

## Book reviews

*Tradeoffs or Synergies? Agricultural Intensification, Economic Development and the Environment*, edited by D.R. Lee and C.B. Barrett. Published by CABI Publishing, Wallingford, UK, 2000, pp. xix + 538, ISBN 0 85199 435 0, £60, US\$99.50.

The debate about ‘tradeoffs versus synergies’ in respect of relationships between economic growth and conservation of natural resources and the environment has in the last two and half decades taken a centre stage as countries have attempted to address the sustainable development goals articulated in the 1987 Report of the World Commission on Environment and Development. This debate has further intensified with increasing concerns about growing global poverty and consequent greater interest in the role agricultural intensification could play in many developing countries to alleviate this problem.

Although a consensus exists that there is a link between agricultural intensification and environmental outcomes, there is disagreement over the nature of this link. Some believe, assume or assert that the relationship is synergistic. Others believe that ‘win–win’ outcomes cannot be achieved without making some tradeoff between agricultural intensification based economic development and environmental quality. Published literature on the environmental Kuznets curve suggests that with increasing economic development, either through agricultural intensification or industrial development, environmental quality decreases first. But with subsequent increases in national economic well being, this literature indicates that environmental quality improves once consumers satisfy their basic livelihood needs, and preferences for environmental goods strengthen. The exact point of transition in a country is an empirical issue.

This edited volume by David Lee and Christopher Barrett of Cornell University presents a collection of chapters examining theoretical and conceptual aspects of the ‘tradeoffs versus synergies’ arguments, as well as relevant empirical evidence. Most of the chapters were initially presented at the 1998 American Agricultural Economics Association conference on agricultural intensification, economic development and the environment. Rather than review each chapter, I have attempted to draw out some broad categories of issues that would be of interest to all readers, researchers, policy makers and graduate students.

This volume is easy to follow, particularly since Lee, Ferraro and Barrett in the introductory chapter clearly set the scene for the papers to follow

and preview the themes and key arguments covered in subsequent chapters. Each chapter provides concluding remarks or a summary of points covered. The concluding chapter offers an excellent summary of the arguments presented in the various chapters.

The book is divided into three parts. Most of the chapters in Part I, *Balancing Food Production, Economic and Environmental Goals: Concepts and Methods*, provide a state of the art overview of the themes, issues, or methods chosen. They would be very useful to graduate students and those seeking a comprehensive overview. The chapters in Part I demonstrate that complementarity between agricultural intensification, economic growth and environmental goals cannot simply be assumed or inferred from theory but must be determined empirically, case by case (e.g. see chapters 5 and 6).

To address the empirical issues and the science-policy divide, several chapters (including chapters 7 and 8) discuss different types of methodologies, including a package of new technology, called 'tradeoff methodology'. As discussed in chapter 8, this developing package of methodology, which includes rigorous discipline-based models, integrated bioeconomic models and Geographic Information Systems, addresses two key needs. First, it proposes an organisational structure around which interdisciplinary research can be designed to assess sustainability of production systems and examine tradeoffs between agricultural intensification, economic growth and environmental outcomes. Second, it provides a means of communicating research findings to policy makers and the public at large. I believe this methodology could help bridge the research-policy divide often encountered today in both developed and developing countries.

The eight articles in Part II, *Empirical Studies of Tradeoffs and Synergies in Agricultural Intensification, Economic Development and the Environment*, provide empirical evidence on the 'tradeoff versus synergy' question from country-specific and cross-regional studies in Asia, Latin America and Africa. These studies provide sufficient empirical application of the methodologies discussed in Part I to persuade readers that associations among agricultural, demographic, economic and environmental variables are indeed complex and often context specific. It follows that it is difficult a priori to suggest when a synergistic effect between agricultural intensification and the environment is likely to occur, and when countries will need to trade off environmental costs against economic growth.

