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A Case for Re-evaluation of Income Averaging for Primary Producers

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Income averaging for primary producers is a long-standing tax policy in Australia. Major changes were made to the scheme in 1983 to overcome anomalies associated with the previous scheme. However the amended scheme has not been subject to review.

In this review, the scheme is found to perform poorly against the traditional evaluation criteria of equity, efficiency and simplicity. The general conclusion is that to avoid cross-subsidisation and investment distortions which are often inherent features of any general scheme, it is appropriate to consider the adequacy of self-averaging mechanisms.

1. Introduction

In 1971, Glau stated "... the effectiveness of rural taxation policy has been accepted by successive governments as an article of faith and there has been little empirical evaluation of it". Little has changed since, despite recent emphasis by government on micro-economic reform and resource use efficiency. This efficiency emphasis necessarily requires greater insights into the way government policies influence the incentives of individuals and avoidance of policy complexity that reduces the transparency of 'cause and effect' relationships.

It is unusual therefore, that income averaging for primary producers, and rural tax policy more generally, have not come under greater scrutiny given their complexity and the largely unknown effects they have on investment behavior. A better understanding of these effects is desirable to encourage efficient resource use in agriculture.

In this paper, income averaging for primary producers¹ is evaluated on the basis of equity, efficiency and simplicity, the criteria normally associated with tax policy. It is found that the policy performs poorly against each and that differences in marginal tax rates between primary production and non-primary production income may affect resource allocation.

2. Description of Income Averaging.

Tax averaging has applied to primary producers since 1921. The policy is designed to overcome the impact of *period inequity*, which is defined as the additional income tax payable on fluctuating incomes compared to the tax imposed on stable or smoothly trending incomes.

The current tax averaging scheme has applied since 1983, and is based on taxing primary producer's taxable incomes at the average rate of tax applicable to their average income. Generally, average income is the mean of the current and previous four years taxable incomes. The scheme applies to all taxpayers (other than companies) who receive primary production income unless they have made an irrevocable election that the scheme not apply to them.

If average income is less than taxable income (income is trending up), less tax will be payable than is prescribed by the scheduled rates, the saving being achieved by provision of an average rebate. Alternatively, if average income is greater than taxable income (income is trending down), more tax will be

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¹ Other forms of averaging exists for authors, inventors, sportspersons, etc, and for taxable capital gains.

payable than is prescribed by the scheduled rates, with the additional tax imposed called complementary tax.

A taxpayer whose income trends upwards can receive benefits from the averaging system beyond those necessary to alleviate period inequity (Curran, Minnis and Freeman). The revenue cost of the averaging provisions are estimated each year by Commonwealth

Table 1: Annual Revenue Cost of Income Averaging (1984-85 - 1992-93)

Year	Estimated Cost \$ m
1984-85	92
1985-86	92
1986-87	98
1987-88	165
1988-89	262
1989-90	288
1990-91	235
1991-92	34
1992-93	27
TOTAL	1293

Treasury and are summarised in Table 1. It can be seen that the revenue foregone is significant, but variable.

To prevent the benefits of averaging extending to income sources other than primary production, shading in provisions have been introduced. These provide that non-primary production income of less than \$5,000 is entitled to be averaged as primary production income. If non-primary production income is between \$5,000 and \$10,000, the amount of non-primary production income entitled to be averaged is reduced on a dollar for dollar basis. If non-primary production income is over \$10,000, only primary production income may be averaged.

3. Evaluation Criteria

To avoid intersectoral distortions, rural tax policy should be consistent with broader tax policy. Industry-specific policies may be required in particular circumstances to ensure industries are taxed in an equitable and efficient manner and to ensure taxable income is a close approximation of economic gain or loss over the assessment period. Examples include

the need to allow for depletion in resource industries, amortisation of research and development expenditure, and in the case of agriculture, allowance for capital expenditure to reduce land degradation which would not otherwise qualify for depreciation or deduction. It follows that there should be a presumption against the use of taxation for purposes other than the collection of revenue, unless it can be demonstrated that this is the most efficient method of achieving a particular policy objective (Department of Treasury).

