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## BOOK REVIEWS

*Taxation and the Rural Economy*. Conference Papers prepared for the Australian Tax Research Foundation (Melbourne), July, 1988, ISBN 0 949482 24 2.

Can a collection of seven papers discussing the present problems of revenue raising and suggested solutions be interesting as well as informative? It can, taxation affects us all! These papers are of importance to all people associated with agricultural economics whether they be in government, in universities, in finance or in agricultural production. The rural sector is very sensitive to government imposts as it is principally a group of individualists; therefore, changes in the taxation base can be easily misunderstood.

The Australian Tax Research Foundation (ATRF), recognising the need for reasoned thoughts on the subject of change, has brought authors together to present an informed review of the present position and the possible changes. All people associated with agriculture will benefit from the information presented and views expressed as change is introduced. Australia is reviewing its revenue-raising systems and significant steps implementing change have already been taken. It is reasonable to expect that this momentum will continue; therefore, all concerned with agriculture need to have a proper understanding of the effect of the change.

The ATRF has succeeded in presenting the various factors which must be considered when major changes are planned. Much has been written and discussed regarding changing the tax base to a broader based consumption tax. The rural sector has particular problems which must be considered when a structural change is contemplated. Experience has shown that farmers are effective in persuading governments to attempt to solve their problems through the income tax system with varying degrees of success. The authors in different ways set out the past history, present position and their projections of effects of possible changes on the rural economy. Readers of these papers will find considerable help in understanding the complex nature and effects of the changes proposed. This will assist in an informed debate as the momentum of change develops. Two authors look at the special taxation arrangements applicable to the rural industry and project a possible path towards reform. The importance to the economy of rural exports is recognised. Therefore, they support an efficient farm sector and insist resources be used in the most productive way. The authors state that taxation should not distort the use of farm resources. The structure of taxation, not the level, is the principal concern. The May 1988 Economic Statement is aimed at achieving a level playing field for all industries by the reforms introduced. Statistics are used to illustrate that primary producers in general pay about the same rate of tax as PAYE earners, that is, 23 per cent and 24 per cent respectively.

These statistics show taxation concessions in the present income tax structure have not unduly distorted tax payments in favour of the farm sector. It would seem reasonable to expect a new structure to protect this relativity.

The effect of capital gains tax (CGT) is well discussed in the first paper by Preston, who examines the impact of CGT to date. The infrequent turnover of farms, death rollover provisions and inflation adjustment are examined and shown to have reduced the expected adverse impact of the tax on the farm sector. I find it hard to agree with Preston on the point that accelerated depreciation tended to impede, rather than encourage, growth in the rural industry; labour training and control of stocks do not seem a viable alternative to depreciation incentives in this case. The other taxes paid by farmers are dealt with and, when read with the more detailed treatment by the other authors, form a balanced overview of rural taxation.

The ideas and information presented by Preston lead very well into the paper by Hooke who examines the possible path towards tax reform. Hooke impresses with the need to let the mind have free rein to examine new theories. He comes out strongly for a single rate VAT structure with reduced income tax rates as a consequence.

The argument compliments comments by the other authors and provides a sound base for discussions relating to future implementation of a broad-based consumption tax.

There are five papers which deal in detail with the other facets of taxation affecting the rural sector. Fluctuating incomes have been a major problem for farmers and the problem was recognised in tax administration as early as 1921. The various attempts to achieve equity are chronicled and commented upon. Use of tables and charts illustrates the points very well and assists the understanding of the complex subject. The facts and opinions expressed will assist decision makers in their task of restructuring the taxation base.

A review of taxation structure would not be complete without a discussion of CGT. Chisholm deals with this subject in detail. He points out that no income tax structure can operate fairly without CGT. The farm sector is capital intensive, and the effect of this is discussed with a conclusion that the major rural asset, land, has not increased in value beyond the past pattern of inflation. CGT, by allowing the cost base to be adjusted for inflation, will not have a heavy impact on farmers. Land that increases in value beyond the trend of inflation does so due to other factors, such as proximity to expanding city areas.

