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Relative Assistance to Agriculture and Manufacturing since Federation

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1. Introduction

The general level of assistance which has gone to farmers and other agricultural producers has been a major political issue since the beginning of Federation in Australia. From 1901 butter producers received protection from imports in the form of a prohibition of imports of margarine and butter substitutes "unless coloured and branded as prescribed" and sugar producers received a bounty on cane grown and harvested by white labour from 1902. New forms of assistance to particular agricultural producers came in every succeeding decade. From the 1920s Australian farmers sought increased assistance to offset the high levels of assistance given to manufacturers of import-competing products from the Australian Tariff.

In this paper we seek to quantify the levels of assistance received by agricultural producers of the major crops and products in Australia and the average for the whole sector from the time of Federation, and then to compare this with the level of assistance provided to the Manufacturing sector.

There are no existing quantitative measures of the assistance levels for any of the major agricultural crops and products in the period prior to the end of World War II.[1] Stuart Harris (1964) was the first to provide quantitative measures of the assistance levels for major agricultural crops and products in Australia. His series covers the period 1946-47 to 1962-63 and relates to what is nowadays called the nominal rate of assistance.[2] Harris's series were extended by the Bureau of Agricultural Economics to 1970-71 (published in Lloyd, 1973, pp. 149-58). Anderson, Lloyd and MacLaren (2007) reworked and extended the series further forward to 2004-05, and the World Bank has carried it to 2009-10 (World Bank, 2012). Anderson, Lloyd and MacLaren also constructed a series of the "relative rate of assistance", that is, the average rate of assistance received each year by agricultural producers relative to the average received by other sector producers for the period 1946-47 to 2004-05.

In this paper, we extend these post-World War II series for agricultural producers backwards to 1903. Specifically, we first construct series of the nominal rate of assistance to producers of the major agricultural crops and products for each year in the period 1903 to 1945-46. From these, we then construct a series of the production-weighted average nominal rate of assistance for the whole sector. Finally, we construct a series of the relative rate of assistance for the period. The definition of

terms and statistical measures are the same as those used in Anderson, Lloyd and MacLaren (2007). Our estimates for the period 1903 to 1945-46 are linked to those in that paper. This gives us consistent time series beginning in 1903, a period of 100 years. These data reveal the extent to which there has been an anti-agriculture sector bias in the pattern of industry assistance from the Commonwealth Government.

As background, in Section 2 we review the major agricultural commodities exported and imported by Australia in the pre-World War II period, and the list of commodities for which estimates of nominal rates of assistance will be provided. In Section 3 we review the major measures that were used to assist both export and import-competing agricultural producers in this period. We then report the measurement of assistance to commodities from six measures: bounties, export bounties, relief assistance, tariffs and the plans relating to the dairying and the wheat industries. Next we report the series of nominal rates of assistance over the pre-World War II period for individual commodities and the sector average. In Section 4 the average levels of assistance to the Agriculture Sector from Section 3 are linked to the 63-year series of the average levels of assistance for the post-World War II period reported in Anderson, Lloyd and MacLaren (2007). These rates of assistance for the Agriculture sector are then compared with measures for the Manufacturing sector to provide the relative rates of assistance. Arguments about sectoral bias that have been advanced by farmers and agricultural economists and the advocacy of increased assistance to the sector in the form of "overall protection" and "tariff compensation" are reviewed in Section 5. There is a brief conclusion in Section 6.

2. The Agriculture sector

The size of the Agriculture sector (including forestry and fisheries) was roughly comparable with that of the Manufacturing sector, in terms of its contribution to both GDP and civilian employment, up to the outbreak of World War II. Anderson, Lloyd and MacLaren (2007, Table 1) provide series for the contribution to GDP, and the Economic Society of Australia (2012, month of February) provides a series for civilian employment by sector. However, the Services sector has provided close to or more than 50 per cent of both output and employment from the time of Federation. The Agriculture sector's share of both employment and output has declined steadily since the beginning of Federation.

The Agriculture sector's share of international trade is of more direct interest to us. This sector was (and still is) primarily a producer of exported commodities rather than imported commodities. Figure 1 provides a graph of the share of the major agricultural commodities in the value of total agricultural exports for the period 1903 to 1937-38.

FIGURE 1

Several features of the distribution of agricultural exports stand out. Wool dominates agricultural exports throughout the whole period, its share being more than 50 per cent in most years. Grains is the second most important product group, adding another 10-20 per cent in all years. Wool and grains are broadacre temperate products. Meat and dairy are the next most important export product groups. There has been a progressive diversification of both farm exports and farm imports since Federation as new products have been introduced to Australia. Sugar becomes a major export from the early 1920s and the catch-all "Other products" becomes progressively more important. Conversely, a few products which were major items of production and export in the early days after Federation have become unimportant, namely, tallow and also hides and skins.

Imports of agricultural commodities were much less important as a share of total merchandise imports. Throughout this pre-World War II period, they accounted for less than 20 per cent of total merchandise imports and in most years they were less than 10 per cent. Consequently many more of the commodities in our commodity list are exported rather than imported. There were, however, substantial imports by value of some agricultural products, for example, tea, tobacco, copra, rice, raw cotton and wine.

Following Anderson, Lloyd and MacLaren (2007), we divide agricultural commodities into three categories – exportables, import-competing and non-tradables. There are, however, several difficulties in partitioning the set of all agricultural commodities produced into these three sub-sets or categories.

The first difficulty is that for nearly all agricultural product groups, there are simultaneous exports and imports of different products within a group. For example, from the mid-1920s Australia was a substantial exporter of cane sugar and a net

exporter of sugar and sugar products but it remained a substantial importer of processed sugar products such as golden syrup and molasses in the pre-World War II period. Today we call this intra-industry trade. For our purposes, we select the main product traded in a group. In the case of the sugar and sugar product group, this is cane sugar, an exportable. In the case of cotton it is raw cotton, and in the case of tobacco it is unmanufactured tobacco.

