THE STABILIZATION AND DISTRIBUTION EFFECTS OF THE AUSTRALIAN WHEAT INDUSTRY STABILIZATION SCHEME

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The wheat stabilization scheme has been operating for almost two decades. In this article quantitative estimates are made of the effects of the scheme upon the stability of prices and incomes and the distribution of income over the period 1948-49 to 1965-66.

The Australian wheat industry stabilization scheme was part of an overall post-war rural policy designed to stabilize prices and incomes in the wheat industry and to assist in the achievement of the more general economic objectives of a stable internal price level and steady economic progress.[1] The scheme has directly affected both the price of wheat to domestic consumers and the average return per bushel which wheatgrowers have received. In addition, the provisions for organized marketing and the stabilization fund have had an influence on the annual income received by growers.

Stabilization

A basic provision of the 1948 and each subsequent Wheat Industry Stabilization Act has been the designation of the Australian Wheat Board as the marketing authority for Australian wheat. The Board has been required to differentiate between the domestic and export markets, but in some of the early years both these markets were still further differentiated.[2] Consequently the price paid by domestic consumers has had little relationship to the pooled return paid to growers by the Board.

Domestic Prices and Returns

One way of examing the effects of the scheme upon domestic prices and returns is to consider the prices and returns which would have ruled without the scheme. However, it is difficult to know exactly what

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1 For an outline of the scheme see Commonwealth Bureau of Census and Statistics, *Year Book of the Commonwealth of Australia*, No. 51 (1965), pp. 996-997. For a theoretical analysis of the scheme see John W. Longworth, "The Australian Wheat Industry Stabilization Scheme: An Analytical Model", *Economic Record*, Vol. 42, No. 2 (June 1966), pp. 244-255.

2 The domestic market was differentiated in two seasons 1951-52 and 1952-53. In these years wheat used for stock-feed was sold by the Board at a higher price than wheat intended for human consumption. The export market for Australian wheat was differentiated over the period 1949-50 to 1958-59 as a result of the practice of selling an agreed quantity of wheat at prices specified in the International Wheat Agreement and the remainder at the prevailing market price.

the average price of wheat in Australia would have been in the absence of organized marketing. If it is assumed that the demand for Australian wheat on the world market is perfectly elastic then it could be argued that the average world market price (i.e. the "free" export market price), adjusted for freight charges, would have ruled in Australia. Even if this assumption is accepted, the choice of an appropriate average world price is difficult. Although wheat is a relatively homogeneous product, the prices paid for Australian FAQ wheat may be quite different to the prices offered for the grades quoted on the world's commodity exchanges. One appropriate average price would be the annual average price received for Australian wheat on the free export market. Unfortunately a weighted annual average is not available. There are, however, two alternative price series. The first can be derived from the monthly base selling prices quoted by the Australian Wheat Board. It is not possible to weight these prices for quantities sold and, therefore, this series is an unweighted average for the Australian wheat year (i.e. 1st December to 30th November). The second series is the actual weighted average price received for wheat sold from each pool on the free export market. Both these sets of prices have limitations. The

