

Books Reviewed

Burfisher, Mary E. *Agricultural Policy Reform in the WTO*. Hauppauge, NY: Nova Science Publishers, Inc., 2003, 222 pp., \$59.

Agricultural Policy Reform in the WTO is a compilation of several studies focused on measuring the economic impacts of further reductions in trade-distorting policies related to agriculture. The purpose of the book is to provide background and discussion on various issues expected to be central to the WTO trade negotiations. Each of the chapters focuses on a different set of policy choices.

The overview by Burfisher provides a concise discussion of issues addressed later in the book. She states the book's basic objectives as

- (a) Quantifying global costs of current agricultural trade distortions, and
- (b) Measuring benefits of eliminating various trade-distorting policies.

The overview does a nice job of summarizing the later chapters, including replicating some of the tables and graphs from specific chapters. For those interested in a short treatment of recent research on trade policy, and the economic implications associated with various policy changes, the overview is quite useful.

In total, the various chapters address further liberalization of what has been referred to as the three pillars of the Uruguay Round Agreement on Agriculture (URAA). These include market access, domestic support for local production, and export subsidies. Both static and dynamic effects of reducing barriers in all three areas are discussed.

The first several chapters of the book do a nice job of laying out anticipated impacts from various trade policy changes. With some exceptions, less-restrictive trade appears to generate net benefits for most exporters and importers, and for both developed and less-developed (LDC) countries. For example, the Chapter 1 analysis presented by Diao, Somwaru, and Roe suggests that removing all domestic support programs for agriculture would result in aggregate world agricultural commodity prices increasing 12% relative to other prices.

In Chapter 2, Wainio, Gibson, and Whitley evaluate four tariff-cutting strategies. Market impacts vary depending of the initial

tariff structure in each country, but the authors conclude that it is generally in the interest of each country to reduce tariff protection. Benefits include cheaper procurement for both food processors and consumers, and a more efficient allocation of production resources.

The next several chapters consider the effects of liberalizing tariff rate quotas, reducing aggregate measures of domestic support in OECD countries, and the effects of eliminating EU export subsidies. In all cases, estimated net benefits are positive, although, as one might expect, the distribution of benefits and costs is not balanced across individual countries, or between developed and LDC countries.

Chapter 6 by Shapouri and Trueblood provides an analysis of the impacts of agricultural policy reform on LDCs. Specifically, they examine both food security and per capita consumption in 67 food deficit LDCs. They consider two scenarios: (a) the direct impact of rising food prices resulting from more liberal trade, and (b) the additional impact of an increase in foreign exchange. Under both scenarios, the countries considered experience positive, but quite small impacts from less-restricted trade. Thus, contrary to what is sometimes argued by critics of free trade, loss of food security is not found to be a byproduct of a more liberal worldwide trade policy.

The last three chapters of the book address some of the social concerns associated with freer trade. Specifically, Nimon and Smith provide a short essay on environmental issues, Mitchell a short discussion on the economics of animal welfare, and Elbehri discusses the implications of liberalizing preferential quotas. The last chapter, Chapter 10 by Normile, discusses issues related to multifunctionality—that is the nonagricultural impacts of less-restrictive trade in agricultural products. The chapter focuses on incentives to subsidize local agriculture because of positive externalities associated with its existence (i.e., scenery, environmental benefits, retaining a cultural heritage, etc.). As noted by Normile, these externalities are often used in trade negotiations as a rationale for maintaining various levels of protection for domestic agriculture.