The traditional criteria for evaluating tax policy include equity, efficiency and simplicity (Allan, Groenewegen, Musgrave and Musgrave, Sandford). For progressive taxation systems based on the concepts of ability to pay and equal marginal sacrifice, the equity criterion has traditionally been divided into two sub-components, horizontal and vertical equity.

Horizontal equity can be defined as the equal treatment of equals, while vertical equity "describes the treatment of taxpayers who are unequal with the appropriate degree of inequality" (Allan), i.e. the increasing of marginal tax rates with increasing income to reflect the greater ability to pay.

Efficiency (or neutrality) requires that there is no positive or negative discrimination in favour of one economic activity over another, i.e. the taxation system should have a neutral impact upon resource allocation. Efficiency should ensure that the most profitable business enterprise before tax, remains the most profitable after tax.

Simplicity requires taxpayers to understand their taxation obligations, thereby minimising administration and compliance costs and maximising equity and efficiency. Simplicity may assist in achieving the equity and efficiency objectives of the particular scheme.

There are obvious trade-offs between the three criteria. The trade-off between equity and efficiency is resolved by making value judgements as to the relative merits of changes in equity compared to the efficiency losses that may result. Simplicity is only desirable to the extent that marginal savings in administrative and compliance costs exceed losses of efficiency and equity.

"Tax policy, therefore, is an art no less than a science; and equity is to be sought as a matter of degree rather than as an absolute norm" (Musgrave and Musgrave).

It should be noted, however, that the efficiency criteria may partially subsume the equity and simplicity criteria. Thus a policy which is inequitable may lead to tax avoidance, reducing efficiency. Similarly, policies which lack simplicity and consequently have high administrative and/or compliance costs will also reduce efficiency.

4. Equity and Income Averaging.

The Industries Assistance Commission stated that the justification for averaging schemes was to increase period equity, i.e. to reduce the additional tax burden borne by individuals with fluctuating incomes compared to those with more stable incomes.

Chisholm justified averaging on the grounds: "It is well known that the interaction of an annual accounting period and a fixed progressive rate scale causes taxpayers with unstable annual incomes to pay more tax over a span of years than those receiving the same total income in equal annual mounts". "...the primary function of income averaging should be to attain period equity. That is, over some specific period, equal taxes should be paid on incomes of equal total size, regardless of how the income is distributed over the period."

Reference to period inequity appears more in the Australian literature than overseas. Musgrave and Musgrave do not mention the concept, whilst Stiglitz appears to accept both the penalties and benefits of fluctuating incomes as a feature of a progressive income tax system.

In this section it is shown that primary producers have mechanisms other than averaging which allow them to voluntarily reduce period inequity, that fluctuating incomes do not necessarily result in period inequity, and that averaging may fail to increase overall equity.

4.1 Mechanisms available to smooth taxable income

Jeffery (1981) argued: "... if the assumption that taxable income is an accurate and consistent index of equality is relaxed, the justification for the introduction of period equity measures on equity grounds is removed. If taxable income is not a precise and consistent index of equity (that is, primary inequities exist) it is not possible to judge whether there will be an improvement in overall tax equity resulting from

the introduction of period equity measures. Nevertheless, it is still justifiable, on efficiency (neutrality) grounds, to introduce period equity measures²."

Jeffery defined "primary inequities" as being "the inequities which will arise from differences in the manner of measuring taxable income among and between classes of taxpayers." The Income Tax Assessment Act contains many provisions (set out in Table 2) that enable primary producers to alter and defer assessable income compared to the provisions available to the rest of the community. To the extent that these provisions are not available to the wider community, primary inequities may be said to arise.

Table 2: ITAA Provisions that Enable Deferral of Assessable Income

Section	Impact
26B	Insurance recoveries on loss of livestock or trees may be spread over 5 years.
26BA	Profit from double wool clips may be deferred until the subsequent year.
34	Allows natural increase of livestock to be valued at concessional values, thus partially deferring tax until sale. Average cost method of valuation of livestock allows partial deductions for purchase of livestock.
36(3)	Allows profit from livestock sold in consequence of a fire, flood or drought to be spread over 5 years.
36Aa	Allows profits from the forced disposal or compulsory acquisition of livestock to be spread over 5 years.
36AAA	Alternative to section 36(3), allows longer and more flexible spreading of income.
IED'S	Allows deduction for loans made to the government, which are taxable upon redemption.

