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Overview of Rural Income Taxation: Issues, Implications and Importance

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The main purpose of this paper is to discuss aspects of taxation policy as it is applied to rural sector issues. The paper begins by reviewing the relevance of rural income volatility, and general trends in protection policy, for taxation policy design. Comments are included on the general appropriateness of concessional tax treatment and a description is provided of key taxation policy principles — equity, efficiency, certainty and administrability. The paper then illustrates how these taxation policy principles are taken into account during the policy advising process. Four case studies are used for this purpose: drought, water reform, horticulture and landcare.

1. Introduction

When considering any changes to taxation arrangements applying to the rural sector, policy advisers are required not only to come to grips with the details of the particular problem which might be confronting them but, also, to have an eye on the main influences impacting on the sector and on the objectives of broader economic policy. These objectives currently include the need to achieve rapid fiscal consolidation — in order to, inter alia, raise national savings — and the on-going requirement to ensure that the taxation system is as neutral as possible in its treatment of the various sectors and industries within the economy.

This overview paper has two objectives. First, to comment briefly on the relevance of general influences impacting on rural taxation arrangements. Second, to illustrate how taxation policy principles have been applied to a number of contemporary rural sector issues, including the recent drought.

A summary of taxation arrangements currently applying to the rural sector is set out at attachment A to this paper.¹

2. Volatility and Industry Protection

2.1 Volatility and Taxation

Being heavily dependent on export markets and the vicissitudes of numerous uncontrollable influences, the rural sector is potentially susceptible to relatively large fluctuations in prices, output, profits and exports. The unpredictability of some basic influences (i.e., rainfall and international commodity price developments) is of significance. The volatility of aggregate output and profits estimated for the rural sector appears to be generally greater than the volatility of the same parameters estimated for the mining, manufacturing and the non-farm sectors of the economy. Some indicators bearing on volatility issues are illustrated in chart 1: statistical measures of volatility, and their limitations and qualifications, are reported at attachment B. Due to data limitations, the analysis reported at attachment B does not permit conclusions to be drawn as to whether or not individual primary producers generally incur greater taxable income variability than do some other taxpayers.

In an ideal world policy advisers would have the advantage of always knowing when volatility is excessive and whether intervention by government to counter its impact could be effective. In the real world

* The Treasury, Canberra. The author appreciates the assistance provided by Jonathon Kirkby, Andrew Wilson, Deborah Peterson and Charlie Lay. Although the Australian Bureau of Statistics and the Australian Taxation Office provided technical advice, the paper is issued under the author's responsibility. The views expressed do not necessarily reflect those of the Government or of the Treasury.

¹ Further details can be found in the *1995 Australian Master Tax Guide*, published by CCH Australia Limited, and in relevant legislation.

knowledge and foresight are far from perfect. We do know, however, that fluctuations in prices and profits provide critical signals to producers and consumers. These fluctuations — and associated risks — play a central role in the allocation of financial, labour and other resources within and between different sectors in the economy. As a general rule governments should not intervene in order to eliminate such fluctuations.²

Successive Australian governments have moulded taxation arrangements in the rural sector aimed not at moderating price signals or controlling production but at smoothing tax burdens and encouraging savings. It is beyond the scope of this overview paper to evaluate the success or otherwise of current taxation policies. A few scene-setting comments are, however, probably in order.

The existing income averaging arrangements — which are relatively popular and apply to around 80 to 85 per cent of primary producers — are designed to smooth out the effects on taxation payments of fluctuations in income.³ However, one implication of the averaging arrangements is that (as illustrated in panel D of chart 1⁴) they work to reduce effective tax payments by farmers when income is trending upwards (the value of the average rebate doubled between 1985-86 to 1989-90) and increase effective tax payments when income is trending downwards (the value of the average rebate received by taxable producers fell from around \$1600 in 1987-88 to less than \$800 in 1989-90). The number of taxable farmers obtaining the rebate also moves in a similar pro-cyclical manner.⁵ Between 1983-84 and 1989-90 (the period of rising farm incomes) the number of farmers benefiting from the rebate was between two and four times greater than the number of farmers paying the complementary tax. As farm incomes fell post-1989-90 the numbers receiving the rebate contracted sharply (falling by more than 50 per cent).

The existing tax preferred savings schemes — Income Equalisation Deposits (IEDs) and Farm Management Bonds (FMBs) — aim to encourage farmers to save in high tax years (and reduce their tax liability) and withdraw in low income years (the withdrawals providing rather more cash than the tax liability). On the face of it, therefore, the greater the tax relief given by tax averaging in high income years the less is the incentive to invest funds in IED/FMB schemes. Put

another way, tax averaging would appear to lower the effective rates of return on IEDs. To the extent this is the case, the greater the tax relief provided by tax averaging the greater are the tax incentives required to make IED/FMB-type schemes effective.

Assessments of rural income volatility and its implications for taxation policy should, of course, take into consideration the tendency over time toward increased diversification of income sources within the rural sector and between rural and non-rural activities. Some indicators of income diversification based on statistics published by the Australian Taxation Office are included at panel C of chart 1. ABARE survey data also suggest such tendencies exist.⁶ In 1990-91, for those primary producers whose primary source of income is classified to primary production, around 70 per cent of total net farm income was accounted for by off-farm income.