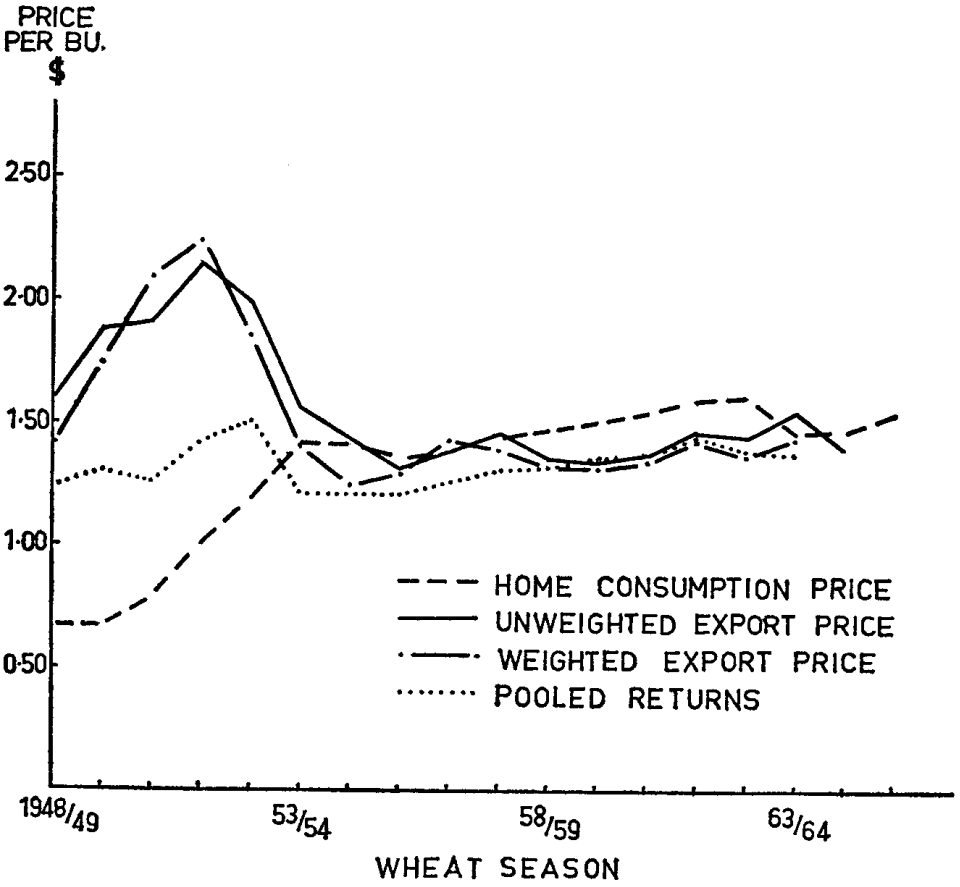

FIG. 1—Home consumption prices, unweighted average free export price, weighted average free export price received and pooled returns paid to growers for wheat.

TABLE 1

Home Consumption Prices, Unweighted Average Free Export Price, Weighted Average Free Export Price Received and Pooled Returns Paid to Growers for the Wheat Seasons 1948-49 to 1965-66

Wheat season (1st December to 30th November)	Home consumption price per bushel[a]	Unweighted annual average free export price per bushel[b]	Weighted average free export price per bushel received for each pool[c]	Average return per bushel paid to growers from pool[d]
	$	$	$	$
1948-49	0.67	1.60	1.42	1.23
1949-50	0.67	1.88	1.73	1.30
1950-51	0.78	1.90	2.08	1.26
1951-52	1.00 (1.20)	2.14	2.23	1.42
1952-53	1.19 (1.39)	1.99	1.85	1.50
1953-54	1.41	1.55	1.40	1.21
1954-55	1.41	1.43	1.25	1.20
1955-56	1.35	1.31	1.29	1.20
1956-57	1.38	1.38	1.42	1.25
1957-58	1.43	1.45	1.38	1.30
1958-59	1.47	1.35	1.32	1.32
1959-60	1.50	1.34	1.32	1.35
1960-61	1.53	1.37	1.34	1.36
1961-62	1.58	1.46	1.42	1.44
1962-63	1.60	1.44	1.36	1.39
1963-64	1.46	1.54	1.43	1.37
1964-65	1.47	1.39	n.a.	n.a.
1965-66	1.53	n.a.	n.a.	n.a.
Coefficient of variation of the mean	0.0131	0.0096	0.0122	0.0043

(a) The prices in brackets are the home consumption prices for feed wheat in seasons when these differed from the price set for wheat destined for human consumption.

(b) Calculated from Australian Wheat Board monthly basic selling price for f.a.q. bulk wheat, f.o.b. basis. These prices relate to Australian wheat years (viz. 1st December to 30th November).

(c) F.o.r. ports. Wheat from any one season's pool may be sold in several later seasons. These prices may therefore apply to a period of more than one year.

(d) Bulk wheat, eastern States, subject to the deduction of individual grower's rail freight.

Source: Commonwealth Bureau of Census and Statistics, *Statistical Bulletin: The Wheat Industry*. Australian Wheat Board, *Annual Report*.

annual averages of the monthly prices quoted by the Board appear to be optimistic (or maximum) estimates. In addition no account has been taken of the volume sold at each of the monthly quotes. On the other hand the average return for each pool may be received over several years and may not adequately represent world prices in the year of harvest. The following analysis considers both price series.

Table 1 and Figure 1 present the actual prices paid by domestic consumers, the two free export market price series and the actual pooled

return paid to growers for wheat produced in each wheat season (gross of rail freight to terminals). Table 1 also contains the coefficient of variation of the mean for each of the four series. Australian consumers paid well below the world market price for wheat until 1953-54 and above that price in most years since. The distributional implications of this will be discussed later. Figure 1 shows that world prices since 1953-54 have been remarkably stable compared with the immediate post-war period. This has made a major contribution to the stability of the return paid to growers over the last thirteen years.

The general trend in the administered home consumption price has been upward, and to get a measure of the significance of this trend the annual changes in the domestic wheat prices can be compared with the annual changes in the consumer price index. There are two ways of making this comparison. The first approach is to calculate the percentage increase from one year to the next for the two series. The second method involves deflating the domestic price of wheat by the price index. The results of both these calculations are presented in Table 2 along with the corresponding results for the two price series being used as indicators of prices without the scheme.