Most of the economic analysis presented is conducted on an aggregate level, so it is

difficult to evaluate specific policy changes sector by sector (in some cases specific sectors like dairy are either omitted or aggregated with other sectors). Thus, the book provides a nice general reference on trade issues and large, aggregate effects of changes in policy, but it is not helpful (and likely was not intended to be) in assessing individual commodity impacts. In addition, most of the chapters describe the results of empirical research but specific modeling strategies are not discussed (Appendix 3 provides a general, nontechnical discussion of the models employed). This has a positive and a negative aspect. By eliminating mathematical notation and discussions of specific model formulations and estimation techniques the book is left quite readable by a general audience, and could be useful in an undergraduate trade class, or an interdisciplinary seminar focused on trade issues. The disadvantage is that the more serious trade scholar does not get the detail necessary to evaluate, in a sense, the "quality" of the analysis. However, all authors provide a complete reference section at the end of their chapters, so the information is presumably available for those readers inclined to peruse the citations in the various reference sections.

The book is quite short, and since technical details are relegated to the various appendices, it makes a relatively quick read. While this clearly has advantages, it is unfortunate that the last four chapters were not expanded. As evident from the experience in Cancun, Mexico, some of the greatest challenges faced by the WTO negotiators will likely revolve around the broader social aspects of less-restricted trade. A more complete overview of these less-tangible issues would probably double the book's length, but would also enhance the manuscript's contribution to understanding the issues and challenges that may prevent any of the policy choices discussed in the first several chapters from reaching fruition.

One minor disappointment with the book relates to printing quality—several of the graphs are difficult to read either because of small print or low quality graphics. The tables are generally more readable, and as a result more useful in supporting arguments made in the text.

In summary, Agricultural Policy Reform in the WTO constitutes a worthwhile and relatively easy read, but one that could have been improved with more detailed discussion of the environmental and multifunctionality issues

that may prove the basis for preventing additional trade enhancement through WTO.

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Ball, V. Eldon and Norton, George W. *Agricultural Productivity: Measurement and Sources of Growth*. Boston: Kluwer Academic Publishers, 2002, 320 pp., \$121.00.

Agricultural Productivity: Measurement and Sources of Growth is a welcome addition to the applied economist's bookshelf. Production economists have been frustrated by the lack of common datasets from which more general insights and state and regional comparisons might be inferred and additive knowledge generated. This contribution to the Kluwer Academic Publishers series on productivity and efficiency contains eleven studies on U.S. agricultural productivity, efficiency, and agriculture's interface with the environment. The chapters capitalize on common public datasets, made available by several federal agencies, and are sufficiently additive to increase our understanding of the determinants of growth in agricultural productivity, efficiency, and the sector's impact upon resource productivity.

This book is divided into three primary sections. The first section contains four papers on state-level comparisons of total-factor productivity using parametric and nonparametric methods. The second section contains three papers that identify the importance of research expenditures and spillovers, extension, and infrastructure in determining the state-level efficiencies. The third section contains four papers that explore the linkage in agricultural productivity and the environment.

The first section of the book makes strong empirical and methodological contributions to understanding relative levels of agricultural productivity and growth rates among the 48 contiguous U.S. states over the 1960–96 period. Using the index number approaches, these chapters identify state-level average productivity growth rates ranging from 0.79% to 3.23% compared with a national average of 1.9% per annum. Interesting investigations include a testing of the hypothesis that laggards in technological progress experience more rapid productivity gains than leaders, determining how urban influences affect land values (and hence productivity measures)

and illustration of the importance of how the construction of the aggregate capital measure is important in shaping productivity differences. A methodological contribution that generalizes the productivity indices proposed by previous researchers in the 1960s is provided and this contribution can facilitate a multilateral comparison between dissimilar states or agents.

The second section of the book centers around the estimation of efficiency measures. Two studies use the same dataset to evaluate the impact of public investment, extension, and infrastructure on total cost and total factor productivity. These studies underline the importance of R&D investment, spillovers and highway infrastructure in determining cost structure, growth rates, and returns to investments. In another study, Bayesian methods are investigated as a potential solution to overcome curvature violations when estimating systems of profit or cost equations.