The lock-in effect of CGT being paid on a realisation basis is criticised and an alternative accruals system discussed and recommended. The resulting problem of cash flow is addressed. The solutions suggested appear administratively difficult and may not prove cost effective. Planners will need to examine the benefits of reducing the lock-in effect against the costs of administration. This paper is a good reference from which to start.

Fringe benefit tax (FBT) was unpopular when introduced and the rural sector has remained strongly opposed to the principal of the tax being payable not by the recipient but by the payer. It is suggested that FBT has contributed to the establishment of a more level playing field by promoting a more efficient, comparative advantage manufacturing sector. It is therefore part of a more rational resource allocation policy to achieve improvement in our balance of payments.

It seems the major objections are now less strenuously promoted and the farm sector is reluctantly accepting the tax while the further review of taxation is being undertaken.

The discussions on excise tax and its effects on agriculture provide a reasoned approach to these taxes as revenue raisers. The point that the diesel tax is both a revenue raiser and a road tax is made with some conviction. The rural sector is not likely to agree because of its belief that heavy road transport contributes significantly to the high cost of road damage. The abolition of the rural rebate of diesel fuel tax is quoted as likely to reduce real net income of agricultural producers by 2 per cent.

The paper on a broad-based consumption tax brings together many of the points raised by the other authors. The distinction between the single stage tax [retail sale tax (RST)] and the multi-stage tax [value added tax (VAT)] is explained. The benefits and efficiencies of both are outlined with the author establishing the VAT as the preferred option. It is a broader based tax, with final consumption point more clearly defined. Freebairn is convincing in his argument that the slightly higher administration cost is outweighed by the above benefits.

The rural sector is likely to have an overall rise in costs from VAT or RST which may or may not be compensated by other savings, such as reduced tax on savings. The farmer has not been a net saver. In bad years, inputs would continue at higher cost level without benefit of income tax savings. These disadvantages may be overcome by overall improved efficiency of better rural resource allocation and improved markets with the Australian economy as a whole.

Those people involved in planning for, and implementing, the continuation of the current taxation restructuring will gain from studying these papers, resulting in a beneficial effect for the rural sector and Australia.

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*Disease in Farm Livestock: Economics and Policy.* By K. S. HOWE and J. P. MCINERNEY (eds). (Office for Official Publications of the European Communities, Luxembourg, 1987.) Pp. 190, Agriculture Series, EN, ISBN 92 825 7728 7.

The papers that make up this book 'crossed my desk' first in late 1987, having been sent from Europe by Bill Scanlan who was then the Veterinary Counsellor, Australian Embassy, Brussels. Papers of this type are sent routinely in order to keep people in the Australian veterinary administration aware of policy developments in Europe.

Now in the form of a bound report, this outcome of a mid-1987 symposium sponsored by the Commission of the European Communities possibly represents the state of the art of livestock economics as it relates to animal disease policy in Europe.

My first view of the collected papers was that they gave a useful description of the ways in which European livestock data could be applied in economic appraisal at national, regional and farm levels.

There seemed to me to be an undue emphasis given to describing the measurement of disease losses, which admittedly is one basic issue to be covered when preparing to analyse a disease management problem. Measurement of disease loss is, of course, less than half the battle. Armed with information on losses, examples of the really thorny questions when they arise are: What will be the response to disease

control action? What level of control would be optimal to individuals? Or to society as a whole? and; Should Governments be involved?

There are papers on these wider issues, giving balance to the overall symposium coverage. These discuss the fuller information requirements for proper application of economics to disease control problems. The reader notes with some relief that the authors recognise that animal health inputs must take their place among the other factors that are involved in the livestock production process, and that the critical need is to relate data on input levels with measures of the consequent outputs, so that managers can make rational decisions.