Part III examines the technological, institutional and policy dimensions of the debate. While papers focusing on on-farm agricultural issues dominate the collection of papers, three chapters (chapters 21, 22 and 23) deal with the debate over how in situ conservation of biodiversity through national parks and protected areas relates to agricultural development. These chapters usefully focus readers' attention on institutional strategies

that could help jointly promote development and biodiversity conservation, although some tradeoff between conserved areas and agriculture is inevitable. These chapters also provide empirical evidence regarding successful and unsuccessful efforts to find solutions that are 'win-win' in terms of economic development and conservation.

Key factors critical for simultaneously achieving agricultural intensification, poverty reduction and environmental conservation goals are identified in Parts II and III. These key factors are succinctly summarised by Lee, Barrett, Hazell and Southgate in chapter 24 on pp. 451–464. While context-specific variations make generalising difficult, the authors observe that chances of multiple goals being achieved increase in the presence of certain conditions. These conditions include physical and institutional structures that increase market access, presence of alternative off-farm employment opportunities, diversified cropping systems, secure property rights, participatory approaches to development and development projects designed in accordance with local people's priorities. A proper policy environment and specific policy strategies are indispensable if these conditions are to be met so that poverty alleviation strategies work at desired spatial and temporal levels.

One could criticise the book for lack of consistency in the level of detail provided in each chapter. However, this diversity of treatment illustrates, first, the different ways researchers have addressed this issue and, second, that the question of 'tradeoffs versus synergy' is not a simple one that can be examined adequately on just one scale. Another criticism one could make is that the book primarily covers the issues related to agriculture in the traditional sense. The production of crops and livestock is the main focus. There are no fisheries case studies included in the volume. Tradeoffs between value adding through agroprocessing and environmental quality are also not addressed. As these issues are often the focus of debate in the environmental fraternity, attention to them would have resulted in a more balanced volume.

Nonetheless, this book is a very good reference for researchers, policy makers and postgraduate students who are interested in the 'tradeoff versus synergies' debate. For researchers and postgraduate students, some of the methodological review chapters in Part I and empirical chapters in Parts II and III would serve as excellent starting points for taking the debate further. With a bibliography of over 50 pages, the book serves as a very rich source of theoretical and empirical references regarding how agricultural intensification, economic development and environment interact with each other to produce observed outcomes under particular economic, institutional and social circumstances. Policy makers, too, will find this book worthy of attention, as many of the chapters have adopted an interdisciplinary approach to this complex issue. For them the book also demonstrates the need to understand interactions among the biophysical, demographic and

economic features in order to predict outcomes of alternative courses of action with some accuracy. Usefully too, it highlights the challenges ahead in designing and implementing policies and institutions such that economic growth can be achieved with minimal environmental degradation.

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*Contracting for Agricultural Extension: International Case Studies and Emerging Practices*, edited by William M. Rivera and Willem Zijp. Published by CABI Publishing, Wallingford, UK, 2002, pp. xxiii + 188, ISBN 0 85199 571 3, £40.

Agricultural extension worldwide has undergone a period of rapid change, and the process of reinvention continues. Declining support for agricultural extension delivery by public services has been one of the defining trends. Rather than accept this to be a symptom of overall decline in the relevance and role of extension, this book promotes a view of extension being in a phase of positive transition. The decentralisation of extension services by government, with greater participation by a variety of private sector providers, is championed as the path to more efficient and effective delivery of agricultural knowledge to farmers. By purposefully highlighting good practice in the outsourcing of extension services, the editors of this book have taken an active stance in the facilitation of this process.