The third section provides a strong insight into the implications of modeling agricultural products and environmental impacts jointly. The section is introduced by a paper that develops human health and environmental indicators linked to pesticide usage and annual concentrations of chemicals leaving the farm field through a spatially disaggregated simulation approach. These indices are incorporated into measures of total resource productivity and compared against total factor productivity measures. These chapters have rich insight into the role of public policy in justifying environmental regulations and the social costs and benefits of limiting chemical applications in production agriculture.

It is reassuring that this book capitalized upon strong conviction of the early 1980s to improve the measurement of agricultural productivity growth. This book documents the findings of this initiative and provides a platform for further research in several directions, many of which are detailed in the final discussion chapter. While the issues raised in the final chapter may be a cause for reevaluation of the assumptions used in the construction of the datasets and the empirical tools used in the studies, those concerns do not diminish the significance of this book in creating additive and convergent knowledge from a recognized database.

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Sterner, Thomas. *Policy Instruments for Environmental and Natural Resource Management*. Washington, DC: Resources for the Future Press, co-published with World Bank and Swedish International Development Cooperation Agency (Sida), 2002, 526 pp., \$36.95.

This book, written by an economist with extensive experience as an academic and policy advisor, integrates the role of institutions with economic models of environmental and natural resource management. The topics covered range from models of fisheries to policy instruments for road transportation, and Sterner successfully presents the economic frameworks, institutional settings, and policy considerations necessary to enrich our discussion of these complex topics. The intended audience includes a wide array of readers: undergraduate and graduate students, policy analysts, researchers, and particularly policymakers and resource managers in countries without experience in market-based policy instruments. The reader may be surprised at this diversity; however, the text successfully combines the introductory models seen in basic course texts with rich discussions of the policy environment and institutional considerations. In general, it is written in a nontechnical style that is easily accessible to the readers with minimal economics training. Mathematical models are presented in separate boxes for those who want additional rigor. Supplemental readings are suggested at the end of each chapter to guide the readers through the literature.

The book is divided into three major sections: motivation for economic analyses of environmental and natural resource issues (Part I), description of policy instruments (Parts II and III), and special topics (Parts IV–VI). Part I presents the basic economic models of environmental degradation and its causes, public economics and information, the incorporation of ecosystems in economic models, and the evolution of property rights. Each fundamental economic concept is related to real-world examples and the interdisciplinary nature of environmental problems emphasized. For example, the model of the fishery is used as an example of adapting models to ecosystems. The author provides a succinct presentation of population models and the complexities of natural ecosystems as well as a preview of management issues, including tradeoffs between efficiency, monitoring costs, social acceptability,

and the precautionary principle. To illustrate the challenges of balancing the competing uses of ecosystems, the author describes the various values that are associated with ecosystem services from a mangrove forest. This example emphasizes that apparently simple economic solutions may be neither practical nor optimal in a real-world context. Part I concludes with a crucial chapter on “The Evolution of Rights”—an often-neglected topic—describing the wide variety of legal contexts in which market mechanisms could be implemented. The discussion covers major concepts including the Pigovian approach and Coasian thought, a topology of forms of property, and private versus public law. It makes a major contribution in highlighting the complexities and evolutionary characteristics that institutions share with ecosystems. Examples of real property and property law are presented using specific legal cases and historical accounts.

This unusually long introduction to the field is a particular strength of this book, persuasively explaining both the necessity of economic analysis and its limitations. By incorporating perspectives from other disciplines and the complexities of modern environmental issues, the author motivates students and policymakers who might otherwise be turned away from the field. A reader expecting to see each topic delineated in isolated chapters may need to adjust his or her expectations prior to reading this book; however, its integrative approach is one of its most impressive features.

The book continues with a review of policy instruments (Part II) and a discussion of the issue of selecting appropriate policy instruments (Part III). The review of policy instruments outlines the major approaches including direct regulation, tradable permits, taxes, subsidies and deposit-refunds schemes, and property rights and other legal instruments. Sterner sets the tone for this section by stating, “Policy does not function in a vacuum; it is heavily dependent on the overall policy environment” (p. 67). The importance of information about the policy environment and policymaking is also stressed.

