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# Linking Trade and Resources Policy—It's About Time

*Agricultural Trade and Natural Resources—Discovering the Critical Linkages. Edited by John D. Sutton. Boulder, CO Lynne Rienner Publishers, 1988, 245 pages, \$30*

*Reviewed by Alan Randall*

In the 1950's and 1960's, agricultural policy was largely a matter of figuring out how to dispose of surplus commodities. A highly productive agriculture, a strong dollar, and United States dominance of world financial markets kept the policy issues simple, if not especially tractable. But, things changed about 1970, never to be the same again. The United States, accustomed to making things happen on the world scene, was convulsed by a series of events it could no longer control.

The 1970's were the decade of flexible exchange rates, OPEC and the oil price shocks, rising inflation, fencerow-to-fencerow cultivation, buoyant farmland prices, concerns about fertilizer and pesticide residues, prohibition of some first-generation pesticides in the United States with subsequent suspicions that agricultural imports may have been produced using these same pesticides, and the charge that the United States was balancing its international accounts by trading soil for oil. The 1980's have seen the internationalization of financial markets, enormous third-world debt, falling but still-high inflation in the United States, the emergence of many former food-importing nations (rich and poor) as self-sufficient or net exporters, huge U.S. grain surpluses, plunging farmland prices and crises for heavily leveraged farmers and their creditor institutions alike, persistent U.S. trade and fiscal deficits, increasing protectionism at home and abroad, and renewed reliance on old policy instruments (set-asides) and even older ones (land retirement, refurbished as the Conservation Reserve Program) to reduce commodity surpluses. When things seem really desperate, as they did in the 1930's and the 1980's, agricultural interests are prepared to offer some really serious-sounding soil conservation, if that's what it takes to bring in more public dollars.

Ever alert for new, hot issues, it seems that a small group of leading agricultural economists came up with "Shoot, maybe we ought to hold a workshop on

agricultural trade and natural resources linkages, say, sometime in 1987." Shoot, why not? Having made this commitment, an informal group of analysts based in USDA's Economic Research Service and Resources for the Future's National Center for Food and Agricultural Policy organized a workshop to study the factors that link agricultural trade and natural resources.

I missed the workshop, but to judge from John Sutton's edited volume of essays generated for or by that gathering, it must have been better focused than most efforts of its kind. The standard complaint about edited volumes concerns disjointedness and uneven quality among the individual papers. However, this volume is coherent and polished. Most of the chapters reflect serious effort: the organizers must have chosen authors who had substantial work in progress or were willing to make major efforts for this workshop. Style and level of treatment is fairly consistent, with most essays using diagrammatic analyses familiar to anyone who has studied commerce. Papers that present formal mathematical models and results are not unusually forbidding. Most pleasing, and not especially common in works of this kind, are some of the essays, which show clear signs that final drafts were significantly influenced by ideas developed at the workshop. In all of these respects, this book is better than many similar collections of conference papers.

The book's goal is to "advance our ability to construct a conceptual framework describing economic relations between trade and resources and to conduct research needed to clarify linkages that may be particularly important for policy and economic analysis" (p. 1). The book should appeal to advanced students, teachers, researchers, and policy analysts who have a special interest in agricultural trade and natural resources. Three major sections deal with theoretical framework, implications of natural resource policies for agricultural trade, and implications of trade policy for natural resources. Theoretical analyses dot all three sections, while the second and third sections also present some data and simple empirical analyses. Comprehensive empirical analysis of major issues is beyond the scope established by the workshop organizers and the editor. The reader forms the impression that such analyses are generally unavailable, and a major purpose of this volume is to stimulate their production.