² Here Jeffery was arguing that the tax system should be neutral with respect to investments with variable income flows.

The concessional valuation of livestock applies to most livestock producers, and is one of the more significant concessions for primary producers within the Income Tax Assessment Act. In many cases the system of livestock valuation defers the recognition of income³ and provides deductions for the purchase of livestock⁴. Various livestock elections exacerbate the problem by providing the potential for further deferral of tax when it is eventually assessed.

Accelerated depreciation provisions add to the divergence between economic income and taxable income. Nash *et al* have shown that for a representative Condobolin, NSW, farm operating at a "steady state" (i.e., selling the same produce at the same price every year, and with a constant cost structure), the combined effect of livestock valuation and accelerated depreciation provisions varied taxable income from \$-26,587 to \$54,725 over a 5 year period, a range of \$80,000. A further \$100,00 of taxable income was deferred. If this result were shown to apply more generally, it could be argued that taxable income is not a good indicator of a primary producer's "ability to pay".

If primary producer's taxable incomes are not necessarily a good indicator of their equality, primary inequities may exist both between agriculture and other sectors, and within agriculture. If primary inequities both between agriculture and other sectors, and within agriculture were judged to be significant, it would be difficult to show that averaging increased overall tax equity. Alternatively, if it is desired to retain the averaging system, the income tax system should be reformed to remove any primary inequities.

A significant degree of period inequity would appear to arise from concessions within the Income Tax Assessment Act itself rather than exogenous factors such as drought or low commodity prices. By treating the cause rather than the symptom, removal of the concessions may be a more effective means of reducing period inequity.

Furthermore, it is difficult to justify both a general scheme to relieve period inequity and specific schemes applicable to the particular circumstances of the individual, such as livestock elections. A choice should be made between the retention of a general averaging scheme, or the provision of elections to defer income such as livestock elections and Income Equalisation Deposits. The provision of mechanisms to smooth taxable income and tax payable is unne-

cessary duplication. A case can be made for the provision of either, but not both.

4.2 Evidence of period inequity.

The extent to which farmers suffer period inequity was questioned by Douglas and Davenport (1993), who found that for a sample of 455 taxpayers⁵ who received average rebates in 1990, only a small proportion had actually suffered period inequity, as illustrated in Table 3.

Table 3: Distriction of Period Inequity in Sample

Amount of Period Inequity	Per cent of Sample Equity Criteria A	Per cent of Sample Equity Criteria B
0 or Negative	30.99	16.04
<\$500	32.09	44.62
\$500 - \$2,500	26.59	28.57
\$2,500 - \$5,000	7.47	7.69
\$5,000 - \$10,000	2.64	2.86
>\$10,000	0.22	0.22

Source: Douglas and Davenport (1993)

It was found that significant period inequity (defined by the authors as \$2,500 total, or \$500 p.a.⁶) occurred in a minority of cases, and that most of the sample

³ Douglas and Davenport (1993) estimate that the livestock valuation concession deferred tax on in excess of \$1,000 million of income p.a.

⁴ The point is that if livestock are considered to be trading stock, other taxpayers cannot receive a similar deduction. If livestock are considered to be capital, the deduction exceeds the depreciation which may be allowed to other taxpayers.

⁵ The random sample was provided by the Australian Taxation Office. Further details are provided in Douglas and Davenport (1993).

⁶ What constitutes "serious period inequity" is a value judgment. The magnitude of period inequity will be magnified if measured in terms of tax payable rather than as a percentage of income. For example, the income stream \$5,000, \$6,000 will result in 200 per cent more tax payable than the income stream \$5,500, \$5,500, but the \$80 additional tax is less than 1% compared to total income of \$11,000. Tax policy, like the law, should not be concerned with trifles.

either suffered little period inequity, or actually paid less tax overall because of fluctuating incomes. This occurred because the taxpayer's incomes were increasing over time while tax rates were trending down. Conversely, if tax rates were trending upwards, those taxpayers whose income was trending down would be advantaged.

