

## Books Reviewed

**Merlinda D. Ingo and John D. Nash (eds.). 2004. *Agriculture and the WTO: Creating a Trading System for Development*. Washington, D.C.: The World Bank, 408 pp., \$45.00.**

The World Bank has a view on how agricultural trade liberalization impacts economic development, and this book describes the basis of that perspective. It contains a description of numerous trade policies, some of which hinder and others which aid development. The trade policies are described, often modeled mathematically and graphically, and supported with data. The book has fifteen chapters and two appendices. Each chapter deals with a different aspect of trade policy.

This book is about the importance of gaining greater trade liberalization for developing countries and about some of the economic problems confronting those countries now and that will confront them in the future. The first two chapters discuss the importance of agricultural trade policies to developing economies. The authors place the current trade debate in the context of the Doha Round and the achievements of past GATT (General Agreement on Tariffs and Trade) rounds, particularly the Uruguay Round.

Chapters 3, 4, 5, and 6 describe different methods countries use to distort production, trade, and price. These chapters do a careful analysis of how developed country policies distort trade to the detriment of international competitors, particularly developing countries. In Chapter 3 much space is allocated to the discussion of export subsidies, while less space is given to food aid and export credit programs. Market access is the theme of Chapter 4, with the appropriate focus placed on import tariffs. Chapter 5 focuses on quota administration. The different types of quota administrations are modeled and discussed in detail. A cross-country comparison of quota levels and their impact on specific sectors in different countries is provided. Finally, Chapter 6 deals with the domestic levels of support for agriculture. In all

four of these chapters there is a nice mix of theory and data.

The remaining chapters are less integrated. Chapter 7 deals with how agricultural policy reform affects the income distribution in a country. It examines the change in the distribution of income when there is an equal reduction in support rates in all countries; it also examines it in a case study of trade liberalization in Mexico versus trade liberalization in rich countries. The analysis depends completely upon the OECD (Organization for Economic Cooperation and Development) policy evaluation model.

Chapters 8 and 9 deal with two issues on which much has been written, multifunctionality and food security. The discussion on multifunctionality attempts to broaden the issue to include less-developed regions and non-agricultural outputs from rural landscapes. The reference to “ecological goods and services” is a recognition that rural people, particularly farmers, produce more than food and biophysical products. The rather short chapter on food security fleshes out how food security is considered in the rules of the WTO (World Trade Organization). In many developing countries, poverty is a major social, political, and economic issue. The authors of this chapter come to the conclusion that multilateral trade liberalization produces benefits to net-food-importing countries. The terms-of-trade impacts resulting from agricultural trade liberalization depend upon the complete array of government policies and not just those in the agriculture sector.

Chapters 10 through 15 discuss special topics that link trade and development. The first of these is the issue of increased price risk, which may arise from a more open economy. It discusses the general perception that increased price transmission is associated with greater producer vulnerability to price risk. Some commonly employed policies to deal with price risk, such as floor prices, are highlighted. Chapter 11 focuses on the sanitary and phytosanitary agreement, food safety, and product attributes. It points out that develop-

ing countries are often unable to meet developed countries' food standards, and that this is a form of economic protection. Labeling requirements on food products are suggested to be a new technical barrier to trade. Chapter 12 focuses on agricultural biotechnology and highlights environmental problems, food labeling, and sanitary and phytosanitary issues. Little attention is paid to market structure concerns and the cost of biotechnology. Chapter 13 discusses the topical issue of intellectual property rights (IPRs). IPRs and to a much lesser extent the related concept of freedom-to-operate are put in the framework of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). How developing countries acquire access to new technology and information is extremely important. The chapter lists a number of international agreements on IPRs and how these agreements may affect the CGIAR (Consultative Group on International Agricultural Research) system.

Chapter 14 takes a different direction to all previous chapters. This chapter focuses on the Doha Round and on what policies would make economic sense for many developing countries. One of the most important topics covered is the Generalized System of Preferences (GSP) schemes. How the poorest developing countries will see market access change in the Doha Round depends upon their current GSP. Another important topic covered is the issue of exceptions from the disciplines in the Uruguay Round. The exceptions allow for long-time periods of adjustment in the reduction in government subsidies to agricultural producers. The final chapter (Chapter 15) deals with special trade agreements to improve market access for developing countries. This chapter includes a list of all trade agreements (i.e., other than the Uruguay Round) that impact upon agricultural trade. Each is discussed in varying detail.

This collection makes a number of contributions to the current trade and development literature; however, it does not break new ground. It sticks to the development-trade orthodoxy, i.e., trade is good for development. There is a rich list of trade agreements, trade barriers, and potential new technical trade barriers, and a review of the issues in the current Doha Round. From this perspective, the book will be very useful for students and to a limited extent policymakers. However, the chapters are poorly integrated. For example, there is little discussion of the link between the GSP and

the import quota policy of some developed nations. In this aspect it suffers the same problems of many edited volumes.

W. Hartley Furtan  
*University of Saskatchewan*  
Canada

**Yacov Tsur, Terry Roe, Rachid Doukkali, and Ariel Dinar. 2004. *Pricing Irrigation Water: Principles and Cases from Developing Countries*. Washington, D.C.: Resources for the Future, 319 pp., \$65.00.**

The stated purpose of this book is to draw on World Bank experience in order to provide policymakers and water managers with methods for evaluating alternative ways for pricing irrigation water under various circumstances. Such an endeavor is well worthwhile: improved pricing policies could help mitigate water scarcity problems that increasingly pose a major impediment to growth and development in many countries (see for example Gleick 2002). This book does contain important elements of a systematic framework for giving water managers and policymakers a fundamental understanding of the pros and cons of alternative pricing systems. But it ultimately falls short of providing a clear, comprehensive treatment that would be comprehensible to its chosen audience.