Several of the authors lament that trade economics and resource economics developed independently, with little communication among the principals. Bruce

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Gardner notes that explicit consideration of welfare economics is largely absent from the papers in this collection. At first glance, the claim that the economics of trade, welfare, and resources are practiced in mutual isolation seems surprising. Yet, it raises a question worth thinking about. The basic theories of all three areas are quite closely related. Welfare economics is central to resource economics, while its core concepts of exchange theory and the identification and measurement of gains from trade, economic surpluses, and the welfare impacts of trade distortions were developed and clarified with considerable input from economists who focused on trade questions. Ricardo is a founding father of both trade economics and resource economics, and his trade theory was founded on differential production costs emanating from differences in resource quality. While subsequent trade theorists have vacillated on the substitutability of land (natural resources) and capital, that has been symptomatic of neoclassical economists in general rather than peculiar to the trade people. In fact, the uniqueness of natural resources has received a more sympathetic hearing from trade economists than from the general run of neoclassicals. Trade economists have displayed an interest in the trade impacts of environmental regulation, resource economists have been concerned with transboundary pollution, and both groups have contributed to the discussion about the viability of international natural resources cartels.

The core theories of welfare economics, international trade, and resource economics clearly emerged after substantial cross-fertilization. Analysts who worried about excessive compartmentalization must have had something else in mind. I speculate that their concern relates not so much to core theories as to the models and empirical analyses that elaborate those theories. If I am right, then the problem is a more general issue, the tension between abstraction and elaboration in economic theories, models, and analyses. Power and generality seem to require a considerable degree of abstraction. A highly abstract model, however, cannot capture simultaneously the subtleties of trade and resources issues. Answers applicable to specific problems require detailed models, with all that entails for specificity, data needs, difficulties in estimation and computation, and the possibility of virtually untraceable error. Faced with this dilemma, we seek simple yet powerful models that address real-world problems, so successes come grudgingly.

Several of the essays in this book nevertheless take us part way down the road. John Antle and Richard Howitt introduce a hybrid resources-and-trade model that identifies some key linkages and suggests empirical hypotheses. Andrew Schmitz, G C van Kooten and

Hartley Furtan, and John Sutton and Alan Webb present some highly probing yet simple comparative static analyses of trade-resources policy interactions. Robert Chambers and Katherine Reichelderfer start with a Ricardo-Viner model (that is, a trade model that assumes that at least some factors, such as farmland, are immobile across production sectors) extended to permit one input to grow or be depleted. This setup allows them to generate some interesting comparative dynamics results.

These efforts at elaboration of models represent a first step toward specifying and estimating empirical relationships and performing empirically-based policy simulations. Agricultural economists, our editor and authors readily admit, have a long way to go before these tasks can be completed routinely and reliably. Like most books intended to stimulate a budding research program, this one contains a mixture of exhortation and leading by example. But, to the credit of the participants, it offers more of the latter than do many such books. As the Nation seeks a high quality of life and high export earnings, and with agriculture rather central to both concerns, one wishes every success to the enterprise this book is intended to encourage.

The essays include "Introduction" by John D Sutton, "Natural Resource Concepts in Trade Analysis" by Kathleen Segerson, "International Trade Theory and Natural Resource Concepts" by Philip C Abbott and Stephen Haley, "Economic Analysis of Agricultural Resources in Open Economy: A Hybrid Model" by John M Antle and Richard E Howitt, "Implications of Environmental Regulations for Competitiveness in Agricultural Trade" by C Ford Runge, James P Houck, and Daniel W Halback, "Discussion: Linkages Between Soil Conservation Policy and Trade Policy" by Clayton W Ogg and John D Sutton, "Effects of Natural Resource Policies on Agricultural Trade" by Robert G Chambers and Katherine Reichelderfer, "Discussion: Developing a Framework for Analyzing Effects of Resource Policies on Trade" by Nancy E Schwartz and George E Rossmiller, "Trade Policies and the Use and Value of Natural Resources" by John D Sutton and Alan J Webb, "Issues in Commodity Trade: Implications for Natural Resources" by Andrew Schmitz, G C van Kooten, and W Hartley Furtan, "Discussion: Policy Issues and Research Questions Relating to the Trade-Resources Interface" by Jerry Sharples, Lyle P Schertz, and Eduardo Segarra, "Technology, Natural Resources, and Commodity Trade" by John M Reilly and Tim T Phipps; and "Bringing Together International and Resource Economists: Comment" by Bruce Gardner.