² The domestic and international experience with production and price support schemes is replete with examples where intervention aimed at achieving greater stability is either ineffective or counterproductive.

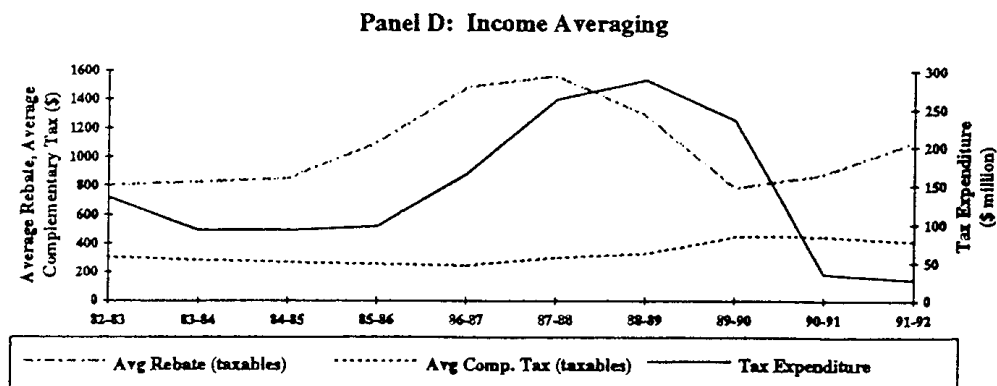
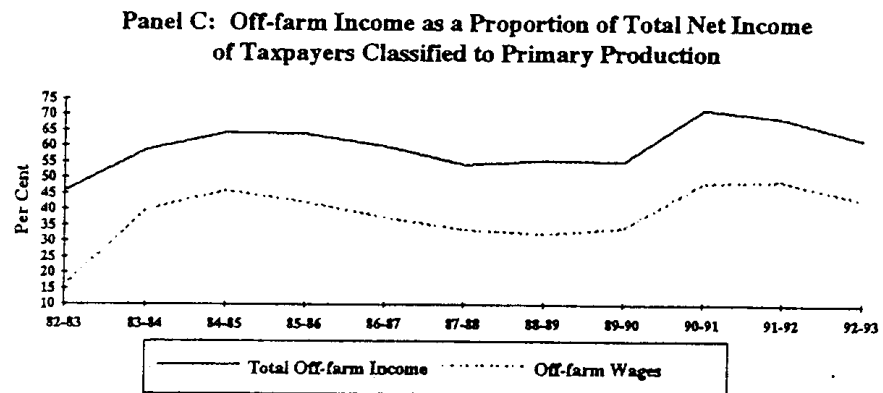
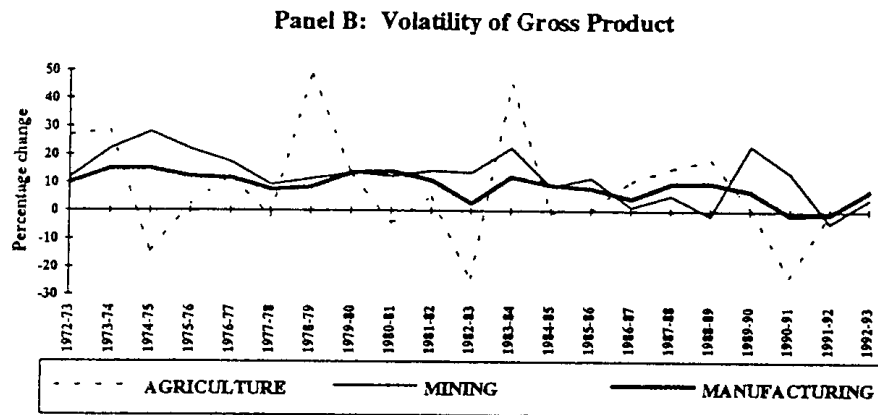
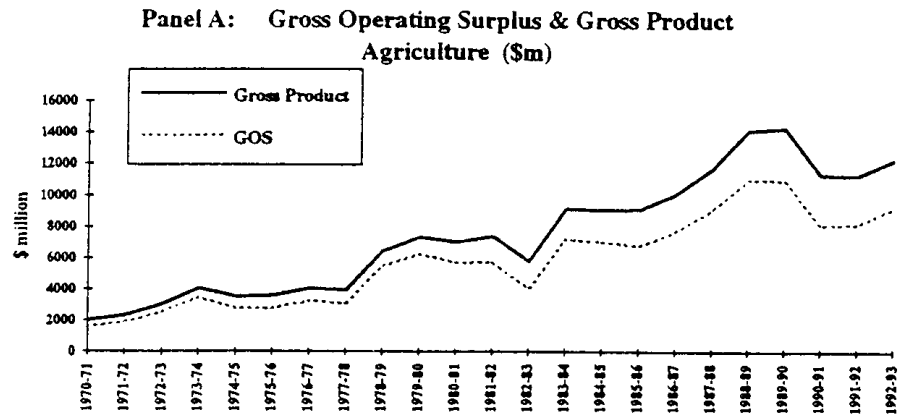
³ Under a progressive tax system and with yearly taxation assessment, income variability across thresholds can increase the tax burden borne by individuals. Under the averaging arrangements yearly tax assessments are calculated on current income at a rate equal to the average rate that would apply to the average of income in the current year plus that of the preceding four years. As table 1 of attachment B illustrates, the volatility of taxes paid by the agricultural sector is less than the volatility of farm income.