The case studies presented in this volume stem from a collaboration between the Agricultural Knowledge and Information Systems (AKIS) Thematic Group of the World Bank and the University of Maryland. By contacting specialists worldwide, the editors received more than thirty submissions relating to agricultural extension contracting, leading to the final selection of 18 case studies from 17 countries and five continents. The case studies describe examples of a wide variety of contracting arrangements as a means to improving extension funding, delivery, design and accountability. As they were originally the basis for an AKIS Good Practice Note on the subject, it is not unexpected that each of the case studies describes predominantly positive outcomes and an encouraging outlook for extension contracting. This is not to say, however, that associated problems are overlooked. One of the strengths of this book is the overview offered by William Rivera, Willem Zijp and Gary Alex in the opening chapter and the concluding chapter by the editors. These chapters provide a level of critical insight that is lacking in several of the case studies. By way of recommendations and requirements for successful extension contracting, they identify

common and potentially problematic issues. These include a real or perceived lack of supply of quality service providers and weaker than desired demand for extension services by farmers. The latter is associated with farmers' experience with extension services in the past and a lack of organisation amongst farmers, limiting their ability to contribute to the new extension agenda. At the institutional level, the challenge of preparing public-sector extension staff for the new roles of outsourcer, overseer, coordinator and regulator is clearly identified.

The case studies are organised into six sections focusing on: (i) off-loading public sector extension delivery services; (ii) contracting to promote environmental, (iii) input and (iv) specialized services; (v) farmers contracting for commercial advisory services; and (vi) other contractual arrangements. The examples generally involve the contracting of extension services to providers in the private sector, although Uganda provides a notable example where otherwise under-resourced and under-utilised public extension staff are 'contracted-in' by non-government organisations (NGO) to extend improved farming techniques. Some case studies describe relatively simple initiatives such as the use of mass media in a rapid-response campaign concerning a pest outbreak in Trinidad, and serve mainly to demonstrate the diversity of contracting situations. Others describe far more complex and significant arrangements such as the forest management contracts in Madagascar involving local communities, the Ministry for Water and Forest and an NGO.

The book should appeal to those with an interest in extension service delivery in both developing and developed countries. Several of the case studies come from developed countries, including Germany and the two from the USA. There is an interesting overview of the national experiment in total off-loading of extension services to the private sector conducted by the Dutch government over the past decade. Finland provides an example of a century-long history of contracting through its rapidly evolving Rural Advisory Centre system. In contrast to these two examples, the Australian case study is small-scale in both time-span and geography. Under the title of 'Australia: Contracting to Prevent Land Degradation: Landcare, a Success Story', the chapter focuses on a project in a small catchment area in South Australia where half of the 54 landholders entered into a cost-sharing agreement to conduct on-ground works aimed at addressing declining water quality in the region's only reservoir. It is noted by the authors that the works most commonly funded through the project were those with the greatest shorter-term private benefit and lowest long-term public benefit (gypsum and lime application). Given this, and that no measurements of impact or success are presented, it appears to be a somewhat curious choice of example to represent both the chapter title and the significance of the National Landcare Program as an extension model.

The brief case studies (some as short as four pages) generally have a standard arrangement that includes headings of sustainability, replicability and lessons learned. Each case study also has a section dedicated to discussing the impact of the extension model that has been implemented. However, few offer quantitative data to support the stated benefits and fewer can provide any level of economic assessment. The lack of sound impact evaluation and the absence of economic analysis of whether contracting systems have resulted in reduced costs and greater efficiencies are recognised by the editors in the introductory chapter as a weakness that requires further study. Nonetheless, given the broad scope of the book and the potentially vast array of case studies available, it would seem that greater emphasis on measured impact as a criteria for inclusion in this volume could have helped to strengthen the case studies and the arguments of the book as a whole.

In recognising the rapid developments in contracting for agricultural extension and the growing diversity of examples worldwide, this compilation is presented as a preliminary instalment, with access to further material to be made available on the World Bank website. As such, the initiative represents a useful contribution and should easily achieve its relatively modest intention to serve as a stimulus to discussion. While those primarily seeking economic insight into the various extension contracting models or an in-depth study of the different contracting mechanisms may be disappointed, this book serves as a useful introduction and guide to the diversity of extension contracting arrangements and the reform of extension. Given that decentralisation and privatisation of extension is a global trend, the book has wide relevance. Its readability and emphasis on practice and implementation should further broaden its appeal. For those with an interest in agricultural information delivery networks and the transformation of agricultural extension it is recommended reading.