The edited report differs from the raw papers, because the editors, from the Department of Economics at the University of Exeter, have contributed to the form of an introduction and a heroic final commentary. In these portions, they take on the challenging task of outlining the areas where economics has a role to play in helping with animal disease control policy.

Writing as someone who has spent over a decade working as a livestock economist alongside the veterinary profession, I can sympathise with the editors' desires to explain that economists do not only deal in money matters.

The veterinary profession has a proud record and can boast substantial achievements. Many veterinarians are interested in the service economists might provide for them, but the book under review demonstrates how economists need to pay close attention to how they sell their potential contribution to people from other professions.

An ardent commentary of what might be done could help in this respect; for veterinarians and economists to actually get together to identify and publish workable policies would be even better.

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*Agricultural Price Policies for Developing Countries.* By JOHN W. MELLOR and RAISUDDIN AHMED (eds). (Johns Hopkins University Press for the International Food Policy Research Institute.) Pp. 327, ISBN 0 8018 3586 0.

In recent years, a number of books useful for designing and analysing price policy in developing countries have appeared. This book is one of them. The editors targeted 'Policymakers and their advisers, staff economists and expatriate professionals who may conduct dialogue on price policies with national governments . . .' as their primary audience with students being the secondary audience (p. xii). Appropriately, the International Food Policy Research Institute (IFPRI), which has Mellor as Director and Ahmed as Director of its Food Production Policy Program, invited individuals from the primary audience to a seminar. The book is an outcome of papers prepared for the seminar by senior IFPRI staff, modified in the light of the discussions which took place. Australian readers will be familiar with the work of several of the individuals who have contributed to the 16 chapters.

Following the introductory chapter written by the editors, there are sections dealing with: (a) the international environment for national price policies; (b) domestic market intervention; (c) production re-

sponse, technology and commercialisation; (d) consumers' welfare; and (e) policies for agricultural growth. Some chapters are theoretical or conceptual (for example, Ahmed's coverage of pricing principles and public intervention in domestic markets and Mundlak's chapter on capital accumulation and choice of production technique), some are highly empirical (for example, Paulino's treatment of trends in cereal markets and Hazell's analysis of changing patterns of variability in cereal prices and production) and two are of a case-study nature (Stone's chapter on relative prices in the People's Republic of China and Sarma's chapter on administered foodgrain prices in India). However, there are examples given throughout the book to demonstrate particular points. There is even reference to the Australian tariff compensation debate in the chapter by Valdes and Siamwalla dealing with foreign trade and exchange rates.

There are many messages for policy makers and their advisors in this volume but some would not be news for those at the workplace (for example, the fact that agricultural price policy is highly political and complex to design, implement and analyse). There are other messages which, although being widely accepted by agricultural price analysts in academia and elsewhere, seem not to be fully appreciated by those who have been responsible for the policies in place in many developing countries. Here one could include, for example, the problems which can result from trying to manipulate prices rather than focusing on underlying demand and supply conditions, and trying to set domestic prices without reference to international price levels. The editors do not favour increased farm prices as a mechanism for increasing agricultural production in developing countries. Rather, what is needed is technological change and increased demand for labour.

A diverse array of subject matter is covered in the book and there are too many separate issues addressed to summarise. The reviewer found the book to be comprehensive in terms of its coverage of issues which have been at the forefront of contemporary literature on agricultural price policy in developing countries. For example, in addition to chapters already mentioned, there are chapters on risk and uncertainty (Hazell), public stock management (Siamwalla), food subsidies (Pinstrup-Andersen) and food aid (von Braun and Huddleston), to mention a few. This is not to say that the book contains a coverage of all of the things which policy makers and their advisors ought to know about. For example, a chapter on data needs for effective price policy design and appraisal would rightly belong in a book such as this. Also, there is not enough attention given to the economics of combinations of policy instruments (as opposed to 'monopolicies').