⁴ A year lag appears between the average rebate estimates and the corresponding tax expenditure amounts in panel D because tax statistics are published on a year-of-income-basis whereas tax expenditures are based on a year-of-impact-on-revenue basis.

⁵ Information on the numbers receiving taxation averaging rebates and the value of the rebates is published by the Australian Taxation Office in *Taxation Statistics*, 1992-93, table 1.24 on p.205. Similar information on complementary tax payments under the averaging arrangements is found at page 198. In addition to rural producers a relatively small number of artists and sports persons make use of income averaging arrangements.

⁶ Evidence of relatively rapid growth in income derived from off-farm wages and salaries for family farms is also reported by Peterson and Moon.

Chart 1: Rural Sector Indicators



2.2 Industry Protection and Taxation

Agricultural support provided to Australian rural producers has declined in recent years and is the second lowest among OECD countries. Over the three years to 1992-93 the effective rate of assistance measured for the Australian rural sector has declined from 15 per cent to 11 per cent: it is expected to decline further in coming years as the Uruguay Round commitments are phased in.⁷ Having been much higher in earlier years, the effective rate of assistance for the manufacturing sector has also declined further recently, from 14 per cent in 1990-91 to 10 per cent in 1993-94, and will decline further to around 5 per cent by 2000.

Concessional taxation measures provided by the Commonwealth government to rural producers in Australia currently represent a small proportion of the total assistance provided to the rural sector. It will be important in the years ahead that taxation policy remains consistent with trade and protection policies and with general resource allocation policy objectives. From a taxation policy adviser's viewpoint, introducing new taxation concessions to rural producers would work to undermine such consistency.

3. Taxation Policy Principles

Business taxation policies are aimed at achieving the maximum practical degree of uniformity in the treatment of business expenditures. Inevitably, there are some areas where anomalies or inconsistencies arise. Many of the changes to the business taxation system that have been announced in recent years have been designed to address such distortions. Quite apart from the well known problems with 'picking winners', the application of taxation policy principles suggests caution in supporting the provision of concessional tax treatment as an incentive for particular activities. In general, where assistance may be warranted it is more effectively and more transparently provided through the outlays side of the budget.

Policy advisers have an obligation to apply a consistent set of principles when assessing the feasibility or desirability of taxation proposals affecting all areas of commerce and business, and in guiding the development of tax policy in general. Efficiency, equity, certainty and administrability rank high on any list of generally applicable tax principles. Proposals to introduce any tax concession or other exceptional tax pro-

visions are assessed rigorously against these principles.

As a general proposition, tax concessions (particularly in the form of deductions) are inequitable — and are inefficient — in that they provide most assistance to those with the highest taxable incomes and are difficult to target to particular groups in the community. Every deployment of concessional tax treatment is at the expense of an alternative use of resources: tax concessions given to one particular group of taxpayers inevitably result in higher imposts on other taxpayers. It is generally more difficult to predict and monitor the cost of providing tax concessions (whereas the cost of outlays measures is, in general, known in advance). Hence tax concessions can potentially have unexpected impacts on budgetary outcomes, which could then be exacerbated if pressures arise for their extension to other groups. Tax concessions are generally not suitable for providing temporary assistance, because once implemented they tend to become entrenched and are difficult to remove. From an economic perspective, concessional tax treatment introduces distortions between productive sectors and can have a deleterious impact on the pattern of national production.

It is often proposed that deductions should be provided even in those circumstances where there is no connection with earning income. The rationale for tax deductions is that they are provided in recognition that certain expenses are necessarily incurred in the course of earning assessable income. Tax principles require that deductions be provided only for such expenses: expenditures that have no direct relation to earning assessable income should not be deductible.

3.1 Efficiency

As an instrument of intervention, taxes may have a role in correcting instances of market failure (e.g., where there are positive or negative externalities associated with a particular market outcome) but, as a general rule, tax policy should aim to impart the smallest possible disturbance to resource allocation. In practice, each generation of policy advisers does not

⁷ For example, the recent (January 1995) reforms in tobacco and the phasing out by the year 2000 of Commonwealth support to the dairy sector will work in the direction of lowering rural assistance.

normally start with a clean slate. The principle of economic efficiency implies that policy advisers should pursue change where it can be expected to produce economic outcomes closer to those that would have been observed in the absence of taxation (except where pre-existing externalities exist). More generally, a worthwhile tax reform may have a substantial impact on behaviour and economic outcomes by removing distortions, including tax induced distortions. Where tax reform adds new distortions to counter the effect of poorly designed public policies the combination of policies and outcomes is usually sub-optimal. It is also inappropriate to develop a taxation policy change where another instrument of Government policy may achieve the same outcome with fewer distorting side-effects and at lower cost.

3.2 Equity

The traditional exposition of tax principles emphasises the concepts of horizontal and vertical equity. Sometimes, equity is labelled fairness. Vertical equity considerations involve normative (value) judgements. Horizontal equity aims to ensure that people in similar circumstances are treated in a similar manner while a prerequisite for the achievement of a vertically equitable tax system, in which those who are better off face a greater tax burden, is that the tax base is reasonably comprehensive.