On the positive side, Chapter 3 develops a useful set of guidelines on water pricing (which reappear later on in an intuitively appealing narrative in Chapter 6), while Chapter 1 presents a nice overview highlighting the importance of linkages between activity at three levels: on the farm, in the water district, and in the macroeconomy. The water pricing guidelines conform to standard economic prescriptions: the desirability of marginal cost pricing, distortions due to average cost pricing, the need to keep fixed cost recovery needs from distorting pricing and therefore water use at the margin, the need for differential pricing of water from different sources or of different qualities (but not for different end uses, e.g., crops), the potential use of block rate pricing to reconcile marginal cost pricing with income distribution goals, the need to incorporate the costs implementing pricing policies into supply costs, etc. These guidelines are derived using economic principles pre-

sented at an advanced undergraduate level that should be well suited to water managers and policymakers. Demand for irrigation water is derived from profit maximization, as is supply. Irrigators' surplus and profits from water supply measure social welfare. Intertemporal considerations are treated heuristically. The main weakness is treating economies of scale in water supply only implicitly, via consideration of fixed cost recovery issues, an approach that creates some problems for the discussion of distortions due to average cost pricing (the unstated assumption is that marginal cost is greater than average cost, hence economies of scale are limited relative to demand). Overall, the treatment, while basic, succeeds in capturing many important albeit frequently forgotten subtleties.

Far less successful are the book's attempts to illustrate application of these guidelines using empirical case studies of water pricing in surface water irrigation projects in Morocco, China, Mexico, South Africa, and Turkey. Much of Chapter 4 is devoted to a description of Howitt's (1995) method of positive mathematical programming, which is used to estimate crop water demand—a topic unlikely to be of substantial interest to the book's putative audience. The analysis of a two-sector trade model (used to derive the second-best result that trade policy reform [reducing tariff barriers] can make society worse off by exacerbating distortions due to administrative water allocation) is equally unlikely to be of interest to (or comprehensible by) water managers and policymakers. Given the purported audience, it would have made more sense to relegate the technical material to an appendix (as was in fact done with the discussion of computable general equilibrium [CGE] models, used for the empirical analyses of Chapter 5).

The purpose of the empirical studies is to illustrate how to apply the general guidelines. They do not serve that purpose well, mainly because there is little thoughtful analysis of the results. For example, to illustrate the inefficiency of charging for water on the basis of land area irrigated, as is done in Mexico and Turkey, the authors simply point out that the marginal value of water differs by crop. But the authors do not consider the costs of alternative pricing methods, nor do they calculate the magnitudes of the social losses from inefficient pricing to see whether changing pricing methods would actually increase social welfare.

Similarly, irrigation projects in all five of the countries examined exhibit economies of scale, so that marginal cost pricing is incompatible with full cost recovery (and hence financial sustainability of water projects). The authors refer in each case to the general guideline that the volumetric component of water charges should not be designed to recover fixed costs. Again, however, the authors seem to have no interest in the magnitude of the problem or the political and economic feasibility of alternative corrective measures. One would want to know, for example, how policies designed to achieve full cost recovery would affect farm income, land and labor in farming, crop production, and so on, in order to determine what measures should be taken to recover costs (as well as whether full cost recovery is in fact a reasonable goal).

The empirical analysis in Chapter 5 of the effects of tariff reductions at the individual water district and economy-wide levels, respectively, both with and without water policy reform, exhibits a similar lack of thoughtfulness. At first glance, the empirical results confirm the importance of simultaneous policy reform: income losses by farmers growing import-competitive crops are smaller with water policy reform than without it. But the magnitudes of the differences are rather small, only a few percentage points. And the water policy reform envisioned entails the establishment of water markets, which can involve significant transaction costs—raising the question of whether simultaneous reform in both sectors actually does outperform trade liberalization by itself once all costs are taken into account.

The remainder of the book is less substantive, at least in terms of economic content. The literature review in Chapter 2 is more of a laundry list of studies categorized by issues addressed than a synthesis of findings, so it is likely to be useful for someone looking for an itemized bibliography as a reference tool rather than for anyone seeking a deeper understanding of what economists have learned about irrigation water pricing. Chapters 7 through 11, which compose about 40 percent of the book, are individual World Bank working papers that essentially serve as appendices containing background information for the countries used in the empirical analyses.

The fundamental problem with this book is that it assembles pieces of the World Bank's experience with irrigation water pricing rather than di-

gesting their lessons and producing a well-rounded synthesis with solid empirical illustrations. A book like the latter would be of interest to professional economists as well as to audiences with less technical training in economics. As it stands, few kinds of audiences are likely to be satisfied with it. While the book does contain the key elements of such a synthesis (especially at the conceptual level), too much of it is devoted to technicalities likely to bewilder those with a less technical economics background. The empirical results, as they now stand, fail to make compelling cases for the policy inferences drawn from them. Finally, the book suffers from a lack of attention stylistically as well as substantively. The empirical chapters in particular lack a good narra-

tive flow and contain numerous typographical errors. More careful editing and proofreading would have improved the book significantly.

Erik Lichtenberg  
*University of Maryland*

### References

- Gleick, P. 2002. *The World's Water 2002-2003: The Biennial Report on Freshwater Resources*. Washington, D.C.: Island Press.
- Howitt, R. 1995. "Positive Mathematical Programming." *American Journal of Agricultural Economics* 77(2): 329-342.