The most striking thing about the figures showing percentage changes is that in the years 1950-51 to 1953-54 the home consumption prices increased annually much more than the general price level. On the other hand the free export prices tended to level off and then decline over these years. The greatest discrepancy occurred in 1953-54 when the price of wheat for human consumption was increased 18·5 per cent over the preceding year's price compared with a mere 2·0 per cent rise in the consumer price index. Without the scheme, domestic wheat prices would have fallen considerably (along with world prices) in 1953-54. In the period 1954-55 to 1965-66 the annual percentage changes in the administered wheat prices were roughly comparable with the rate of annual increase in the consumer price index. The exceptions were the years 1955-56 and 1963-64 when domestic wheat prices declined. Therefore, it would be reasonable to conclude that from 1954-55 onward, increases in the administered domestic wheat prices have more or less followed the general level of prices.

By deflating the administered wheat prices by the consumer price index it is possible to obtain an overall view of the domestic price of wheat compared with other prices in the economy. Table 2 shows that in the base year the domestic wheat price was $0.67 per bushel. The deflated domestic price rose continuously from 1949-50 to 1953-54 in which year the deflated price reached a peak of $0.84. This means that in real terms wheat was dearest in 1953-54 although in money terms the highest domestic prices occurred in 1962-63. Both the free export price series show quite a different picture. Table 2 indicates that in real terms export prices fell sharply in the early 1950's, but have not shown much variation since 1955-56.

One can only conclude that the domestic wheat pricing policies to which the Commonwealth Government was committed under the 1948 and the 1954 Wheat Industry Stabilization Acts in particular, were not consistent with the desire for a stable general level of prices. Initially at least the Commonwealth Government did attempt to reconcile this policy conflict. When the assessed average cost of production increased

TABLE 2

Changes in Consumer Price Index, Home Consumption Prices, and the Two Export Price Series, 1948-49 to 1965-66

	Consumer price index		Home consumption prices (a)			Unweighted annual average free export prices			Weighted average free export price received for pool		
Wheat season	Index	Percentage change from previous year	Price per bushel	Percentage change from previous year	Deflated price per bushel	Price per bushel	Percentage change from previous year	Deflated price per bushel	Price per bushel	Percentage change from previous year	Deflated price per bushel
		%	$	%	$	$	%	$	$	%	$
1948-49	100·0		0.67		0.67	1.60		1.60	1.42		1.42
1949-50	108·4	8·4	0.67	0	0.62	1.88	17·5	1.73	1.73	21·8	1.60
1950-51	122·5	13·0	0·78	16·4	0.64	1.90	1·1	1.55	2.08	20·2	1.70
1951-52	150·1	22·5	1.00	28·2	0.67	2.14	12·6	1.43	2.23	7·2	1.49
			(1.20)	(53·8)	(0.80)						
1952-53	164·1	9·4	1.19	19·0	0.72	1.99	—7·0	1.21	1.85	—17·0	1.13
			(1.39)	(15·8)	(0.85)						
1953-54	167·5	2·0	1.41	18·5	0.84	1.55	—22·1	0.93	1.40	—24·3	0.83
				(1·4)							
1954-55	168·5	0·6	1.41	0	0.84	1.43	—7·7	0.85	1.25	—10·7	0.74
1955-56	175·5	4·2	1.35	—4·3	0.77	1.31	—8·4	0.75	1.29	3·2	0.73
1956-57	185·7	5·8	1.38	2·2	0.74	1.38	5·3	0.74	1.42	10·1	0.76
1957-58	187·5	1·0	1.43	3·6	0.76	1.45	5·4	0.78	1.38	—2·8	0.74
1958-59	190·5	1·6	1.47	2·8	0.77	1.35	—7·2	0.71	1.32	—4·3	0.69
1959-60	195·2	2·5	1.50	2·0	0.77	1.34	—0·7	0.69	1.32	0	0.68
1960-61	203·3	4·1	1.53	2·0	0.75	1.37	2·2	0.67	1.34	1·5	0.66
1961-62	204·1	0·4	1.58	3·3	0.77	1.46	6·9	0.72	1.42	6·0	0.70
1962-63	204·4	0·2	1.60	1·3	0.78	1.44	—1·6	0.70	1.36	—4·2	0.66
1963-64	206·4	1·0	1.46	—8·8	0.71	1.54	6·9	0.75	1.43	5·1	0.69
1964-65	214·1	3·7	1.47	0·7	0.69	1.39	—9·7	0.65	n.a.	n.a.	n.a.
1965-66	222·0	3·7	1.53	4·1	0.69	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(a) The figures in brackets refer to feed wheat.