3.3 Certainty

This principle embraces a number of concepts:

- (a) **Clarity:** Taxation provisions should be sufficiently clear for taxpayers to be able to readily understand the taxation implications of their actions.
- (b) **Consistency:** Taxation policy should be internally consistent and consistent with broader economic policy. Taxation policy which attempts to achieve conflicting objectives is not internally consistent, its effectiveness will be compromised and it will be vulnerable to attack.
- (c) **Stability:** The direction of tax policy should be well articulated and well understood, and taxpayers should have confidence in its continuance. The direction of policy should not be prone to excessive change on an ad hoc basis.

3.4 Administrability and Compliance Costs

It is essential that tax policy outcomes be practicable and that their administration costs are appropriately low. The costs of compliance associated with a particular tax should not be high relative to the revenue (or other policy) objectives being pursued. Several factors can contribute to relatively high compliance costs: the relevant legislation may lack clarity; the transaction being brought to tax may be inherently complex; and, perhaps most commonly, the legislation (or the administration of it) may impose extensive record keeping requirements. Taxpayers affected by the tax should be able to apply the concepts used.

In what follows comments are provided on four contemporary case studies to illustrate how the above principles are applied in practice by taxation policy advisers.

4. Drought Taxation Measures

As mentioned earlier, those charged with the responsibility of advising the Government on taxation matters require knowledge of the general influences bearing on the sector, or the issue, they may be reviewing.

The influence of drought in 1982-83 is clearly evident in the behaviour of the aggregate gross product and gross operating surplus of the agricultural sector, as presented in panel A of chart 1. While gross product of the agricultural sector declined by around 21 per cent during the drought of 1982-83, production recovered sharply following its breaking.⁸ Indeed, the rise in the value of farm production in 1983-84 (58 per cent) was more than double the magnitude of the decline in the previous year. After rising strongly in the late 1980s, farm output and farm gross operating surplus again declined substantially in 1990-91 due, in large part, to the impact of lower grain prices and the collapse of the wool reserve price scheme. The decline in gross farm product in 1990-91 was greater than in 1982-83.

⁸ Between 1978 and 1980 international food commodity prices rose strongly and then fell substantially over the next two years. The timing of the strong recovery in real farm output in late 1983 was preceded by a strong recovery in international food commodity prices. Such influences, and their timing, complicate the evaluation of the impact of drought.

Estimates prepared by ABARE suggest that because of the drought in eastern Australia the gross value of farm production and the value of rural exports could both be around \$2 billion less in 1994-95 than would otherwise have been the case. Consequently, on the basis of ABARE's estimates, economic growth is expected to be around 0.8 percentage points lower than if the drought had not occurred. Current forecasts suggest that the net value of farm production will decline by around 36 per cent in 1994-95. An end to the drought (which hopefully is, at the time of writing, now in sight) should see a strong rebound in farm sector production in 1995-96, although some sectors (such as the cattle industry) and some individual farmers will continue to feel the effects of the drought for some time.

As drought intensified in late 1994 it was generally accepted among policy advisers that taxation policy had little, if any, role to play in terms of addressing the immediate problems created by the drought. Taxation policy cannot prevent drought or cause rain to fall. The taxation system is not the most effective mechanism for delivering urgent assistance to drought affected primary producers, nor for encouraging them to undertake immediate drought related expenditures. The reasons are clear-cut. Taxation concessions, in general, do not provide drought affected primary producers with much needed short-term cash flow assistance; they are of immediate benefit only when tax is payable, which is normally following the end of a year in which taxable income is received. Attempts to alter the tax system in order to assist a particular group of farmers in, say, Queensland and New South Wales, potentially have an effect on all primary producers in all regions (particularly that large number in non-drought regions). Section 51(ii) of the Australian Constitution specifies that the Commonwealth Parliament may not make taxation laws which discriminate between states or parts of states. Generally, therefore, immediate social justice and equity objectives are more effectively and efficiently achieved by outlays measures targeted directly at the income needs of the affected rural community. Apart from other considerations, increasing the number of specific taxation concessions creates undesirable precedents and increases the complexity of the overall tax system.

When preparing advice on the issue of taxation and drought for government consideration the relevant Commonwealth authorities engaged in consultations with key industry and state representatives including the National Farmers' Federation, SCARM (the Stand-

ing Committee on Agriculture and Resource Management), and ARMCANZ (the Agriculture and Resource Management Council of Australia and New Zealand). These bodies, and others, provided the authorities with a wide range of proposals which were reviewed and evaluated. These options included, inter alia, faster rates of accelerated depreciation, 'flexible' depreciation, block averaging, carry forward tax credits, carry back of losses provisions, tax rebates, highly concessionary IED/FMB schemes, commercialisation of the IED/FMB schemes, adjustments to provisional tax arrangements for farmers, etc. A number of these proposals had problems such as:

- (a) they were inequitable as drought affected farmers with low incomes were not in a position to benefit to the same extent as wealthy farmers with good cash flows;
- (b) they detracted from economic efficiency by distorting resource allocation;
- (c) they raised possible mechanisms for abuse and tax avoidance, they conflicted with other policies or objectives (including clarity and consistency), they created undesirable precedents which could spread to other parts of the business tax system, added to compliance costs or were otherwise prohibitive in terms of revenue costs and likely benefits; or
- (d) relevant research findings were inconclusive or otherwise formed an inadequate base on which to mount a case to support the proposal's introduction.