Douglas and Davenport (1993) also found that under the current system it was possible for primary producers to be overcompensated for the period inequity they have suffered. "From Table 4 it can be seen that over the 5-year period⁷ the highest income group, on average, did not suffer period inequity but still qualified for an averaging rebate in 1990⁸.

Taxpayers with incomes over \$25,000, on average, received a larger average rebate in 1990 alone than the total period inequity they suffered during previous 5 years." The three highest income groups received \$172,989,000 (81 per cent) of the \$213,786,000 total average rebates allowed in 1990.

A more recent estimate of period inequity was made by Moon *et al* who examined the income streams of 6,362 farm operators and spouses for the thirteen years from 1980-81 to 1992-93. They concluded that period inequity imposed an additional discounted annual average tax burden of \$1,140 or 4.4 per cent of taxable

income. The amount of period inequity varied according to industry classification, being highest in the sheep industry and lowest in the beef industry. Period inequity was shown vary according to income, being 7 per cent of taxable income for the lowest income groups, and 1.2 per cent of taxable income for the highest income earners. This analysis assumed constant tax rates, and so could overestimate the amount of period inequity as tax rates reduced dramatically over the period.

Due to difficulties in obtaining data, no estimates have been made of the extent of period inequity in the rest of the community, and there is no evidence that the degree of period inequity for primary producers is greater or lesser than that in other sections of the community. Intuitively, period inequity could be large for women of child-bearing age, or taxpayers who are frequently unemployed.

⁷ It can be argued that a five year period is inadequate to assess period inequity. While this may be true, the five year period was selected as it is the period length of the current averaging scheme.

⁸ Possible reasons that can be advanced for income averaging providing a net advantage to primary producers include incomes trending upward over time, not all primary producers have variable incomes, and that no tax is payable in loss years.

Table 4: Net Mean Amount of Period Inequity for a Sample of 455 Primary Producers (1985/86 to 1989/90)

Income Group	Net Mean Period Inequity Equity Criteria A 1985/86 - 1989/90 \$ Tax	Net Mean Period Inequity Equity Criteria B 1985/86 - 1989/90 \$ Tax	Averaging Rebate Allowed 1990 \$
\$0 - \$9,999	707	725	266
\$10,000 - \$14,999	532	574	368
\$15,000 - \$19,999	730	779	428
\$20,000 - \$24,999	1,020	1,074	723
\$25,000 - \$34,999	1,205	1,301	1,260
\$35,000 - \$49,999	958	1,119	2,046
> = \$50,000	-675	-41	3,473

Equity Criteria A compares the tax actually paid with that which would have been paid if total income was derived in equal instalments.

Equity Criteria B compares the tax actually paid with that which would have been paid if total income was derived in instalments trending similarly to Average Weekly Earnings.

Source: Douglas and Davenport 1993, p.27

Business taxpayers, such as farmers, can voluntarily influence the degree of period inequity by altering the timing of receipts and expenditure. Further, it should be remembered that farmers can elect to avoid period inequity by incorporating their business. While this is not a costless exercise, it may provide an attractive and voluntary alternative in the absence of a general averaging scheme.

4.3 The Regressive Nature of Averaging.

Douglas and Davenport (1993) also argued that the benefits provided by the averaging system may be regressive. They analysed the mean average benefit received by different income groups and found that the lowest income groups received negative benefits from the averaging system (i.e., more complementary tax was paid than average rebate received), while high income earners received significant tax savings. These results are shown in Table 5.

Further examination of the sample reveals that as a rule the low income earners were always low income earners. Of the 104 taxpayers with taxable incomes of less than \$10,000 in 1990, only one had earned in excess of \$20,000 in any of the previous four years, and five had earned more than \$15,000 in any of the previous four years.