TABLE 3

Number of Months from Harvest to Final Payment, Number of Separate Payments and Details of the First Advance, 1948-49 to 1965-66

Wheat season[a]	Number of months from harvest to final payment	Number of separate payments	First advance	
			Amount per bushel	As a proportion of final average returns
			$	%
1948-59 (12)	36	6	0.50	44·3
1949-50 (13)	32	6	0.60	46·1
1950-51 (14)	36	6	0.66	52·3
1951-52 (15)	29	7	0.78	54·8
1952-53 (16)	27	5	1.20	80·1
1953-54 (17)	32	4	1.00	82·9
1954-55 (18)	35	4	1.03	85·9
1955-56 (19)	27	4	0.95	79·2
1956-57 (20)	26	5	1.00	79·9
1957-58 (21)	18	3	1.10	84·7
1958-59 (22)	21	3	1.10	83·5
1959-60 (23)	19	3	1.10	81·8
1960-61 (24)	27	6	0.90	66·0
1961-62 (25)	21	5	1.10	76·2
1962-63 (26)	18	3	1.10	78·9
1963-64 (27)	16	3	1.10	80·1
1964-65 (28)	n.a.	n.a.	1.10	n.a.
1965-66 (29)	n.a.	n.a.	1.10	n.a.

[a] The figures in brackets are the corresponding numbers assigned to the pools for the seasons in question. The pooling arrangement commenced in 1939-40 with pools No. 1 and No. 2. For each season since that year there has been a separate, but national pool.

Source: Australian Wheat Board, *Annual Report.*

in 1949-50 to $0.71 (7s. 1d.) per bushel, the Government did not automatically adjust the home consumption price. Instead the home consumption price remained at $0.67 (6s. 8d.) (the same as in 1948-49) and the Government paid a direct subsidy of $0.04 (5d.) per bushel to the Board so that growers received the assessed cost of production for all domestically consumed wheat. However, the use of a direct subsidy to prevent domestic wheat prices from adding to the general inflationary pressures, was not continued.

When the average pooled return per bushel to growers for each season's crop under the marketing scheme is compared with the average prices actually received for that part of each pool sold on the free export market, it is seen that without the scheme growers' returns would have been very much higher up until 1953-54 and only slightly lower in some of the years since that season. Leaving aside for the moment the effect this must have had upon wheatgrowers' incomes, Table 1 indicates and the coefficients of variation confirm that the average return under the scheme has been rather more stable than either the home consumption price or the two free export market price series, when

considered over the whole period covered by the scheme. However, this was an average return in terms of pools and growers received it in up to seven separate payments over a period as long as three years after harvest. The details of the extent of delay in payment, the number of separate payments and the value of the first advance (which is usually paid within a month of the grain being delivered to the Board) are set out in Table 3.

Both the delay and the number of payments are highly dependent upon export market conditions and the size of the Australian crop. Growers have tended to get their money more quickly in the last ten years (with the exception of the 1960-61 season's pool, No. 24) than in the early years of the scheme. The first advance has been fixed at $1.10 since the 1957-58 season (again with the exception of pool No. 24). Table 3 also shows that the first advance has represented about 80 per cent of total payments in all but one year since 1952-53.

Total Annual Wheat Income

It is possible to calculate what the total income from wheat might have been in each season in the absence of the scheme, by multiplying that volume of the crop not exported under the International Wheat Agreement by the average free export market price, and adding to this the actual income realized from International Wheat Agreement sales. Performing this calculation for both the free export price series yielded the figures presented in Table 4. These estimates are rather unsatisfactory because first, they both assume an infinitely elastic export demand for Australian wheat, and second they assume that there would have been no supply response to the higher prices. The tendencies suggested by these objections are, however, compensating and, for want of reliable estimates of the relevant elasticities, the annual wheat income series calculated in this way will be used as a rough guide to what returns might have been.

For comparison with these estimates, gross payments (gross of rail freight to terminals) paid to growers by the Board in each wheat season were calculated and are also presented in Table 4. The differences between this actual income and the two estimated income series are shown as gains or losses in the table. The annual income growers actually received shows less variation from year to year than either of the estimated income series. However, over the whole period wheat-growers have experienced a net loss of income of the order of at least $440 million.

Apart from prices there are two other aspects of the scheme which bear upon the year-to-year variation in total wheat payments made by the Wheat Board. Both the method of pooling with delayed payments and the operation of the stabilization fund should tend to reduce variations in incomes due to poor seasons. The Board enters each year with a reserve of income from previous pools which will eventually be paid to growers. This income carried over from previous years may be potential income in the sense that it is represented by unsold wheat or payments owing to the Board on wheat sold forward or on credit, or it may be money not yet distributed. The amount of the delayed payments to growers in each year is presented in Table 5 both as an absolute amount and as a percentage of the annual wheat cheque. In

TABLE 4

Total Payments to Growers by Years, and Two Estimates of Annual Wheat Income in the Absence of the Scheme together with the Associated Gains or Losses to Growers, 1948-49 to 1964-65