Set out below are brief comments on some of the particular taxation policy proposals which were reviewed by policy advisers in late 1994. The comments are not comprehensive: the purpose is mainly to provide illustrations of how tax policy principles influenced the advising process.

4.1 Faster Rates of Accelerated Depreciation

As things stood, facilities to store fodder were eligible for a depreciation rate of 10 per cent (diminishing value method) and 7 per cent prime cost method. Faster rates of depreciation were proposed as improving farm risk management in order to better withstand drought. However, in evaluating this proposal, ac-

count was taken of the fact that higher rates of accelerated depreciation are not likely to benefit middle or low income earners lacking surplus investible funds, or those low income farmers whose incomes are expected to rise (for instance, when rural producers are recovering from drought). Such producers are likely to be adversely affected by faster rates of accelerated depreciation compared to top marginal rate taxpayers or companies facing a flat tax rate. As well, accelerated depreciation is relatively costly and distorts resource allocation. Further, the current tax averaging system reduces the potential benefits of accelerated depreciation to primary producers because averaging tends to defer some of the benefits from accelerated depreciation until later years.

4.2 Cumulative Flexible Depreciation

This proposal involved rural producers voluntarily deferring part or all of a scheduled depreciation deduction for use in later years. The regime proposed did not suffer from equity distortions. A system of flexible (but non-cumulative) depreciation operates in Canada. However, Canada's system is motivated partly by Canada's seven year limit on loss carry-forward. Australia provides indefinite carry-forward of losses and so unused depreciation deductions are not lost. The proposed measure represented a complex change that (for uncertain benefits) would have undermined the stability of the current depreciation provisions, could have been administratively complex for taxpayers, and would potentially have been costly to the revenue.

4.3 Highly Concessionary Adjustments to the IED Scheme

Some of the proposals under this heading involved likely scope for tax arbitrage and undesirable tax benefit transfers, excessive generosity and potentially large revenue costs. Account also needed to be taken of the interactions of such schemes with income averaging arrangements.

4.4 Commercialisation of the IED/FMB Scheme

Another proposal involved the private financial sector taking over the management of the IED/FMB schemes. Proponents of this scheme believed its adop-

tion would increase the take-up of the scheme. The case against this proposal included a view that such commercialisation arrangements posed potential risks to revenue due to the scope for tax avoidance for which complex anti-arbitrage legislation would be necessary. Further, the proposed schemes raised the possibility of borrowing to invest in the tax advantaged IED/FMB scheme. To the extent this occurred the proposal would most likely work against the objective of generating new net savings.

4.5 Block Averaging

The transitional costs of moving to any block averaging system could be considerable, with those farmers experiencing rising incomes suffering a loss of the subsidies existing under the current averaging arrangements. Canada's block averaging system was abandoned as part of the larger reforms in 1987. Insufficient research had been conducted into the effectiveness of alternative averaging arrangements in the Australian context to warrant the consideration of block averaging.

4.6 Carry Forward Tax Credits

This proposal involved replacing averaging with a system of carry forward tax credits. The system would work by allowing farmers to carry forward unused parts of low income tax brackets from years of low income to years of high income. Such proposals are highly concessionary, administratively very complex and, potentially, permit farmers to include any amount of off-farm income in the carry forward tax credit scheme.

4.7 Carry Back of Losses Provisions

This proposal would allow farmers to cash in the benefit of a tax loss when it is most useful (ie when the farmer is making a loss). Introducing this measure would be a major break from current policy as applied throughout the overall taxation system and would introduce strong pressure to extend the concession to other sectors of the economy, in circumstances where there is already a substantial tax loss overhang for business as a whole. Further, carry back of losses is not compatible with a dividend imputation system. In any event cash relief is already provided by IED/FMB schemes.

4.8 Changing Provisional Tax Arrangements for Farmers

Primary producers already receive special provisional treatment compared to most other taxpayers. First, primary producers are not required to pay quarterly instalments. Rather primary producers pay provisional tax in the last quarter of the year, thereby receiving a timing advantage. Second, access to income averaging provisions is reflected in provisional tax arrangements.

Changes to provisional tax arrangements would not represent a cost effective means of assisting primary producers suffering income loss due to drought. The largest benefits would go to high income earners.

4.9 The Policy Outcome

The government decided to make two adjustments to taxation policy as part of a much larger response to the 1993-94 drought. First, the government decided to implement a 10 per cent drought investment allowance. This allowance is designed to provide an incentive to encourage longer term drought preparedness and will apply to expenditures — capped at \$50 000 per taxpayer, per annum — on facilities for fodder and water storage for livestock, water conveyancing facilities and minimum tillage equipment. The cap was introduced to ensure that wealthy farmers and regions unaffected by drought would not become the main beneficiaries. The water storage and conveyancing components of the drought investment allowance are conditional upon the property owner having an approved property management plan (in order to ensure the allowance is not used in a manner which would result in land degradation). The drought investment allowance will phase out in the year 2000.