I found myself in agreement with most of the advice contained in the book although there are points of detail on which one can quibble. For example, I think Siamwalla was probably a little too kind in his remarks about BULOG's management of Indonesia's buffer stock policy for rice. That institution encountered severe stock-management problems in 1985 culminating in the 'calling in' of expatriate experts (the 'Falcon Team') to help solve the problems.

In the concluding chapter the editors point out that '... the first requisite of good agricultural price policy is the development of a national research, analytical, and policy formulation process.' (p. 291). This strikes a responsive chord with the reviewer and it is something

that should be brought to the attention not only of governments in developing countries, but also the governments of countries providing foreign aid in the form of training. For the former, I believe (albeit based on limited observation) that an important point for consideration is the incentive structures confronting young professionals. If they are to be effective in helping to design and analyse policy, they need to be paid enough for that job so that they do not have to work at other jobs. Also, they need to be given a stronger sense of purpose than what I have usually observed. For governments providing training, and here I have the Australian model in mind particularly, there could be something to be gained from spreading the training budget over fewer individuals with the view to providing some back-up support for those individuals when they return to the workforce in their own countries. That support might, for example, take the form of funding collaborative research involving supervisory input from the donor country. I suspect that there is some tendency for students from developing countries to flounder once they return home to their often impoverished institutions.

It would be interesting to know how much debate took place at the seminar and how much influence the non-IFPRI delegates had on the contents of the book. Even more so, it would be interesting to know the thoughts that were occupying the minds of, say, the delegates from Indonesia's BULOG and India's Agricultural Prices Commission as they listened to some of the presentations with their knowledge of the constraints faced by policy makers in their own particular environments. It would be surprising if there was as much consensus at the seminar as might be implied by the book.

There is no doubt that this book is an important contribution to the literature. But it ideally should be read with books such as Timmer, Falcon and Pearson (1983), McCalla and Josling (1985) and Timmer (1986) which cover much of the basic theory relevant to issues addressed by the contributors. What is still missing from the literature is a book on the process by which agricultural price policy is decided in developing countries. There is a general awareness that it is not simply the outcome of rational economic thinking and that, probably more often than not, it is a response to crisis situations rather than the product of careful deliberation about desirable future pathways to higher living standards for the poor. However, I suspect much remains to be understood about the processes involved, especially by the expatriates targeted by the editors.

The book has a 19-page reference list which should be particularly useful if you are in the business of teaching price and policy analysis to students from developing countries.

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*Economic Liberalisation in New Zealand.* By ALAN BOLLARD and ROBERT BUCKLE (eds). (Allen & Unwin New Zealand Limited, New Zealand, 1987.) Pp. 364, ISBN 0 86861 451 3.

The process of economic reform in New Zealand has not taken place overnight. Earnest moves toward deregulation, such as the dismantling of the import licensing system and the easing of land transport regulations, occurred under the National Governments of the late 1970s and early 1980s. From 1984, the Labour Government expanded these reforms into a more rapid and radical programme of economic liberalisation. This programme has attracted much attention but, surprisingly, little debate and analysis. The book is intended to fill this gap.

The first half of this edited volume of 14 papers emphasises micro-economic reforms and examines competition policy and regulatory changes affecting individual industries. Chapter 1 sets the stage for the debate, discussing the purpose, the instruments and the problems hanging over the process of economic liberalisation in New Zealand. Chapters 2 and 3 review the principle of regulatory change, the history of industry control and the progress of deregulation in New Zealand. An impact study of regulatory change in the New Zealand distribution sector (importing, wholesaling and retailing) is presented. The results indicate that there have been positive effects from the four main strands of industry deregulation: import liberalisation, price control, competition reform and industry regulation. In that sector, deregulation has resulted in a marked increase in vertical integration, a growth of direct importing, a higher rate of close-downs and an increase of new entrants. Changes in business behaviour resulting from these structural changes have generally benefited the consumers. However, it is also recognised that the distribution sector is in some ways exceptional, as it is not subject to foreign competition. The results of the study are therefore not necessarily generalisable to other sectors.