Wheat season	Total[a] payments made during year	Estimate based on the unweighted free export market price		Estimate based on the weighted average free export price received for the pool	
		Annual income	Gain (+) or loss (—)	Annual income	Gain (+) or loss (—)
	$m.	$m.	$m.	$m.	$m.
1948-49	212·0	357·5[b]	—145·5	325·4[b]	—113·4
1949-50	207·4	353·6	—146·2	335·8	—128·4
1950-51	257·1	333·4[b]	—76·3	348·6[b]	—91·5
1951-52	263·7	276·6	—12·9	283·4	—19·7
1952-53	258·2	328·6	—70·4	315·2	—57·0
1953-54	281·4	279·8	1·6	257·0	24·4
1954-55	181·8	216·4	—34·6	197·0	—15·2
1955-56	210·0	240·6	—30·6	237·2	—27·2
1956-57	187·0	167·0	20·0	170·8	16·2
1957-58	129·0	117·2	11·8	112·4	16·6
1958-59	236·1	268·4	—32·3	262·6	—26·5
1959-60	243·5	239·8	3·7	237·2	6·3
1960-61	323·6	344·8	—21·2	336·8	—13·2
1961-62	305·7	328·4	—22·7	320·6	—14·9
1962-63	404·8	412·2	—7·4	387·6	17·2
1963-64	424·7	474·6	—49·9	439·8	—15·1
1964-65	453·0	482·2	—29·2	n.a.	n.a.
Net Loss			—642·2		—441·5

[a] In all years payments are from more than one pool. The year is taken as the Australian wheat year, 1st December to 30th November.
[b] Both estimates in these years include deferred payments from pre-1948-49 seasons.

Source: Australian Wheat Board, *Annual Report*, and personal communications.

the first four years rather large absolute and relative amounts of the annual income received were carried over from previous harvests. However, in 1952-53 when the annual wheat cheque reached the highest level attained in any year before 1960-61, the portion of the total income carried over was a much smaller amount than in the preceding four years. In the seasons of low wheat income, 1956-57 and 1957-58, the amount of income carried over was not abnormally large in comparison with the amount distributed in the previous four years. However, it did represent a bigger proportion of total receipts and did help to maintain wheatgrowers' incomes in what otherwise would have been extremely lean years. Since 1958-59 there has been some tendency for the amount carried over to increase in absolute but not relative terms.

Table 5 also contains details of the movement of moneys into and out of the stabilization fund. A negative sign indicates that in that year the amount collected in stabilization taxes exceeded the amount paid to growers either as repayments of previously contributed taxes (plus

TABLE 5

Total Payments to Growers by Years, Details of the Importance of Income Carried Over from Previous Seasons and the Net Movement of Moneys into and out of the Stabilization Fund, 1948-49 to 1964-65

Wheat season	Total payments[a] made during year	Payments carried over from previous season		Net annual movement of money into and out of the stabilization fund	
		Amount	As a proportion of total payments	Amount	As a proportion of total payments
	$m.	$m.	%	$m.	%
1948-49	212·0	77·5	36·6	—13·6	6·4
1949-50	207·4	41·2	19·9	—26·0	12·5
1950-51	257·1	107·4	41·8	6·0	2·3
1951-52	263·7	107·4	40·7	0·6	0·2
1952-53	258·2	38·2	14·8	14·6	5·7
1953-54	281·4	96·7	34·4	41·2	14·6
1954-55	181·8	22·2	12·2	—10·2	5·6
1955-56	210·0	35·7	17·0	—9·0	4·3
1956-57	187·0	65·3	34·9	—0·4	0·2
1957-58	129·0	38·7	30·0	0·8	0·6
1958-59	236·1	14·7	6·2	—1·2	0·5
1959-60	243·5	44·6	18·3	13·1	5·4
1960-61	323·6	44·8	13·9	16·0	4·9
1961-62	305·7	57·4	18·8	17·8	5·8
1962-63	404·8	88·8	21·9	14·6	3·6
1963-64	424·7	85·4	20·1	22·6	5·3
1964-65	453·0	71·8	15·9	1·9	0·4

[a] The year is the Australian wheat year, 1st December to 30th November.

Source: Commonwealth Bureau of Census and Statistics.

interest) or as price-support payments. A positive sign indicates that the payments to growers (for either or both reasons) exceeded the amount collected from growers. Therefore, in years with a positive sign the annual income of growers has been increased and in years with a negative sign growers' incomes have been reduced by the operation of the fund. Table 5 indicates that the effect of the stabilization fund was to reduce wheatgrowers' incomes in 1948-49 and 1949-50. From 1950-51 to 1952-53 the operation of the fund increased the incomes of wheatgrowers but not by very large relative amounts. The fund added significantly to grower receipts in 1953-54, but has had very little relative effect since that year. In the four years 1960-61 to 1963-64 quite large absolute amounts were added to wheatgrowers' incomes by the operation of the stabilization fund and the subsidy.

Distribution

The wheat pricing policies adopted in the name of stabilization have had considerable distributional consequences. Income has been transferred between wheatgrowers as a group and other sections of the community. In addition significant income transfers have occurred within the industry over time.