The government also decided to enhance the existing FMB scheme — which had been introduced in 1992 as part of the early response to drought — by raising the investment component from 80 to 100 per cent, removing the withholding tax paid on withdrawal and increasing the limit on deposits from \$80 000 to \$150 000 per taxpayer. These adjustments raise the attractiveness of FMBs and provide an increased incentive for a wider range of primary producers to put funds away in good years in order to better prepare for genuine calamity.

At the time of writing, the response to the latest drought has involved Commonwealth expenditure of over \$300 million (spread over four years) by way of direct drought relief on the outlays side of the budget and additional longer term incentives have been provided by the abovementioned tax policy adjustments (10 per cent drought investment allowance and adjustments to the FMB scheme). The states have also provided relief: New South Wales drought assistance measures are anticipated to be around \$112 million in 1994-95 while Queensland is anticipated to spend around \$44 million.

5. Reform in the Water Resources Sector

At a state level, adjustments to the water resources sector hold out the prospect of providing an important contribution towards microeconomic reform, increased economic efficiency and improved environmental management in irrigation. Some states are more advanced than others in their consideration of issues relating to corporatising and privatising irrigation schemes. The underlying rationale is that, to the maximum extent practicable, such schemes should be owned and operated by the farmers that benefit from them in order to maximise efficiencies and flexibility.

The possible reform of irrigation schemes is posing a number of practical questions and taxation issues are being examined in this context. Whether some states may need to contribute to the establishment of newly formed irrigation corporations in order to upgrade or replace infrastructure that has been inadequately maintained is like to emerge as an issue. In some instances it would appear that relevant assets have a low or negative value. One common issue which arises is the depreciable costs of such assets for taxation purposes.

Irrigators currently hold water allocations allowing them to receive specified volumes of water. It is likely that many reform programs may involve the introduction of tradeable water rights: such rights would represent valuable assets. Introduction of tradeable water rights would, in effect, create a new property right, separate from the landholding. Such reforms are likely to raise new analytical and practical questions. Among those questions in this case are, for instance, the capital gains tax consequences of the transaction, including:

- (a) whether grandfathering would apply to tradeable entitlements received by irrigators in exchange for existing water allocations, so that they would be treated as an existing, and so perhaps, a pre-1985, asset; and
- (b) how the capital gains tax cost base of the land would be affected by the separation of water rights from land.

Other issues include the influence of particular legal structures on the privatisation of irrigation schemes, the treatment for tax purposes of payments and receipts for water, tax consequences of trading in water rights, and the tax treatment of a range of expenditures and assets peculiar to irrigation schemes.

A joint Commonwealth/state working group is assisting the States to understand, inter alia, how existing tax laws would apply to such issues.

6. Horticulture

In February 1993 the Industry Commission released its report into horticulture. The government subsequently commissioned a Task Force, chaired by the Parliamentary Secretary to the Minister for Primary Industries and Energy (Senator Sherry), to review the Industry Commission's findings. The Task Force reported in February 1994.

Among the Industry Commission's findings, which was subsequently supported by Senator Sherry's review, was that the horticulture industry was disadvantaged in comparison with other industries because no taxation write-off was provided for the establishment costs of horticultural plantations. Such costs are a significant expenditure for horticulturalists.

In response to the Industry Commission and Horticulture Task Force recommendations, the government announced last year that a form of taxation write-off will be provided to the horticulture industry. The details of how that write-off mechanism will operate are currently being developed by relevant authorities.

In developing policy advice on this issue, the objective was not to introduce concessional taxation arrangements for the horticulture sector. Rather, the proposed write-off mechanism will work to rectify a shortcoming in the Tax Act and afford a fair and equitable

taxation treatment of horticultural plantation establishment costs.

7. Landcare Taxation Issues

The Commonwealth government, in consultation with States and Territories, employs a range of policy and program alternatives to address public interest projects such as revegetation, remnant vegetation conservation, and improved water management, including in rangelands. In adopting the National Ecologically Sustainable Development Strategy in December 1992, governments noted that 'a comprehensive package of taxation measures is already in place for primary producers that promote expenditures for on-farm improvements for land and water management. These complement programs such as the National Landcare Program (NLP)'.⁹ At the same time governments noted 'advice from the Commonwealth that a review of Section 75D of the *Income Tax Assessment Act* is scheduled for 1994-95, and that the taxation aspects of allowing write-off of expenditures or improvements related to land conservation will be considered in that context'.¹⁰

Officials are currently reviewing the role and effectiveness of sections 75B and 75D¹¹ of the Tax Act, which provide generous concessions to farmers undertaking expenditure on water storage and its conveyance and to combat land degradation.

Policy advisers with responsibility for taxation issues will be particularly interested in any findings in the review which bear on:

- (a) whether significant and effective use has been made of the available concessions;
- (b) the extent to which the benefits of landcare tax concessions outweigh their cost;

⁹ See Compendium of ESD Recommendations (1992).

¹⁰ See Compendium of ESD Recommendations (1992).

¹¹ The *Taxation Expenditures Statement* (1994), indicates that tax expenditures in 1992-93 and 1993-94 under Section 75D amounted to some \$14 million.

- (c) whether landcare tax concessions provide an efficient means of channelling assistance to those farmers for whom it is economically justified; and
 - (d) whether alternative policies, such as outlays assistance, would be more effective, better targeted, and less costly in terms of administration.
- including the need to protect the revenue base and to achieve rapid fiscal consolidation — are likely to exert powerful influences in the years ahead in any consideration of taxation arrangements in the rural sector.