Chapters 4 to 8 examine regulatory reforms in individual industries, such as transport and energy, and removal of assistance to state-owned enterprises. Here, the emphasis is mainly on changes in industry regulations and competition laws. Although most of the discussions proceed beyond a simple assertion that market forces can do better, little empirical evidence is presented on the relative gains and costs of the reforms to consumers, producers and related industries. There is little analysis of the welfare implications of the reforms. One reason for this could be, as is acknowledged by one editor, that 'there has not been sufficient adjustment time to judge the long term response' (p. 43). Nevertheless, it is disappointing to have to take the benefits of the reforms on faith.

Although the economic changes that farming faces result more from reductions in government support and intervention in agriculture than from its deregulation, the prospects of farming in the deregulated environment are also analysed. While the profitability of farm exports is reported to have declined at the time when industry protection was increased, the analysis concludes that the adjustment process for farming in the deregulated environment has also been costly. This has largely been due to the substantial increases in interest rates and the appreciation of the New Zealand dollar which took place immediately



after the deregulation of financial markets. The change in the farm environment is likely to alter the nature of farm firms. Increased price uncertainty will lead to diversification in production, and more financial management skills will be required.

The second half of the book directs attention to the macroeconomic aspects, particularly reforms in the financial sector and their implications for economic policy. Chapter 9 provides a brief review of recent theoretical developments in labour economics and an insight into the deregulation of the New Zealand labour market. Chapters 10, 11 and 12 are best read together, forming an integrated discussion. These chapters examine the progress of liberalisation in financial markets and the problems that occurred following their deregulation, namely a deterioration in international competitiveness of exports and high interest rates. The study suggests that these problems can be partly attributed to the particular sequence of market liberalisation adopted in the New Zealand experiment. The sequence of first deregulating financial markets, together with a monetary policy of fully funding fiscal deficits, resulted in increases in domestic interest rates, leading to an inflow of capital which forced up the exchange rate. Monetary policy after the deregulation is concluded to have been inefficient as an anti-inflationary strategy, with the growth rate of the major monetary and credit aggregates generally higher than the rate of inflation.

Chapter 13 provides an assessment of the changing role of fiscal policy in economic liberalisation in New Zealand. In Chapter 14 a different standpoint from economic efficiency is adopted: the reforms in social policy and welfare expenditure are examined in relation to equality and social justice, with emphasis on the effect of taxation reform.

Overall, the book is successful in addressing a wide range of topics related to the economic reforms in New Zealand, and in laying a foundation for further research. Its major distinguishing feature is the authors' attempt to relate the economic theory to practice, which enhances reader interest and comprehension. The appendix provides an excellent source for those seeking factual information on regulatory changes in this context. The book's major weakness is that, being a collection of contributions, it does not develop a coherent picture of the issues addressed and the methodology adopted.

There is much in the book which would be attractive to applied economists, especially those who are interested in economic development in New Zealand.

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*Japanese Agricultural Policies: A Time of Change.* By AUSTRALIAN BUREAU OF AGRICULTURAL AND RESOURCE ECONOMICS. (ABARE, Canberra, 1988.) Pp. 326, ISBN 0 644 07951 7.

The year of 1980 was a revolutionary year for Japanese agriculture because of the commitment to simplify, by 1992, the distribution system for rice and to alter the method used to calculate the producer prices for wheat, barley and soybeans. The commitment also includes

the reduction of producer prices of rice, manufacturing milk and beef and removal of import quotas on beef, fresh oranges and some processed foods. The beef grading system is to be modernised. Tariffs are to be reduced on a range of products including grapefruit and some dairy products.