Indirect Transfers

Average export prices were more than twice as high as the home consumption prices during the first three years of the scheme. This may be regarded as an indirect sectional tax on producers of over 50 per cent. Throughout this period grower organizations complained about the concessional price for stock-feed, but the home consumption price for consumers was more or less accepted. This was probably due, in part at least, to the forward-looking undertaking that, should prices slump, consumers would then subsidize producers. Perhaps the even stronger argument was that farmers were being paid the assessed average cost of production. Any higher price, it was argued, would add to the inflationary pressures. Therefore, it was in the interests of everyone, consumers and farmers alike, to keep the domestic price of wheat down. However, not all farmers passively accepted the situation. In New South Wales particularly, many growers expressed their discontent by supporting the "Nelungaloo" test case.[3]

Towards the end of the five-year period covered by the 1948 Act the Government did reduce the burden on producers. It did this, first, by raising the returns growers received for wheat sold as stock-feed to the maximum price for sales under the International Wheat Agreement. In other words, in 1951-52 and 1952-53 the Board sold wheat as stock-feed at $1.20 and $1.30 per bushel respectively, but the Government paid a bounty on wheat used as stock-feed to bring the net return up to $1.61 per bushel in both years (see Table 6). In the second place, the Government did not collect any stabilization tax in 1952-53.

It is always very difficult to quantify the income transfers which result from home consumption price schemes. Some would say this is their major merit! If the immeasurable concepts of producer and consumer surpluses are replaced by potentially measurable magnitudes such as the change in total income received by producers and the change in the total expenditure on wheat by domestic consumers, some little progress can be achieved. In the previous section an attempt was made to calculate what the annual total income of growers might have been if the pricing policies posited under the scheme had not been in operation. From these figures it appears that during the period 1948-49 to 1952-53 wheatgrowers forfeited income of the order of at least $410 million (see Table 4).

The demand for wheat for human consumption in Australia is likely to be rather inelastic over quite a large range of prices. Therefore, if higher prices had prevailed the total expenditure on wheat for human consumption would probably have been higher. However, the demand for feed wheat may be rather price elastic especially over the wide price range between domestic and free export prices in these years. Therefore, total expenditure on feed wheat would undoubtedly have been lower without the scheme. The actual reduction in total expenditure on feed wheat and the actual increase in total expenditure on wheat for human consumption would depend upon the exact price elasticities in these two markets. However, these changes in total expenditure which would have occurred without the scheme, are cancelling (but only to some extent because of the larger quantity of wheat destined for human con-

[3] *Commonwealth Law Report*, Vol. 22 (July 15, 1948), pp. 126-137; and Vol. 24 (January 25, 1951), pp. 366-372.

TABLE 6

Details of Bounties on Feed Wheat and Consumer Subsidies Paid by the Commonwealth Government, 1948-49 to 1964-65

Wheat season	Bounty on feed wheat		Consumer subsidy	
	Amount per bushel	Total amount	Amount per bushel	Total amount
	$	$m.	$	$m.
1949-50	0.04	1·0	0.04	1·6
1950-51				
1951-52	0.41	9·6		
1952-53	0.22	4·2		

Source: Australian Wheat Board, *Annual Report.*

sumption), and one may assume that roughly the same amount would have been spent by domestic consumers on less wheat, if there had been no scheme in the period, 1948-49 to 1952-53. What this implies is that consumers did not value the additional wheat they consumed at anything like $410 million. Thus the gesture cost growers $410 million, but was worth only a fraction of this amount to domestic consumers. In other words the additional wheat which was consumed within Australia in these years represented a rather small gain to domestic consumers in money terms. This argument suggests that a major part of the $410 million was not only forfeited by wheatgrowers, but also by the economy as a whole, since the wheat used in Australia during these years did have an actual opportunity cost of the order of $410 million.

During the period since 1953-54 the home consumption price has generally been above the free export price. This represents a sectional tax on consumers. However, following the above argument it is suggested that, given the nature of the demand for wheat, the total expenditure upon wheat for domestic consumption in the absence of the scheme would not have been very different. Certainly, there would have been more wheat used in Australia, but as a percentage of total production this increase would have been insignificant. As a result of the scheme the gain in export income owing to less wheat being consumed at home in these years must have been small.

Over the period 1953-54 to 1963-64 the more conservative income estimates given in Table 4 show a net loss to wheatgrowers of the order of $30 million. This result depends heavily upon the assumption that without the scheme the whole of each crop would have been sold within twelve months, at the actual average price obtained for this wheat on the free export market. For this reason, it would be inappropriate to place too much emphasis upon the small apparent net loss to growers. Nevertheless, the result does indicate that in the last decade grower incomes have not been dramatically different from what one might reasonably expect to have been the case without the home consumption price. That is, the indirect transfer of money income from consumers has been small.

Direct Transfers

Since the inception of the stabilization scheme there have been three instances in which a subsidy or a bounty has been paid. The bounty on

feed wheat operated in three years 1949-50, 1951-52 and 1952-53; a consumer subsidy was paid in 1949-50; and since 1959-60 the Government has paid a subsidy to maintain the guaranteed price on the specified volume of exports (viz. 100 million bushels up to and including the 1962-63 season, and 150 million bushels thereafter).