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*Buyer Power and Competition in European Food Retailing*, by Roger Clarke, Stephen Davies, Paul Dobson and Michael Waterson. Published by Edward Elgar Publishing, Cheltenham, UK, Northampton, MA, USA, 2002, pp. xii + 203, ISBN 1 84064 685 3, £49.95.

With a list of authors that includes some of the heavyweights of industrial organisation economics in the UK, this reviewer approached the book with some anticipation. It is perhaps not surprising that these expectations

were over-optimistic, given the commercial sensitivity of most of the information relevant to questions at issue. Despite setting out the research problem clearly, the empirical content was not able to quantify buyer power or estimate the effect that power might have on producer or consumer welfare. What we find instead is another catalogue of anecdote and opinion gleaned from industry sources, along with some telling institutional features and a scatter of statistics of variable quality. So while we can say that retailers do have considerable power to make producers do things they would not choose to do, and we can say that there are plenty of cases in which the public interest is not served by practices enforced by retailers on producers, we cannot say how significant those practices are for final consumers or for aspects of producer economic performance.

The first five chapters introduce very basic theory about buyer power in oligopoly markets, and the policy implications of such power. There is little to detain the professional economist here, as it goes no further than undergraduate texts. What is of concern is their choice of concentration ratios as measures of market power, rather than more sophisticated measures based on conjectural response estimates. It is surprising that the authors did not discuss these measures. One can only conclude they did not have the wherewithal to buy the necessary data to attempt such estimates. None of the USA literature on estimating market power, via marketing margin analysis is cited (e.g. Holloway (1991), Schroeter and Azzam (1991) and Bhuyan and Lopez (1997)). For all its reliance on difficult and heroic assumptions about market knowledge and equilibrium and data expensive to acquire, this USA literature provides a means of quantification such that aberrant results can be investigated in detail.

Chapter 6 reviews existing information about market structure in European retailing and some industries supplying those retailers. It is clear that no consistent data base or conceptual foundations have been created as yet by statistical bureaux. International and inter-industry comparisons are not possible at any level of precision. However, the story of exploitation of economies of scale and scope by newer types of retailer (hypermarkets and discounters) is illustrated with the rapid diffusion of these stores and, consequently, rapidly rising concentration of retail trade in virtually every country in Europe. The rising tide of retailer owned labels is noted also. The authors observe that diffusion of large scale retailing is more advanced in high-income/highly-developed economies, so that some large markets in more developed countries have much higher retail concentration, while less developed markets in smaller countries typically exhibit lower concentration.

In Chapter 7, the authors discuss their attempt to derive their own data. They collected market share information for countries and firms,

putting this into a matrix of largest firms and their shares of trade in different countries. As a piece of descriptive economics, this is a good start to sorting out connections between firms and countries, and processes of European integration. They did not collect or purchase data specifically for the purpose, but used trade sources available for marketers. This data is of variable quality and coverage, and is rather 'macro' in nature. Despite the currency of 'category management' in food and dry grocery marketing, no use is made of category data to refine the estimates of size of hypermarkets or discounters which both sell non-grocery lines in significant proportion (with the proportion differing between countries).

The conclusion of this chapter is that retail concentration is high and rising in all countries, with about 50 retail firms accounting for half of all grocery sales in Europe. For each country, the matrix allows market structure to be characterised as either 'dominant firm', 'duopoly', 'triopoly', 'symmetric oligopoly' or, in the case of Greece and Italy, 'unconcentrated'. The authors then give us two 'hypotheses': (i) there is a long run equilibrium in which market size determines the number of significant players, and (ii) this equilibrium has been achieved in some countries but not in others. Strangely, there is no further mention of these hypotheses. Nor is any attempt made to suggest how to test the hypotheses. Too often economists use the word 'hypothesis' loosely. Were these ones to be tested, very significant data demands would have to be met: scale and scope economies would have to be estimated and tested for significance across national economies; evidence of stasis or consistent trajectories of change would be required to assign national retailing systems to 'long run equilibrium' or 'movement toward equilibrium'. The present volume makes no pretensions to attempting either of these tasks.