The author follows this preamble by describing the intricate relationships between policy variations and their institutional environments, pointing out many combinations of policy instruments and policy options that extend well beyond the typical comparison of taxes to standards. Throughout this section, the author explores the theme of the relationship between policy and the surrounding envi-

ronment, both natural and manmade. By emphasizing the importance of heterogeneity, or specific circumstances, in policy comparisons, he contests as overly simplistic the assertion that market approaches dominate command-and-control regulation. Using the case of catalytic converters, the author argues that command and control is not always an inappropriate policy; in some policy environments, banning some technologies is a reasonable option. Another example studies two technologies to increase fish yields: dynamite and sonar search equipment. While both technologies increase the annual harvest, different policy considerations can lead to different recommendations. Banning dynamite may seem obvious due to its destructiveness, but sonar search equipment raises more difficult questions. Although it seems reasonable to allow a more effective technology if it is not destructive, restrictions may protect the livelihood of fishermen who use alternative techniques. This policy choice requires trade-offs between technological effectiveness, sustainability of the harvest, and financial gains by specific individuals or groups.

The final section of the book covers a wide array of environmental and natural resource issues, grouped into Parts IV–VI, each of which is then divided into specific topics. Part IV, *Policy Instruments for Road Transportation*, discusses environmental damage caused by transportation; environmental road pricing; taxation or regulation for fuel efficiency; and fuel quality, vehicle standards and urban planning. Part V, *Policy Instruments for Industrial Pollution*, provides separate chapters on experience in developed countries and in developing countries. Part VI, *Policy Instruments for the Management of Natural Resources and Ecosystems*, addresses the topics of water, waste, fisheries, agriculture, forestry, and ecosystems. Sterner returns to the major themes of the text including: the need for policy, policymaking process, uncertainty and risk, ecological and technical complexities, feasibility and market issues, and the multiple and sometimes conflicting criteria for policy. All of these themes are interwoven into the discussion of the need for policy, the review of economic models of policy alternatives and the details of special topics.

Sterner provides a compelling description of the complexities of environmental and natural resource policy. He draws on a wealth of sources, including environmental and resource economics, the theory of institutions, politics,

and psychology, to show both the limitations of simple economic models and the need for economic analyses in policymaking. Despite this detailed treatment of the difficulties in modeling environmental and resource policy, its ultimate effect is not to daunt the reader. Instead, a major benefit of the book is that it leaves the reader motivated and intrigued by the many challenges in the field.

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Allen, Douglas W. and Lueck, Dean. *The Nature of the Farm: Contracts, Risk, and Organization in Agriculture*. Cambridge, Massachusetts: London, UK, 2002, 253 pp.

This book attempts to explain the economic organization of farming in the United States and Canada, with a “focus on transaction costs” (p. viii). Chapter 1 provides an overall introduction to the issues and approach. Chapter 2 presents basic data on U.S. farms. The remaining chapters consolidate several detailed empirical studies by the authors. Chapter 3 asks why the prevalence of relatively simple oral contracts in farmland rental. Chapter 4 investigates the choice of crop-sharing versus cash rental in such contracts, and Chapter 5 investigates the relationship between output sharing and input cost sharing. On this last subject, the authors’ develop a model with the strikingly concrete prediction that variable input costs are shared either in the same proportion as output or not at all. Chapters 6 and 7 assess alternative explanations for crop-share contracts. In explaining the choice of crop-sharing as compared to cash contracts, Chapter 6 finds that indicators associated with crop risks—yield variability, reliance on income from farming, the farmer’s wealth, availability of future markets—do not help in explaining either the prevalence of crop-share contracts or the size of the renter’s share when such contracts exist. Chapter 7 considers, and rejects, a specific hypothesis about contracts, the “ratchet effect,” according to which crop-share contracts will be re-negotiated over time on terms decreasingly favorable to the renter.