With the high income earners (greater than \$50,000 in 1990), 29 of the 65 had not suffered period inequity over the five years, e.g. their taxable incomes were always greater than the threshold of highest tax

bracket. Yet every one had received an average rebate, ranging from \$9 to \$4,736. Moon *et al* also report over-compensation of some taxpayers.

Consider the taxpayer identified as 039 whose income stream was \$113,346 (1986), \$122,177 (1987), \$84,799 (1988), \$132,425 (1989), and \$287,277 (1990). This taxpayer received an average rebate of \$3,923 in 1990, even though the taxpayer had paid \$7,290 less tax than if the income had been received in equal instalments, i.e. had negative period inequity. If all taxable income had been eligible for averaging, the rebate would have been \$7,380!

This raises the questions of whether the overall equity of the tax system is improved by providing a benefit to high income farmers, presumably at the cost of a small increase in the overall tax burden for all other taxpayers.

On the basis of this information, it is possible to question the appropriateness of a general scheme to relieve a problem that only affects a minority of primary producers, and which may overcompensate some, and under-compensate others. It is also possible to question a scheme which seeks to provide benefits to those who suffer period inequity, but regards as windfall gains the benefits which may arise from fluctuating incomes. If achieving period equity is desirable, it follows that both the penalties and the benefits associated with fluctuating incomes should be removed.

Table 5: Mean Average Rebate Received by Income Group

Income Group	1984-85 \$	1985-86 \$	1986-87 \$	1987-88 \$	1988-89 \$
Non-Taxable	-23	-3	98	118	159
<\$7,500	-169	-165	-146	-169	-219
\$7,500 - \$12,599	230	256	305	324	240
\$12,600 - \$19,499	428	470	646	685	601
\$19,500 - \$27,999	908	954	1,191	1,250	1,121
\$28,000 - \$34,999	1,601	1,627	1,878	1,899	1,705
\$35,000 - \$49,999	2,670	2,629	2,862	2,884	2,627
>\$50,000	5,169	4,745	4,887	5,235	4,745

Source: Douglas and Davenport (1993) calculated the data from the published Australian Taxation Office Statistics by dividing the total net average rebate (total average rebate minus total complementary tax) by the number of taxpayers in each income bracket.

5. Efficiency and Income Averaging

It is generally accepted that a taxation system should not discriminate between activities, unless this is the explicit aim of the tax (e.g., tobacco taxes). Douglas and Davenport (1992) noted that the averaging system provided marginal tax rates dependent on the source of income. They further noted that every taxpayer on averaging with more than \$5,000 of non-primary production income had three marginal tax rates for any given level of taxable income, one rate for primary production income, a second rate for non-primary production income and a third rate for taxable capital gains.

Changes to taxable income in the current year not only affect tax payable in the current year, but tax payable for the succeeding four years. This occurs as this year's taxable income affects average income in both the current and four succeeding years. Accordingly, primary producers have both current year marginal tax rates (the change to the current year's tax payments) and five-year marginal tax rates (the change to total tax payable during the five years that average income is altered).

An extreme example (Douglas) illustrates the potential distortion. Assume a farmer has a taxable income of \$104,000 consisting of \$96,000 of primary production income and \$8,000 of non-primary production income. Average income is assumed to be \$20,800. Tax payable for 1993-94 is \$16,888.60. Should the taxpayer receive an extra \$1,000 of non-primary production income, the tax payable for the year would be \$17,704.80, increasing the current tax liability by \$816.20, or an effective current-year marginal rate of 81.2 per cent.

Should the extra \$1,000 have been received as primary production income, tax paid in 1993-94 would have been \$17,236.73, an additional \$348.13, and the effective current year marginal rate would have been 34.13 per cent. If the additional income had been taxed as a capital gain the current year marginal tax rate would have been 35.5 per cent.

The five-year marginal tax rates will vary according to what assumptions are made about future income streams, as the change in the current year's taxable income will affect average income for the four subsequent years of income.