The details of the first two subsidies are shown in Table 6. The "benefits" of both these direct transfers from taxpayers were shared, depending upon the relevant elasticities of supply and demand in the markets. In the case of the stock-feed bounty both wheatgrowers and livestock producers would have received some benefit. The consumer subsidy would have been shared between wheatgrowers and consumers. The small gains accruing to wheatgrowers as a result of these direct transfers only partly compensated for the large opportunity cost.

During 1960-61 when the final payments for the 1959-60 pool were being made, the last of the grower contributions to the stabilization fund was exhausted. It therefore became necessary for the Government to pay a direct subsidy to maintain the guaranteed return on the specified volume of wheat exported. Table 7 presents the aggregate wheat income for these years, first in terms of pools and then in terms of Australian wheat years. In each case the total amount of the subsidy paid is given. This subsidy is then expressed as a percentage of the total income for that pool or year as the case may be. These figures indicate the importance of the subsidies to wheatgrowers. In absolute terms the subsidies have represented quite large sums. But in relative terms the subsidies have not constituted more than 6 per cent of aggregate income for any pool or year. It is notable that the largest percentage is represented by the subsidy paid to growers in the year 1961-62, when a recession occurred in the Australian economy.

Direct subsidies have less effect on income distribution and resource allocation and, therefore, on economic grounds are a more desirable form of protection than home-price schemes. However, the home price is a less obvious protective device and less likely to be subject to critical review. This aspect appeals to producers and politicians alike because it enables producers to obtain and enjoy protection and it enables politicians to grant them semi-permanent protection, with the least possible disturbance. This is undoubtedly one good reason why the device has been so widely employed in the protection of Australian primary industries. But another consideration which has become more important since the Second World War is that it is easier for the representatives of the Australian Government at GATT discussions to gain acceptance for a home-price scheme than an export subsidy. The home consumption price principle has now become more or less accepted as a stabilization device. It is undoubtedly a form of export dumping but has become so widely practised that it is no longer regarded as a major obstacle to good trading relations.

Transfers within the Industry over Time

The wheat industry stabilization scheme can be seriously questioned upon the grounds of equity between growers.

First, to tax one group of growers for four years and then a decade later subsidize a substantially different (and enlarged) group of producers does not appear to be a very equitable process. To what degree

TABLE 7

Details of the Export Subsidies Paid to Wheatgrowers by the Commonwealth Government, 1948-49 to 1964-65

Wheat season[a]	Subsidy per bushel	Subsidy paid on a pool basis			Subsidy paid on an annual basis[b]		
		Total amount of subsidy	Total payments to growers	Subsidy as proportion of total payments	Total amount of subsidy	Total payments to growers	Subsidy as proportion of total payments
	$	$m.	$m.	%	$m.	$m.	%
1959-60 (23)	0·050	6·0	240·8	2·5		243·5	
1960-61 (24)	0·091	17·8	342·2	5·2	6·0	323·6	1·9
1961-62 (25)	0·085	14·6	323·6	4·5	17·8	305·7	5·8
1962-63 (26)	0·097	22·6	398·0	5·7	14·6	404·8	3·6
1963-64 (27)	0.006	1·9	438·4	0·5	22·6	424·7	5·3
1964-65 (28)	n.a.	n.a.	n.a.	n.a.	1·9	453·0	0·4

(a) The figures in brackets are the appropriate pool numbers.
(b) The year is the Australian wheat year, 1st December to 30th November.

Source: Commonwealth Bureau of Census and Statistics, *Statistical Bulletin: The Wheat Industry.*

the composition of the group has changed is difficult to measure and it would be almost impossible to compare the gains and losses of individual growers since such a comparison would involve both intertemporal and interpersonal comparisons. Nevertheless, this is no reason to neglect completely this important aspect of the scheme's operation.

The second instance of income transfer over time and between producers occurred in connection with the stabilization fund. The operations of this fund transferred farmers' income initially over time and then, both over time and between farmers. As Table 8 shows, all payments into the stabilization fund from pools earlier than No. 17 (1953-54) were subsequently refunded to growers with interest.[4] These transfers of growers' incomes over time were partly compensated by the payment of a low rate of interest. Table 8 presents two estimates of this rate. The first assumes rather unrealistically that the moneys retained could have been paid to the growers at the time of the first payment. The second assumes the tax was deducted from the final payment. These two rates only serve as limits, the actual rate would lie somewhere between these two.

The figures in Table 8 indicate that although the absolute level of the stabilization tax per bushel was not high, the total taxes collected and held for long periods represented considerable sums. The rate of interest earned by these moneys was very low. Therefore, the stabilization tax and repayment system represented a form of forced saving for which the rate of interest paid did not adequately compensate. Growers thus suffered a considerable loss of income.