This book focuses on these issues. It comprises 13 chapters. The first chapter is the introduction. The rest of the book is divided into three parts. The first part contains goals, policy instruments and effects (ch. 2: Agricultural Goals and the Post-War Economy; ch. 3: Agricultural Policy Instruments; ch. 4: The Effects of Government Intervention). The second part examines Japan's agriculture and its major industries (ch. 5: Characteristics of Japan's Agriculture; ch. 6: Grains Industries; ch. 7: Dairy Industry; ch. 8: Beef Industry; ch. 9: Sweetener Industry; ch. 10: Fruit Industry; ch. 11: Forest Industries; ch. 12: Fishing Industry). The third part contains issues in adjustment (ch. 13: Need for Further Reform).

As the contents indicate, the book explains Japanese agriculture in comprehensive detail and recommends further reform. This book is rated highly because it enables people to understand the topic clearly. Each chapter contains detailed data. Further, the summary clearly explains the essence of the book. I also agree with the book's premise that efforts must be made to change Japanese agriculture to enhance its labour productivity and decrease the cost of agricultural products. However, Japan has many particular constraints and characteristics which this book ignores. It would be impossible to understand Japanese agriculture and trade friction problems unless these points are understood. Also, whether free trade is appropriate or not, is a very controversial issue.

Some of the factors that cause international and internal criticisms of Japanese agriculture are listed on page 12 of the summary. However, the book also considers the following background factors which are also relevant in the criticism of Japanese agriculture: (1) world-wide surplus of agricultural products, (2) large deficit in the US trade balance, (3) too many Japanese agricultural import quotas, (4) overprotection of Japanese agriculture, (5) high price of land, especially in urban areas, (6) low tax rate for Japanese agriculture, (7) decrease of the share of the agricultural sector, and (8) criticism of Japanese agricultural co-operation.

Among my criticisms are doubts concerning the relevance of some of the background factors. For example, it is true that there are large surpluses of food and therefore the prices of agricultural goods are low in the present situation [background factor (1)]. However, on the basis of past experience it is not clear that these surpluses will last. With respect to the US trade deficit, factor (2), it is so large that Japan can hardly help to reduce it through the purchase of agricultural goods even if all agricultural products were imported from the US. With respect to Japan's import quotas, factor (3), Japan has agreed to liberalise several of these.

It is often mentioned that Japanese agriculture is overprotected [factor (4)]. For example, the book shows the numerical values of nominal rates of protection of agriculture calculated by Hayami and Homma in Table 4.7 and the values of PSE (producer subsidy equivalent) in Figure 4.1. From these data, the values for Japanese

agriculture are extremely high. However, these numerical values are seriously defective as also pointed out by Nakagawa (1987). For example, Hayami and Homma (1986) calculated the nominal rate of protection by using the data of 12 agricultural commodities. However, the Japanese prices of these 12 commodities are very high because of the severe land constraints. They do not include other important agricultural commodities such as vegetables and fruits. Second, they do not consider the differences of quality among agricultural commodities. Third, they ignore the effect of agricultural policy such as the EEC's variable levy system. Fourth, the values of the nominal rate of protection in each commodity often lead people to misunderstand the whole figure of protection because they ignore the effects of the rate of self-sufficiency. For example, the values for barley and wheat in Figure 4.3 (p. 50) are more than 500 per cent but almost all barley and wheat is imported as seen in Table 6.9 (p. 122). Rather, the new values which include the effect of the rate of self-sufficiency on the nominal rate of protection should be given. One of the simplest methods is to multiply the nominal rate of protection by the self-sufficiency rate as Egaitu (1987) suggests. Fifth, the extremely high value of the nominal rate of protection in recent years comes from the appreciation of the yen. Sixth, a result of the Hayami and Homma (1986) model shows that Japan's high agricultural protection rate is typical of countries at Japan's stage of development. The rate of protection would be typical of a country with Japan's comparative advantage in agriculture and share of agriculture. Judging from the results, Japanese agriculture is walking a similar path to that of the developed countries and is not being overprotected.