The mechanism which causes this distortion is simple. Primary producers are allowed to average all income if non-primary production income is less than \$5,000. If non-primary production income is greater than \$10,000, the average rebate or complementary tax is pro-rated, while between these amounts there is dollar for dollar shading in. This means that once the \$5,000 limit for non-primary production income is exceeded, each additional dollar of non-primary production income not only increases the total tax liability, but also decreased the amount of average rebate to which the farmer is entitled, giving rise to these extreme marginal rates. The effect is such that merely substituting \$1,000 of primary production income for \$1,000 of non-primary production income in the first example altered tax payable by \$468.07.

If a taxpayer's taxable income has been declining, and complementary tax is being paid, it is possible to show negative marginal tax rates for non-primary production income, i.e., an increase in income leading to a reduction in the overall tax burden⁹.

Intuitively, two rules of thumb emerge. If a taxpayer's income is trending up, and they are receiving average rebates, their marginal rate will be higher for non-primary production income than it will be for primary production income. A tax-minimising primary producer should therefore attempt to maximise receipts from farm sources, whilst attempting to ensure that deductible expenditure relates off-farm activities. This could affect the resource base, as the farmer may be tempted to "mine" the land, maximising outputs and minimising inputs.

Alternatively, if a primary producer's income is trending down, and they are paying complementary tax, their marginal tax rate for non-primary production income will be less than their marginal tax rate for primary production income. In this case, the tax-minimising primary producer should attempt to maximise non-primary production income and ensure that deductible relates to primary production activities.

The above examples highlight the extremes that are possible, with current year marginal rates ranging

⁹ For example, a farmer with \$10,000 taxable income of which \$4,000 is primary production income, and an average income of \$100,000 will save \$298.72 in tax in the current year if they receive an extra \$1,000 in non-primary production income.

from 80% to -30%¹⁰. However, even at modest income levels the difference between current year marginal rates exist. For example, a taxpayer with a \$25,000 taxable income of which \$19,000 is primary production income and an average income of \$20,000, will pay an extra \$259.07 tax in the current year if an extra \$1,000 non-primary production income is received, but only an extra \$172.03 in tax in the current year if an extra \$1,000 primary production income is received.

The Australian Taxation Office sample obtained for the recent Review of the Income Equalisation Deposit Scheme (Douglas and Davenport 1993) was used to analyse the impact on current year marginal tax liabilities if the taxpayers in the sample had received a further \$1,000 of income. Marginal amounts of tax payable were calculated if the \$1,000 marginal income was primary production income, compared to non-primary production income. The differences between these marginal rates of tax payable were calculated and are summarised in Table 6. Note the calculations did not include provisional tax, and the percentage differences are absolute¹¹. The 1 per cent column includes those observations in the 5 per cent and higher columns.

A longitudinal sample of 54 primary production income streams was purchased from agriculture consultants. This could not be considered a representative sample, but it is interesting to note that of the 44 sample taxpayers who had sufficient taxable

income to be liable to pay tax, 21 had absolute differences of more than 10 per cent in their current year marginal tax rates (not including provisional tax) in at least 1 year, 10 had more than a 20 per cent difference in at least one year, and 3 had more than a 30 per cent difference in at least one year. The largest absolute difference was 35.41 per cent (a 38.91 per cent marginal tax rate for non-primary production income and 3.50 per cent marginal tax rate for primary production income). If provisional tax had been included, the difference would have increased to approximately 70 per cent.

From Table 6 it can be seen that differences in marginal tax rates affect a majority of primary producers in the sample with a taxable income in excess of \$20,000, but is less significant for those with lower incomes. One explanation for this is that those low income taxpayers in the sample were not observed to receive significant amounts of non-primary production income, and in most cases, all income was taxed as primary production income. Evidence for this can be found in the ATO sample, the 104 taxpayers with

¹⁰ Cleaver (1993) reports 235 per cent marginal tax rates associated with the averaging of taxable capital gains.

¹¹ A 10 per cent difference means that the rates were (say) 20 per cent and 30 per cent, not 20 per cent and 22 per cent.