8. Concluding Comments

It is hoped that the discussion in this paper, including the four case studies, has demonstrated — in a practical policy context — the importance and the role that taxation policy principles assume in the development of policy advice bearing on the rural sector. The consideration of taxation policy issues by officials extends beyond the requirements of those principles alone. In this regard general trends in industry protection and broader macroeconomic policy objectives —

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Attachment A: Current Taxation Arrangements — The Rural Sector

General

The current tax arrangements for the rural sector involve the application of standard tax rates to individuals, partnerships, trusts and corporations but with taxation concessions available as outlined below. Individual farmers may receive a payment for wages and salaries, to which is added profits from farming, all of which is taxed according to the tax rate applicable to that income total. More than 80 per cent of farmers (individuals) make use of income averaging arrangements. Corporations are not entitled to utilise the income averaging provisions.

In 1992-93 there were some 251 156 individuals and 12 469 companies earning income that were classified to primary production as the main source of income. Of this 195 707 individuals were taxable while only 3 516 companies were taxable. The remainder did not pay tax.

In October 1994 there were approximately 6700 IED accounts. At that time about \$128 million was invested in IEDs/FMBs, with \$13 million deposited in FMBs.

Principal Tax Provisions Affecting Primary Producers

Investment Incentives	Effect
Livestock	Purchases of breeding livestock are substantially tax deductible because of method of calculation
Machinery purchase	Accelerated depreciation
Machinery lease	100 per cent tax deductible for lease payment, larger capital gains tax liabilities on sale
Land conservation	100 per cent tax deduction for soil conservation and land degradation measures, capital gains tax advantages
Water conservation	Accelerated depreciation (three year write-off), capital gains tax advantages
Purchase of fodder	100 per cent tax deduction for purchase of fodder used or stored for the purpose of feeding livestock
Storage of fodder	Fodder stored for purpose of feeding livestock does not have to be accounted for as trading stock
Income Equalisation Deposits	100 per cent tax deductible, withdrawals taxable, 61 per cent investment component
Farm Management Bonds	100 per cent tax deductibility, withdrawals taxable, 100 per cent investment component, withdrawals conditional on farm hardship (otherwise reverts to IED)
Other capital expenditures	Fences, dams, and some structural improvements by farmers are treated as plant and equipment for accelerated depreciation
Drought investment allowance	An investment allowance of 10 per cent for expenditure on facilities for fodder and water storage for livestock, water conveyancing facilities and minimum tillage equipment, capped at \$50 000 per taxpayer per annum

Other Incentives

Grapevine stock	Four year write-off for the costs of establishing grapevine rootstock
Income averaging for rural producers	Enables rural producers to pay tax on their taxable income at the rate of tax applicable to their average income (over the current year and the four preceding years)
Deduction for cost of telephone lines	Can be written off in ten equal instalments
Double wool clips	In certain circumstances the proceeds of the second shearing can be deferred to the following year
Insurance recoveries for livestock losses	Insurance recoveries for loss of livestock can be spread over a five year period
Forced disposal of livestock	A primary producer may elect to have the profit arising from forced disposal spread in equal instalments over a five year period. Alternatively, the profit may be carried forward and applied to the cost of replacing stock over the next five years
Death or destruction	Where compensation payments are received for the death or compulsory destruction of livestock, the resulting profits can be spread over five years. Alternatively, the profit may be carried forward and applied against the purchase price of replacement stock or in the maintenance of breeding stock over the next five years
Livestock valuation	Valuation options permit some deferment of tax liabilities until stock is sold
Diesel fuel rebate scheme	Diesel fuel used on properties by primary producers is eligible for a full rebate of excise duty paid
Zone rebates	A tax rebate is available to residents of specified remote areas.

The cost of planting annual crops (e.g., wheat and barley) is deductible under the ordinary deduction provisions of section 51 in the income year in which the expenditure is incurred. On the other hand, expenditure on planting trees, shrubs and similar long-lived plants is generally capital and non-deductible, although a four-year write-off is available for capital expenditure incurred in establishing grape vines for use in a business of primary production. The government announced in November 1994 that a form of

taxation write-off would be extended to expenditure on new horticultural plantations.

Primary production plant generally qualifies for depreciation on the same basis as other plant. The definition of plant is specifically extended by the tax law to include fences, dams and some other structural improvements.

Special taxation provisions also apply to certain timber-related capital expenditures and timber losses.

Attachment B: The Volatility of Agriculture Compared to Other Sectors

In this attachment a commonly used measure of volatility, known as the coefficient of variation, is used to compare the variability of real output, prices, gross operating surplus (GOS), gross product and tax receipts¹², across selected sectors of the economy. The coefficient of variation (CV) is also reported for farm income.¹³ The results are presented in table A.

The CV is defined as the standard deviation divided by the average of the series and accounts for the degree of variability across different time series with different means.

If the CV were to be calculated from the raw time series as published by the Australian Bureau of Statistics (ABS) it would reflect both the longer term (or trend) movements in the series and the shorter term fluctuations. For many investigations it is the latter that are of interest, and ideally the measure of variability should separate out the trend element. Several methods of performing this separation are available. For example, Motha, Sheales and Saad estimated the trend component using both a linear regression and a simple moving average. An alternative would be to use the path-preserving Henderson moving averages that underlie the ABS's trend estimates of economic indicators.