Chapters 8 and 9 extend the book’s scope to address issues beyond crop-share contracts. Chapter 8 looks generally at whether it is best for a farmer to own or rent the farm’s assets. Chapter 9 covers a range of issues in farm organization, the two main ones being family versus

corporate farming, and specialization by stage of production versus vertical integration. The book does not, however, address the most debated recent innovations in livestock contracts, notably the rise of incentive-based tournament incentives in contracts between processors and growers. I was also surprised by the lack of attention to hired labor on farms, where transaction costs appear to be related to farmers’ hiring and labor contracting practices in a way that would repay the detailed application of the book’s approach.

Chapter 10 draws conclusions. The general one is that “the pattern of contracts and organization in modern and historical agriculture is consistent with an effort to mitigate transaction costs” (p. 203). More specifically, “transaction cost economics” is credited with explaining why land rental contracts tend to be simple (Chapter 3), why input-cost sharing varies as it does in crop-share contracts (Chapter 5), and why we see family farming in some situations and corporate farming in others (the big factor being capabilities of controlling nature in the production process).

Allen and Lueck use a definition of transaction costs as “the costs of enforcing and maintaining property rights” (p. 4), notwithstanding that the costs of exchanging such rights is truer to the ordinary sense of the term. The authors are zealous salesmen of the idea of explaining forms of contracting and the economic organization of farming by means of these costs. Their strategy in each chapter is to give an anecdotal introduction to an issue, provide a formal model embodying some of its aspects, and then conduct an econometric investigation related to the model. A general problem is, as the authors say, that the variables central to transaction costs are unmeasured in the data available, so one needs proxies. I found the anecdotal discussions often enlightening, the theoretical models too restrictive to be helpful, and the econometric analyses interesting but often unconvincing in support of conclusions drawn because of loose connections between the explanatory variables and the transaction-cost hypotheses putatively tested.

The authors’ are too dismissive of alternative explanations of, for example, why we see grain farmers leasing land rather than limiting their operations to what they own. Transaction costs surely play a role, but Allen and Lueck did not dissuade me from believing that technology, credit constraints, risk attitudes, or government commodity and tax policies play an equal or greater role in many matters of

farm organization. Also, I do not understand the authors' repeated distancing of their approach from "neo-classical economics," which indeed sometimes seems to be their *bête noire*. To me, the economic analysis of transaction costs provides a deepening and expansion of standard economics, not an alternative to it. Indeed, the basic ideas that incentives matter, that individuals do the best they can to further their objectives given the constraints they face, and that some of the most important constraints stem from the like behavior of other individuals, are common to both modern neo-classical economics and transaction-cost economics.

Nonetheless, the authors' have put their fingers, or fists, on a problem with the general practice of agricultural economists, which is a tendency to treat all problems as ones in the standard theory of the competitive firm either under certainty or facing risk. Showing the limitations of this narrowness is a valuable contribution.

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Cochrane, Willard W. *The Curse of American Agricultural Abundance: A Sustainable Solution*. Lincoln and London: University of Nebraska Press, 2003, 154 pp., \$35.00.

Many books have now been written on the myriad problems confronting contemporary American agriculture. Indeed, the author of this book is a prominent agricultural economist and he himself contributed—primarily by means of his earlier book *Reforming Farm Policy: Toward a National Agenda*—to our understanding of some of the ills that face American agriculture. In this book, the author examines two distinct periods in American agricultural history, that is, 1953–66 and 1997–2002, and on the basis of this examination he makes a number of suggestions about how we might enjoy what he calls our "agricultural abundance." Specifically, this book consists of a collection of previously published and unpublished essays. The reader should note that because the individual essays are not written as chapters in a book there is some overlap and, as the author puts it, "some conflict of ideas" (p. 3).