The remainder of the book is devoted to closer examination of France, Germany, Spain and UK. Three product categories are singled out in each country: washing powders and detergents (an interesting choice of food item), coffee, and yellow fats. Data collected for these cases include: (i) published sources including company reports, trade magazines, and market analysis reports, and (ii) questionnaire-based interviews with 47 persons out of 118 contacted. These persons were senior executives of suppliers (24), retailers (9), buying groups (3), and other organisations including producer organisations, retail groups and trade associations (11). No statistical information was collected from these contacts. The information gained from these interviews is suggestive and useful for providing institutional detail on ways that power is deployed in bargaining situations. However, it does not advance the task of fixing the size of any problem. Little use is made of company reports or any accounting data that might be available. Only in very few cases are we given information about marketing margins,



value added, or stockturns, as examples of data relevant to economic efficiency or market power.

In keeping with the orthodox economic theory familiar to the authors, little is made of the diversity of production technologies and relative efficiencies of different firms, nor their waxing and waning over time. The topic of mergers is dealt with as though it were simply about enjoyment of economies of scale or scope, rather than as an element of competitive struggle, creation of competencies and advantage. We find more insights into these issues in discussion of British supermarkets in the second chapter of John Kay's *Foundations of Corporate Success* (1993). The extent of internationalisation of retailing, in Spain (by French firms) and Germany (by innovative entrants, such as Aldi, expanding internationally), is the only reference to these important issues. Lack of useful data or a consistent approach cripples much of the case studies. A more substantial research grant might have allowed purchase of much more detailed information, such as scanner data sets, which may have given some indications about efficiency versus the expropriation of surplus. The high gross margins of UK retailers compared to those of France and Germany are cited, but even there, the possible inferences that can be drawn cannot be refined into anything definitive.

Sadly, one must conclude, the specialist in the food marketing chain will not find any new insights here. The lay reader and the interested economist will find the institutions and the basics of market performance outlined quite nicely. But we must await more directed research to give us clear indications about the importance for consumer welfare and producer performance of the obvious but unquantified market power of food and grocery retailers.

### References

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*Working on Country: Contemporary Indigenous Management of Australia's Lands and Coastal Regions*, edited by R. Baker, J. Davies and E. Young. Published by Oxford University Press, Melbourne, 2001, pp. xxiv + 351, ISBN 0 19551 217 0, \$49.95.

*Working on Country* deals with the fiddly details of resource allocation with which economists are often uncomfortable. Economists might be likened to epidemiologists whose focus is on the broad sweep of disease spread, but who might be uncomfortable with the notion that each 'observation' is actually a living person. Agricultural economists whose origins are in farm management might, however, be more comfortable with these 'fiddly issues' of resource management, where aspects additional to profit maximisation are important.

The book comprises four parts. In the first, Contemporary Indigenous Management, one chapter provides an historical, physical and social overview of Indigenous relationships with land, highlighting connections with subsequent chapters. Of particular interest to non-indigenous Australians is the argument that there has developed an "us and them" attitude to resource management because indigenous diversity is often overlooked. The other chapter deals with legal aspects of indigenous land management emphasising, but not confined to, native title. As Judge Blackburn observed in *Milirrpum v Nabalco Pty Ltd* (in 1971):

'... the fundamental truth about the aboriginals' relationship to the land is that whatever else it is, it is a religious relationship. ... There is an unquestioned scheme of things in which the spirit ancestors, the people of the clan, particular land and everything that exists on and in it, are organic parts of one indissoluble whole.' (quoted in the majority judgement in recent High Court case *WA v Ben Ward*, [2002] HCA 28, 8 August 2002)