The PSE and CSE (consumer subsidy equivalent) try to grasp more than these international and domestic price differences. For example, PSE includes the expenditures for more general agricultural policy such as land improvement and restoration after disaster. However, almost all criticisms stated above of Hayami and Homma's nominal rates of protection are applied to the PSE and CSE concepts. Also, each country has its own natural, historical, social background. Therefore, it is natural that these expenditures also vary largely. PSE neglects these points.

There are good reasons for protecting Japanese agriculture. The first is food security. Probably for the people of the food-exporting countries, one of the most difficult things to understand is the Japanese fear about food security. However, there are too many vivid memories of terrible food crises after World War II, the rice riot in 1918 and the US soybean export regulation in 1973. Judging from the panic caused by tissue paper and toilet paper shortages in the oil shock period (1973), the Japanese can easily become panicked, especially if the sea lane for imports such as rice is attacked as Nakajima (1987) states. Japan imports more than half of its food consumption measured in calories and is only 30 per cent self-sufficient in grains. Both figures show that Japanese self-sufficiency in food is the lowest of the developed countries. Japan is the largest net food-importing country. Thus, the Japanese envy the food-exporting countries which do not have to worry about food security.

The argument in the book is not convincing although several points are accepted. For example, security can be gained through increased

food stockpiling, although eating fresh food is preferable. Further, increased use of long-term bilateral contracts for food stuffs is favoured.

The second reason for protecting agriculture is that it has external economies which are extremely important for Japanese society. For example, agriculture, particularly paddy field agriculture, has the function of water conservation (prevention of both soil erosion and the disaster of landslides). It also has the function of air conservation (purification of air, supply of oxygen and mitigation of climate) and the maintenance of green space (maintenance of beautiful farm villages, supply of shelter places in case of disaster).

The third reason for protecting agriculture is that it forms an important part of Japanese culture. Most Japanese festivals originated from agriculture and the praise of a good harvest. Also, most of the shrines and temples are originally agriculture-oriented.

The fourth reason for protection is that a large amount of investment is required to increase labour productivity by changing the agricultural structure. Because Japanese agriculture belonged to the Asian type of agriculture which has high land productivity (because land was a scarce factor) and low labour productivity (because labour was an abundant factor), Japan needed to increase land productivity by using large amounts of fertilisers. The development of Japanese agriculture for 100 years was admirable and was a kind of hero of this Asian type of agriculture. However, after the high economic growth era of the 1960s not only land, but also labour, became a scarce factor. Therefore, Japanese agriculture acquired a severe restriction from both labour and land. In other words, Japan has to develop its agriculture to a completely new frontier in the world which has both high land and labour productivities. However, given the topography it is difficult to increase labour productivity. About 75 per cent of Japanese land is occupied by mountains and only 15 per cent is covered by agricultural land. Also, such land is scattered and of an irregular shape. Further, much of the land is mountainous. Therefore, Japan needs a large budget to change its agriculture from an Asian type to a more modern style which is in the new frontier. The book neglects these facts.

The fifth reason for protection is that Japanese agriculture and forestry still use large amounts of land, although its share in income and employment is now small. Also, Japanese agriculture still absorbs the employed labour during a recession. In other words, a large part of local and mountainous places would be depopulated if agriculture is destroyed by trade liberalisation of agricultural products, especially rice. In this sense, the argument of pp. 302–4 (that most prefectures are independent of agriculture, and that employment and income opportunities in many rural communities could probably best be served by using land currently under agriculture for other purposes) is not convincing.

The sixth reason is to reduce fluctuations in the prices of agricultural products. As stability and growth are two major goals of economic policy, Japan needs some expenditure to reduce the fluctuation of agricultural prices owing to agricultural goods' low price elasticity of demand.

