low (in the mid-1980s and 1998–2002) and decreased when world prices were high (in the early and mid-1990s). Budgetary payments for input subsidies to agriculture increased during the period covered by the study, but when both price support and budgetary costs are considered, the counter-cyclical dimension of agricultural policy dominates a trend from disprotection towards protection during 1985–2002.

Taking measurement issues into account, the results show less aggregate disprotection of Indian agriculture in the 1990s and less aggregate protection at the end of the decade than do earlier assessments. This study's careful choice of reference prices partly explains the difference. A larger component of the difference arises from whether the MPS protection or disprotection calculated for the covered commodities (primarily basic grains and oilseeds) is assumed (scaled up) to apply to commodities that were not included in the analysis (primarily livestock products and fruits and vegetables). The scaling up leads to a total MPS of greater absolute value than the MPS for the covered commodities, a result that is only appropriate when market price support for the two sets of commodities is similar.

For Indonesia, agricultural support is evaluated for four imported commodities (rice, sugar, maize, and soybeans) and two exported commodities (crude palm oil and natural rubber). The MPS and PSEs show that, in spite of the reforms, the government of Indonesia has consistently subsidized agriculture since 1990, although not uniformly across commodities. Support was interrupted briefly by the Asian financial crisis in 1997–98 but subsequently reverted to pre-crisis levels and increased during 2000–2002 for some crops and in aggregate.

For China, the analysis is limited to the years 1995–2001. Over this period, China's agricultural policies are estimated to have been nearly neutral (neither protection nor disprotection), although domestic prices lagged the run up of world prices in 1996, creating negative protection that year.

Vietnam has followed China in moving from a centrally planned economy toward a market-oriented economy under a communist political regime. The results, covering more than 70 percent of the value of agricultural output, show that most agricultural products were taxed in Vietnam in the mid-1980s until the mid-1990s. Domestic economic reforms have opened up the economy since the early 1990s, and there has been a policy shift from an import-substitution strategy toward export promotion, with decreasing disprotection turning to positive protection overall.

The effects of exchange rate misalignment on agricultural price incentives and the MPS and PSE measures of agricultural support are evaluated for India and China.

Overvaluation is found to have depressed agricultural prices in India before macroeconomic reforms in the early 1990s. For China, exchange rate undervaluation since the end of the 1990s has had more impact than direct policy effects, serving to raise prices of traded agricultural products.

## CONCLUSIONS

Taken together the reported measures of support and disprotection of specific crops and agriculture in total provide a reasonable basis for assessing the stance of agricultural policies of India, Indonesia, China, and Vietnam. Attention to measurement issues provides a sensitivity analysis. The results reported are indicative of the range of outcomes likely to be found more broadly among developing countries. From regimes of heavy intervention in agricultural markets, each of the four countries in the study has undergone a substantial reform process. Despite reforms, Indonesia has provided the most consistent support for agriculture, particularly food crops. India has supported agriculture when world prices have been low but has disprotected key grains, including rice and wheat, and also disprotected agriculture overall for many of the years covered by the study. In these two economies, the reform process does not seem to have fundamentally changed the pattern of observed support levels over the period 1985–2002. China and Vietnam, in contrast, have transitioned out of past communist disprotection of agriculture into providing net support to the sector. China's farmers could face substantial adjustment pressure if the yuan appreciates.

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