Table 6: Differences in Marginal Tax Rates for Primary Production and Non-primary Production Income for Sample of 455 Primary Producers

Income Bracket	Absolute Difference in Marginal Tax Rates (percentage difference)				
	>1	>5	>10	>15	>20
<10,000	6.7	5.8	2.9	-	-
\$10,000 - <15,000	31.4	7.8	-	-	-
\$15,000 - <20,000	37.2	4.6	-	-	-
\$20,000 - <25,000	54.8	21.4	-	-	-
\$25,000 - <35,000	51.8	30.6	12.9	3.5	1.2
\$35,000 - <50,000	70.8	35.4	10.8	1.5	-
\$50,000 - ∞	83.1	33.8	6.1	-	-
TOTALS	45.3	20.2	5.3	0.9	0.2

Source: Obtained by calculating the difference in additional tax payable if taxpayers in the Douglas and Davenport (1993) sample had received (a) an extra \$1,000 of primary production income, and (b) an extra \$1,000 of non-primary production income.

taxable incomes of 10,000 received an average of \$559 in non-primary production taxable income. Only 8 had non-primary production income of more than \$4,000, and were potentially subject to differing marginal rates under the methodology adopted.

By contrast, the 65 taxpayers with taxable incomes \$50,000 received a mean of \$52,787 non-primary production taxable income, slightly more than their mean primary production taxable income of \$49,131, and a mean total taxable income of \$101,918. Only 8 of this group had less than \$10,000 non-primary production income, with 7 having only primary production income. Hence the majority of this group had differing marginal rates.

Therefore, the main impact of differing marginal tax rates falls on the middle and higher income earners, who are those who are most widely to be considering investing off-farm.

In assessing the importance of differing marginal tax rates, it should be noted that even small differentials in marginal tax rates can distort investment decisions. However, this will depend on the extent to which primary producers are aware of their marginal tax rates.

6. Simplicity Considerations

The complex calculation methods associated with income averaging reduce its simplicity. Taxpayers not on averaging can calculate their marginal tax rate by estimating their current years income and examining a taxation rate schedule. For those on averaging, it is also necessary to know the income of the previous four years, and estimate not only the current years taxable income, but also its respective components of primary production and non-primary production taxable income. Armed with this information, it is then necessary to calculate total tax payable for each scenario and compare the different amount of tax payable, there being no simple formula which will allow an estimate of the marginal tax rate. Having performed these steps, the taxpayer still only knows their current years marginal tax rate. The total tax benefit or penalty for any change in the current years will take four years to be determined.

This lack of knowledge of marginal rates not only impacts on simplicity, but also the efficiency criteria. Theory would suggest that investment decisions be

made on the basis of net present value calculations of after-tax cash flows. However, if the after-tax impact is unknown, this will reduce effectiveness of the decision making process.

7. Conclusions

On the basis of the evidence obtained from the Australian Taxation Office sample, income averaging may not improve horizontal equity of primary producers, and by imposing additional tax burdens on low income primary producers, whilst reducing the tax burdens of high income primary producers, may not achieve vertical equity.

Income averaging also has the effect of reducing the neutrality of the tax system as different marginal tax rates for different forms of income is inconsistent with the efficiency criteria. In addition, the complexity of averaging and the inability to determine the after tax impact of investment decisions until four years after the investment, reduces effective decision making. The long delays in receiving full tax benefits may also reduce the impact of tax-based incentive schemes.

Income averaging is not a simple scheme, and adds complexity to decision making. The only thing certain about income averaging is that its impact is uncertain.

On the basis of equity, efficiency and simplicity income averaging appears to perform poorly. A particular concern is that period inequity, the basic justification for the scheme, may not be sufficient to warrant a general scheme. Such schemes typically are insensitive to the unique circumstances of individuals resulting in distortions in the form of cross-subsidisation between primary producers and between sectors of the economy. In view of these concerns, it becomes necessary to focus on the adequacy of alternative means by which primary producers can spread their income.

It is the authors opinion that the current averaging scheme is neither consistent with the objectives of tax policy, nor rural policy. While some of the results presented in this study may be sample specific, they raise sufficient concern to warrant a wider review of the averaging scheme. That review is to be conducted by Treasury and the Department of Primary Industries and Energy in 1995.

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