Japanese agriculture is subjected to particular conditions and has certain characteristics. As stated above, I agree with the book's view of

increasing the labour productivity while keeping the high land productivity. However, Japanese agriculture has heavy land constraints. As the book states, the size of most farms is less than 1 hectare and this small size is the result of post-war land reform policies of the Allied Powers (p. 73). The book sensibly suggests an increase in the farm scale and in labour productivity. However, it ignores the following extremely severe constraints of Japanese agricultural land. In Japan the area of agricultural land per head of the population is only 4.4 ares. Generally speaking, the new continental countries have large values. For example, Australia has 1151 ares (about 262 times the Japanese value), Canada has 152 ares, and the US has 133 ares. On the other hand, the values for Asian countries are generally small because of the high population density. However, China has 36 ares and India has 23. European countries also have values of 20 to 60 ares. Therefore, it is very clear that Japan has an extremely severe land constraint. (The amount of agricultural land per person is more representative of a country's land resources than land per farmer.)

Also, the area of cultivated land in Japan is only 15 per cent of Japan's total land, one of the smallest proportions in the world. Japan's topography limits its agricultural possibilities since almost 60 per cent of the land has a gradient of 15° or more, which restricts its use for cultivation as the book explains (p. 71). Also, agricultural lands are dispersed. Therefore, it is very difficult to increase the labour productivity with such a heavy land constraint. Hayami (1988) explains that Japanese agriculture is under siege and criticises NOKYO (Japanese Agricultural Cooperative Association). I agree with many of his arguments, but he makes a most serious mistake in neglecting the severe land constraint of 4.4 ares. In fact, Nakajima (1987) shows that it is impossible for Japanese agriculture to compete with foreign agriculture (for such commodities as rice) despite maximum effort to increase labour productivity because of the small size and dispersion of agricultural lands.

In spite of these problems, the growth rate of Japanese agriculture for the 100 years since the era of Meiji (1880–1970) is 1.63 per cent which compares favourably with most countries, including the more developed countries such as the US (1.56 per cent), West Germany (1.59 per cent), France (1.35 per cent) and England (0.96 per cent). This was possible because it was relatively easy to increase land productivity by the use of a large amount of fertiliser. However, when Japan changed to a labour-shortage economy, labour productivity had to be increased and agriculture changed to a more European-type or new continental-type. Because the severe land constraint remains, Japan has to create a new frontier which has both high land and labour productivities.

In order to overcome these difficulties and increase agricultural labour productivity, a large budget is required. The trade friction problem is extremely political. The book is also much influenced by political interests, even though many other aspects of the book are highly regarded. For example, the arguments on page 11 of the summary that 'Japanese protection reduced Japanese export earnings, lowered world prices for meat, increased the variation of agricultural prices and reduced world trade' are too biased because Japan has been one of the biggest contributors to expansion in world agricultural trade

as Hayami (1988) states. In fact, the real value of imports of agricultural commodities to Japan increased from 1960 to 1985 at an average rate of 13 per cent per year, more than three times faster than the world total. The arguments also completely neglect the non-economic contributions of Japanese agriculture.

As stated above, Japan is at the stage of economic development where agricultural protection typically is highest. Considering the extremely low self-sufficiency rate, I do not think that Japanese agriculture is too overprotected. Further Japanese agriculture has many non-economic values such as culture, land conservation and social balance. Therefore, agriculture should not be destroyed but the basic foods such as rice should be produced domestically. However, strong efforts should be made to change Japanese agriculture. Also, the aggressive exports of non-agricultural products should be controlled in order to achieve a balanced growth between agriculture and non-agriculture.

In short, this book paints a very rich and detailed description of Japanese agriculture which gives people outside Japan a chance to understand the topic much more clearly than any other book previously published. I agree that Japan should try to change its agriculture and improve the labour productivity of its agriculture. Also, the book is highly likely to influence Japanese agricultural policy through increasing outside pressure. However, several arguments in the book may not be convincing to the Japanese themselves. The book may be too biased by the potential influence of political power and understate the special feelings regarding food security. I hope that these points could be developed further in the future in order to promote mutual welfare.

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