An Analysis of Income Averaging for Primary Producers

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Abstract.

Income averaging for primary producers is a longstanding 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.

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AN ANALYSIS OF INCOME AVERAGING FOR PRIMARY PRODUCERS.

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 then despite recent emphasis by governments 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 behaviour. A better understanding of these effects is desirable to encourage efficient resource use in agriculture.

In this paper, income averaging for primary producers[1] 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.

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 to withdraw from the scheme.

If average income is less than taxable income, 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, more tax will be payable than is prescribed by the scheduled rates, with the additional tax imposed called complementary tax.

A taxpayer whose income trends upwards can receive substantial benefits from the averaging system and to prevent the benefits 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, between $5,000 and $10,000, the amount of non-primary production income entitled to be averaged in excess of $5,000 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 assessing and collecting revenue, unless it can be demonstrated that this is the most efficient method of achieving a particular policy objective (Department of Treasury 1990).

The traditional criteria for evaluating tax policy include equity, efficiency and simplicity (Allan 1971, Groenewegan 1990, Musgrave and Musgrave 1989, Sandford 1992) . 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 equity 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 1971), 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 administrative 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 changes in the dead-weight 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 1989).

However, it should be noted 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 (IAC 1975) 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 (1971) justified averaging on the basis that "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 amounts." He stated: "... 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 (1989) do not mention the concept, whilst Stiglitz (1988) appears to accept both the penalties and benefits of fluctuating incomes as being 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 measures*[2].

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 (ITAA) contains many provisions that enable primary producers to alter and defer assessable income compared to the provisions available to the rest of the community. These are set out in Table 1.

TABLE 1.
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

To the extent that these concessions are not more generally available to the wider community, primary inequities arise. Alternatively, if it were accepted that some unique feature of agriculture justifies these concessions exclusively for primary producers, there remains primary inequities within the agricultural sector. A recent example of inconsistencies between agricultural sectors occurs in draft tax ruling TR93/D29 (issued 1 July 1993) which requires cotton growers to value trading stock according to full absorption costing, including "... not only the costs of planting, tending and harvesting the crop but also an appropriate portion of overheads" whilst tax ruling 147 allows wheat growers to value trading stock "... at cost (which could be quite low as only cash outlays need to be taken into account)."

It follows that primary producer's taxable incomes are not necessarily a good indicator of their equality, and that primary inequities exist both between agriculture and other sectors, and within agriculture. Therefore, it is difficult to show that averaging has increased overall tax equity. Furthermore, it is difficult to justify a general scheme when specific schemes applicable to the particular circumstances of the individual are available.

4.2. Evidence of period inequity.

The extent to which farmers suffer period inequity was questioned by Douglas and Davenport (1993), who have found that for a sample of 455 taxpayers who received average rebates in 1990, only a small proportion had actually suffered period inequity, as illustrated in Table 2.

TABLE 2.
DISTRIBUTION OF PERIOD INEQUITY IN SAMPLE

AMOUNT OF PERIOD INEQUITY	% OF SAMPLE EQUITY CRITERIA A	% 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 can be seen that significant period inequity only occurred in a minority of cases, and that most of the sample suffered no period inequity, or actually paid less tax overall because of fluctuating incomes. This occurred because the taxpayer's incomes were increasing over time when tax rates were trending down. Similarly, 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 3 it can be seen that over the 5-year period the highest income group, on average, did not suffer period inequity but still qualified for an averaging rebate in 1990. Taxpayers with incomes over $25,000, on average, received a larger average rebate in 1990 alone than the total period inequity they suffered during the previous 5 years. The three highest income groups received $172,989,000 (81%) of the $213,786,000 total average rebates allowed in 1990.*

TABLE 3.
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	1020	1074	723
$25,000 - $34,999	1205	1301	1260
$35,000 - $49,999	958	1119	2046
>= $50,000	-675	-41	3473

(Source : Douglas and Davenport 1993, 27
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.)

4.3. The regressive nature of averaging.

Douglas and Davenport (1993) also argued that the benefits provided by the averaging system were 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 4.

TABLE 4.
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	1191	1250	1121
28,000 34,999	1601	1627	1878	1899	1705
35,000 - 49,999	2670	2629	2862	2884	2627
>50,000	5169	4745	4887	5235	4745

Source: Douglas and Davenport (1993)

This raises two questions in assessing changes in equity. The first is whether tax equity for primary producers is improved by imposing a small additional burden on low income earners, whilst providing substantial reductions in tax for high income earners who, on average, have benefited from period inequity. The second is 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.

" 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.

On the basis of this information, it is possible to question the appropriateness of a general scheme to relieve a problem that only afflicts 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.

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 (eg, 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 for primary production income, one for non-primary production income and one for taxable capital gains.

An extreme example (Douglas 1993) 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.

Total tax payable is $15,490. Should the taxpayer receive an extra $1,000 of non-primary production income, the tax liability would be $16,351.79, increasing the tax liability by $861.79, or an effective marginal rate of 86.18%. If provisional tax had been included, the effective marginal rate would rise to 180%. Should the extra $1,000 have been received as primary production income, the effective marginal rate would have been 38% (80% including provisional tax) and if the additional income had been taxed as a capital gain the marginal tax rate would have been 39.25%. Part of the additional tax payments will be clawed back the following year as a refund of provisional tax.

Depending on what assumptions are made about future income streams, the medium-term marginal tax rates will be in the ranges 85% to 100% for non-primary production income and 40% to 55% for primary production income, as the impact of a change in the current years taxable income affects average income for the four subsequent years on 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 decreases 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 can alter tax payable by $1,000 in the current year, and potentially $480 in the medium term.

If a taxpayer's taxable income has been declining, and he is paying complementary tax, 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 burden[3].

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 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 producers 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 primary producer should attempt to maximise non-primary production income and ensure that deductible expenditure relates to primary production activities.

The above examples highlight the extremes that are possible, with marginal rates ranging from 180% to -30%[4]. However, even at modest income levels the difference between marginal rates can be significant. 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 $617.36 in tax and provisional tax in the current year if an extra $1,000 non-primary production income is received, but only an extra $386.12 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 was used to analyse the impact on 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 summarised in Table 5. Note the calculations did not include provisional tax, and the percentage differences are absolute.[5] The 1% column includes those observations in the 5% and higher columns.

TABLE 5.

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				
	>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.)

A longitudinal sample of 54 primary production income streams was purchased from agricultural 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% in their marginal tax rates (not including provisional tax) in at least 1 year, 10 had more than a 20% difference in at least one year, and 3 had more than a 30% difference in at least one year. The largest absolute difference was 35.41% (38.91% for non-primary production income and 3.50% for primary production income). If provisional tax had been included, the difference would have increased to approximately 70%.

From Table 5 it is evident that differences in marginal tax rates affect a majority of primary producers 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 ATO sample of 104 taxpayers with 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 < $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 likely 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 it's 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 income 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 presented, 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 it's 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.

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ENDNOTES.

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

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

3. 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.

4. Cleaver (1993) has reported 235% marginal tax rates associated with the averaging of taxable capital gains.

5. A 10% difference means that the rates were (say) 20% and 30%, not 20% and 22%