From the 1953-54 pool onwards the stabilization fund began to operate as it was initially intended. Growers contributing to pool No. 17 paid $18 million into the pool but did not receive any repayment on that pool. Growers producing wheat in the 1954-55 and 1955-56 seasons did not contribute to the fund at all. Instead they were paid a total of a little over $2 million out of the fund. This amounted to $0.04 (5 pence) per bushel contributed to pool No. 18 and $0.02 (2 pence) per bushel contributed to pool No. 19. Growers contributing to pool No. 20 paid $3·0 million into the fund. All subsequent pools up to 1962-63 have either withdrawn moneys from the fund or received direct subsidies from consolidated revenue. Pool No. 23 (1959-60) withdrew $10 million of previously contributed grower funds and also received a $6 million direct subsidy. Pools No. 24, 25, 26 and 27 have all received direct subsidies.

Not only will the composition of the producer groups change from year to year, but the burden of the tax varies from pool to pool for each individual grower. It is easy to see that a grower who had a big crop in 1953-54 and contributed a large volume of grain to pool No. 17, paid a large amount into the fund. Suppose this same producer had bad crops, or for some other reason produced less, or perhaps none at all, for the next two years when the price was supported by withdrawals from the stabilization fund. Under these circumstances this producer may not receive (in absolute total income terms) anything like the share he contributed in his good crop year. Of course, the opposite also applies; a grower with a poor crop in a year of high export prices pays

[4] There was no stabilization tax collected in the last season covered by the 1948 Act (i.e. 1952-53).

TABLE 8

Wheat Prices Stabilization Fund Amounts Collected from and Refunded to Growers, 1948-49 to 1951-52

Wheat season[a]	Payments into fund		Interest earned in fund	Repayments from fund		Period moneys held in fund			
						Maximum period		Minimum period	
	Total amount	Average amount per bushel		Total amount	Average amount per bushel	No. of months	Rate of interest	No. of months	Rate of interest
	$m.	$	$m.	$m.	$		%		%
1948-49 (12)	24·992	0·143	0·928	25·920	0·148	36	1·2	15	3·0
1949-50 (13)	30·490	0·150	0·789	31·278	0·154	32	1·0	13	2·6
1950-51 (14)	22·142	0·130	0·801	22·943	0·132	36	1·2	18	2·4
1951-52 (15)	18·333	0·126	0·565	18·898	0·129	29	1·2	9	4·2

[a] The figures in brackets are the corresponding pool numbers.

Source: Australian Wheat Board, *Annual Report.*

a relatively small absolute amount into the fund. If he then has a large crop in a year of poor export prices, he may receive as support payments far more than he paid into the fund. In this way income is not only transferred over time but also between producers. The loss of equity in this sense cannot be measured, but perhaps the operation of the fund could be re-organized to prevent this redistribution. One method of achieving this would be to keep separate accounts for each grower and limit his repayments in years of poor prices to the absolute amount he contributed in years of good prices. This may involve a great deal of additional administrative detail, but with modern computer-processing the work involved in handling a large number of separate accounts may not be excessive.

A third form of inequity between farmers arises under the present method of operating the stabilization fund and stems from the fact that contributions to the fund from any one pool are made at a fixed rate per bushel. The burden of the tax is, therefore, much greater on growers who have below average yields than on producers with above average yields. This, of course, assumes that unit costs of production are higher with lower yields. Under most circumstances this seems to be a reasonable asumption. One way of overcoming this problem would be to adopt and extend the individual accounts system suggested above to incorporate a flexible stabilization tax rate depending upon region and yield. A much simpler approach would be to levy the stabilization tax as an income tax rather than an excise tax.

Conclusion

Before 1953-54 domestic wheat prices would have been much higher in the absence of the pricing policies adopted as part of the scheme. However, domestic prices would have been falling in the early 1950's, when instead, with the scheme in operation, wheat prices rose faster than the general level of prices. In real terms the domestic price reached a peak in 1953-54 and has tended to decline since that season. On the other hand, in money terms the price of wheat in Australia continued to show a slight upward trend since 1953-54, reaching a peak in 1962-63.

The pooled return to growers has been rather more stable than the average return would have been without the scheme. This feature of the scheme is of questionable value given the long delays between the harvest and the final payment to growers.

There is little doubt that growers lost in excess of $400 million between 1948-49 and 1953-54. This probably represented much less to Australian consumers in terms of money income saved. Since 1953-54, the evidence suggests that total grower income would have been very little different in the absence of the scheme. However, in some years the system of pooling and delayed payments and in others the stabilization fund, have helped to reduce year-to-year variation in the wheat cheque.

Direct subsidies have been relatively unimportant sources of income to growers although representing quite large absolute amounts in the early 1960's.

Finally, there are several aspects of the stabilization scheme which adversely affect the distribution of income between wheatgrowers. These sources of inequity are important and could be easily removed.