The first three chapters look at agricultural policies in the mid-1900s. Chapter 1 makes two useful points. First, it succinctly explains that

what is often known as the "farm problem" arises because there is systematic excess supply of agricultural commodities. This state of affairs drives prices downward and this has a negative impact on farm incomes. Second, this chapter notes that whether or not the output of an agricultural commodity will decline when faced with declining prices depends, to a great deal, on the production alternatives available to the relevant farmers. Next, the author calls undesirable the situation in which "the median income (the exact middle income) in agriculture is considerably below the median urban income" (p. 15). However, he never explains why he finds this situation undesirable. This is an important point and this chapter would have been much better had the author taken the time to explain clearly at the outset why having a lower median agricultural income is undesirable.

The author presents his theory of the "agricultural treadmill" in Chapter 2. This treadmill involves the following sequence of events. First, the supply of an agricultural commodity surpasses its demand and this results in lower commodity prices. Second, this notwithstanding, in order to keep up with their peers, farmers continue to adopt new and improved technologies and hence, they manage to increase—rather than decrease—the output even further. As a result, the aggregate agricultural output keeps increasing in depressed times and this results in prolonging the saturnine state of affairs in agriculture. The author does a good job of explaining this simple but plausible chain of events. One puzzling feature of this chapter concerns the author's description of agriculture as a competitive market. In this context, it needs to be remembered that the price-taking behavior is but one of many attributes that a market must possess before it can be labeled competitive. In particular, agriculture is characterized by informational externalities and a whole host of distortions that make it anything but competitive.

Chapters 4–7 discuss the agricultural policies for the year 2002 and beyond. Chapter 4 nicely points out that the United States of the twentieth century has had four policy goals for the food and agricultural sector of the economy. These include the production of an abundant quantity of food at fair prices, the maintenance of a productive and prosperous economic climate for farmers, the upkeep of the family farm as a viable unit, and the realization of a high quality of life for rural residents. Following this observation, this chapter

suggests an agenda to ensure that the above four policy goals are realized in the future. Individual aspects of this agenda are problematic and the agenda in its entirety "is an ambitious one" (p. 81). Consequently, it makes sense to discuss the feasibility of this agenda and, given the author's distinguished career in public service, to speculate intelligently about the likelihood of it ever being implemented, either partially or wholly. Unfortunately, the author does none of this. Instead, he concludes this chapter by simply noting that if his policy agenda "was passed in its entirety, was adequately funded, and was put in operation by leaders who believed in it, it would make rural America a pleasant place in which to work and live" (p. 81).

Chapter 5 briefly focuses on the futility of what has often been called the "export solution." As the author rightly points out, the global demand for American agricultural products "cannot be manipulated at the beck and call of American policymakers" (p. 90). As a result, there is really no practical way to solve the price and income problems of American farmers by exporting more farm products to the rest of the world. This is a perspicacious chapter and my only bone of contention concerning this chapter pertains to the author's assertion that weather is a "completely unpredictable" (p. 85) variable affecting the supply of farm products.

Should one attempt to save the family farm? This interesting question is the subject of Chapter 6. According to the author, the an-

swer to the above question is yes because if the family farm is not saved, then the Tyson chicken syndrome will become universal and our food and agricultural system will become an outright monopoly. I am not convinced that this is in fact what would happen but even if it did, is this sufficient justification for saving the family farm? In particular, given the huge costs of most "save the family farm" policies, does the alleged universality of the Tyson chicken syndrome warrant the creation of additional "save the family farm" policies? In addition, suppose our food and agricultural system did become a thoroughgoing monopoly. In a benefit-cost sense, is it better to regulate this monopoly or is it better to put in place the author's three policies to save the family farm? Unfortunately, despite the relevance of these questions, the author pays scant attention to them.

Let me conclude this review by noting that, for the most part, this is an interesting book by a prominent agricultural economist. In addition, the analysis in this book on several occasions is quite thoughtful. These positive features notwithstanding, it seems to me that readers who are interested in acquiring a deep understanding of contemporary American agricultural issues and problems will profit more by perusing *Policy Reform in American Agriculture* by David Orden, Robert Paarlberg, and Terry Roe.

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