A simpler method that yields much the same conclusions about comparative variability is to calculate the CVs based on the log difference of each series. This method has the effect of eliminating the long run effects (for instance, accounting for the upward trend of the series) and expresses the series as growth rates (when multiplied by 100). It is on this basis that the coefficients of variation reported in table A are calculated.

The results¹⁴ are presented in table A of this attachment (see below) for four sectors — rural, mining, manufacturing and non-farm. Data limitations constrain the coverage of the price and income behaviour (see footnote 13).

The results obtained are consistent for different sample periods. In summary, the agricultural sector generally exhibits greater volatility (measured in terms of movements in output and GOS) than the mining and manufacturing sectors and the non-agricultural sector as a whole. The volatility of taxes paid by the agricultural sector is less than the volatility of farm income.

Significant qualifications attach to the use of the results reported above for policy purposes. These qualifications include the fact that the above analysis covers sectoral aggregates only; analysis of income volatility for the average (or individual) taxpayer is not attempted due to data limitations. No attempt is taken of off-farm income earnings. Further there may be significant differences between the variability of farm income (obtained from national accounts) and taxable income of the agricultural sector. There could, as well, be variability hidden by the aggregation process and the selection of time periods.

¹² The scope of the comparisons reported in table A of this attachment has been constrained by data limitations. First, table A includes estimates for farm income reported in the Australian national accounts estimates prepared by the Australian Bureau of Statistics (ABS). However, the ABS does not publish estimates of income for the mining and manufacturing sectors. Second the ABS does not publish implicit price deflators for the mining and manufacturing sectors. Third, reliable estimates of taxable income deriving from own-farm activities in the rural sector are not available.

¹³ Farm income is defined by the Commonwealth Statistician as the income accruing from farm production during the year. It is equal to gross farm product at factor cost less consumption of fixed capital, wages, net rent and interest payments and third party insurance transfers.

¹⁴ Other methods of analysing the variability - for example, first removing the trend using the ABS's moving average filters or otherwise normalising the data - may have yielded somewhat different CVs or other measures of variability, and may have permitted formal statistical tests of the significance of the observed differences between sectors. However, based on the differences in the CV results reported in table A, those more complex methods of analysis would support the same broad conclusion.

Table A: Analysis of Volatility By Sector

	Sample Period	Sectors	Stand. Dev.	Average	Coefficient of Variation	Conclusion (Degree of Variability)
Real output *	74:3-94:3	FARM	0.0976	0.0141	6.92	FARM>MNF>MIN>GDP>NAGR
		MIN	0.0464	0.0095	4.87	
		MNF	0.0246	0.0039	6.33	
		NAGR	0.0137	0.0254	0.54	
		GDP	0.0123	0.0076	1.65	
Prices *	74:3-94:3	FARM	0.0662	0.0092	7.24	FARM>NON-FARM
		NON-FARM	0.0119	0.0178	0.67	
Gross Operating Surplus *	78/79 to 92/93	AGR	0.257	0.0738	3.49	AGR>MNF>MIN>NAGR
		MIN	0.0977	0.103	0.94	
		MNF	0.0973	0.0938	1.04	
		NAGR	0.0534	0.117	0.46	
	74/75 to 92/93	AGR	0.239	0.0521	4.59	AGR>MNF>MIN>NAGR
		MIN	0.102	0.124	0.82	
		MNF	0.0894	0.0949	0.94	
		NAGR	0.0551	0.125	0.44	
	70/71 to 92/93	AGR	0.234	0.0803	2.92	AGR>MNF>MIN>NAGR
		MIN	0.0989	0.134	0.74	
		MNF	0.0859	0.0892	0.96	
		NAGR	0.0515	0.123	0.42	
Gross Product *	78/79 to 92/93	AGR	0.202	0.0757	2.67	AGR>MNF>MIN>NAGR
		MIN	0.0786	0.1004	0.78	
		MNF	0.0468	0.0763	0.61	
		NAGR	0.0344	0.0964	0.36	
	74/75 to 92/93	AGR	0.187	0.0585	3.20	AGR>MNF>MIN>NAGR
		MIN	0.0855	0.119	0.72	
		MNF	0.0462	0.0846	0.55	
		NAGR	0.0438	0.108	0.41	
	70/71 to 92/93	AGR	0.185	0.0821	2.26	AGR>MNF>MIN>NAGR
		MIN	0.0829	0.127	0.65	
		MNF	0.0452	0.0875	0.52	
		NAGR	0.0424	0.111	0.38	
Farm Income *	78/79 to 92/93	FARM	0.840	0.058	14.40	
	74/75 to 92/93	FARM	0.768	0.034	22.69	
Tax Receipts **	78/79 to 92/93	AGR Net Tax	0.281	0.0656	4.29	
	74/75 to 92/93	AGR Net Tax	0.264	0.0456	5.79	
	70/71 to 92/93	AGR Net Tax	0.284	0.101	2.80	
* Derived from <i>Australian National Accounts</i> estimates published by the Australian Bureau of Statistics. ** Derived from <i>Taxation Statistics</i> (annual) published by the Australian Taxation Office.						