Part II, Approaches to Managing Country, contains chapters dealing with management of the seas, national parks, wildlife in Africa and its lessons for Australia. There are also chapters dealing with indigenous perspectives on land management and interaction with non-indigenous people (including government) in the Northern Territory (NT) and New South Wales (NSW). There is an extended introduction including four 'boxed' case studies of indigenous resource management. Westerners, confronted with management of 'commons' invariably reach for private property rights as the appropriate policy response. It is instructive that other societies, with putatively more primitive institutional structures, have independently invented a common alternative:

‘Indigenous groups avoided the so-called “tragedy of the commons” by group ownership of resources and access, use and management rules prescribed by law, cultural practices, and social cohesion. Governments attempt to avoid the tragedy of open access by various mechanisms, including licensing and establishing tradable quotas, enforced through law but without the imperatives of small-group social cohesion.’ (p. 60)

Part III, *Sharing Knowledge: Tools and Communication*, contains chapters dealing with communication between indigenous land managers and scientists, using mapping for communication, and case studies of communication in central Australia (two chapters), ‘whitefella secret cattle business’, marine resources in the Torres Strait, and Willandra Lakes/Lake Mungo. Again, there is an extended introduction, this time with three ‘boxed’ case studies of indigenous/non-indigenous interaction. For non-indigenous Australians, communication means pre-eminently the written word and – especially in the last decade – its electronic form and the Internet. As evidenced in the Telstra privatisation debate, however, electronic communication has its limitations beyond the regional centres. Communicating with indigenous Australians may require alternative approaches. As Judge McClellan observed, at his swearing in as a NSW Supreme Court judge, about his time on the Maralinga Royal Commission:

‘One of the most significant [great issues that emerged] was the treatment of indigenous people by the authorities of the time, and the need to define an effective response in the 1980s. The cruelty shown to aboriginal people, who were rounded up and put on trains going west from Maralinga to anywhere and thereby dispossessed of their land, with their tribal and social structures destroyed, remains as but one of the legacies of that era of Australian life. The anger expressed by Jim McClelland, sitting in the dust with aborigines at Maralinga, and the recommendations of the final report, could never repair the damage done to many individuals.’  
[[http://www.lawlink.nsw.gov.au/sc/sc.nsf/pages/mcclellan\\_swearin](http://www.lawlink.nsw.gov.au/sc/sc.nsf/pages/mcclellan_swearin)]

If non-indigenous Australians really do intend to treat Indigenous Australians as equals in natural resource management, there is an enormous amount of ‘sitting in the dust’ to make up.

Part IV, *Negotiating Management*, contains chapters on processes through which Indigenous people are obtaining ownership and/or management of land in NSW (two chapters) and the Top End, one chapter on fire management in Tasmania, a chapter reviewing the social impact assessment process for the Coronation Hill mine in the NT, and a concluding chapter by the editors.

As the editors note in the concluding chapter:

‘In dominant non-indigenous cultures, “work” is the opposite of “play” or “recreation”. “Work” is seen to be purposeful and directed. It is often expected to be performed at fixed times, set apart from community, social, and cultural aspects of life. However, for indigenous people, “working on country” embraces very different concepts. It encompasses both the practical actions and the contemplative processes of fulfilling, demonstrating, maintaining, and negotiating relationships to traditional lands, waters, and wildlife that are undertaken as part of people’s economic, social, and cultural lives.’ (p. 337)

*Working on Country* is eye- and mind-opening for non-indigenous Australians. If non-indigenous Australians are prepared to grant that an Indigenous individual’s personal and collective preferences count equally with those of a non-indigenous Australian, efficient resource allocation requires that non-indigenous Australians must understand how Indigenous Australians relate to ‘country’. This ought to have happened before 1992; a decade after *Mabo*, it is now imperative.

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