The second related difficulty is that products as defined in the previous paragraph were imported in some period but became exported in a later period as new products and new technologies of production were introduced. Cane sugar was initially imported before it become an export good. Similarly, rice was imported for more than two decades but by the 1930s had become a substantial export, and dried vine fruits, which were initially a large net import item, had become a large net export item by the 1920s. These three goods are classified as exportable for the whole period. Tobacco – unmanufactured tobacco as distinct from the manufactured products such as cigars and cigarettes – was initially exported but it had become an imported commodity by the outbreak of World War I. It is classified as an importable. This export/import switching problem also applies to the longer 100 year period. Cotton was imported throughout the pre-World War II period, despite attempts to establish a cotton export industry soon after Federation. Imports continued until the late 1960s when large scale wetland cotton farming began, initially in the Namoi region of NSW.

A third related difficulty is that, in some periods, a product which is actually exported is protected from import competition on the home market. The outstanding examples in the pre-World War II period are sugar and processed dairy products (butter and cheese). Unprocessed food products such as apples, oranges and potatoes are net exports in some years and net imports in others because of fluctuations in Australian annual outputs.

The list of agricultural crops and products covered in the pre-World War II period comprises 20 commodities. 14 of these are exportables and 6 are importables (see the lists in Tables 1 and 2.) The classification as exportables or importables is determined, in the case of those commodities which switch at some time from being a net exportable to a net importable or vice versa, on the basis of aggregate net

exports/imports over the whole period. Of course this status as net export or import good in the actual trade data is affected by the level of assistance to these goods.[3]

Our list is a modification of the list in Anderson, Lloyd and MacLaren (2007). Some inclusions and exclusions are arbitrary. Conventionally, butter and cheese have been regarded as farm products although they are processed in off-farm factories. By comparison, wine is conventionally regarded as a non-agricultural product, even though wines, like butter and cheese, are produced in rural areas and, especially in the pre-World War II period, were mostly processed on the premises where the grapes were grown. Butter and cheese (Dairy products) are included and Wine is omitted from the product list, as they were in Anderson, Lloyd and MacLaren (2007). Products such as Sorghum, Rapeseed (canola), Sunflower, Oilseeds, Olives and Soybean, which were included in the Anderson, Lloyd and MacLaren (2007) product list for the post-World War II period, are not covered by this table as the products were not produced in Australia on a significant scale and were little traded before World War II. The one non-tradeable commodity covered in the post-World War II period, Eggs, had to be combined with Poultry because of the absence of value of production data for eggs separately in the earlier period.

For each selected commodity, we define the nominal rate of assistance as the percentage deviation of the (average) price received by Australian producers from the world price. For exportable commodities, this involves a direct comparison of the home price and the world price. If an "exportable" is imported or threatened with imports during some period, assistance to an "exportable" is defined as the rate of assistance from tariffs and any other import-restricting measure that applied, if any. For importables, it involves a calculation of the average of the General (= MFN) rate and the British Preferential specific rate and any other preferential rates and then conversion to an ad valorem equivalent rate plus assistance from any other measure.

With respect to the period coverage, our series covers the period of World War I and that of World War II. In World War I, prices were fixed for a large number of farm commodities. Shipping to the UK, the major market for most agricultural exports, was severely dislocated but production was not controlled. A special effort was made to increase wheat production. World War II disrupted goods trade flows to a much

greater extent than had World War I (see Crawford *et al*., 1954). Shipping to the UK, the major market for most agricultural exports at that time, was very severely dislocated. Farm capital was run down, farm labour was very short in supply and supplies of materials such as fertilizers and fencing wire were very limited. There was a substantial reduction in the areas devoted to principal crops. Prices of major agricultural commodities in Australian markets were again controlled (see Commonwealth Bureau of Census and Statistics, 1945). Exports of food and wool were directed to the United Kingdom.[4] (For information on the marketing and regulation arrangements during World War II, see Crawford *et al*., 1954, pp. 81-83 and the Commonwealth Yearbook 1944-45, p. 961)

Given the extent of restrictions on supply and market regulation and the absence of free market prices on world markets, the rates of assistance in the war years are not strictly comparable to those of the non-war years. Undoubtedly the most serious long-term consequence of World War II for assistance policy in Australia generally was the introduction of import licensing in 1939. This was continued after the war and provided a strong encouragement to the production of more manufactures until it was ended in 1962.

3. Assistance to agricultural producers in the pre-World War II period

Accounts of assistance to agricultural producers in the period before World War II are scattered and incomplete compared with those available for the post-World War II period. Crawford *et al*. (1954) provides a detailed account of the sector in the years of World War II. Copland and Janes (1938) is a useful source of documents for the period 1932-37. Rural Reconstruction Commission (1946) contains much information and trade data series for the period of the Second World War and also the decades of the 1920s and 1930s . We have found no account of assistance in the first two decades of Federation.

In fact, measures to assist some Australian farmers came in with Federation. Butter producers received protection from imports in the form of a prohibition of imports of margarine and butter substitutes “unless coloured and branded as prescribed” from 1901. As a concession to Queensland to join the Federation, the Commonwealth paid a bounty in 1902 on sugar cane grown and harvested with European labour, as the

cheap Melanesian labour ("kanakas") were mostly repatriated after Federation under the White Australia policy. This measure lasted until 1914. The Bounties Act 1907 offered bounties for the production of primary products which were currently imported and not produced or produced on a small scale in Australia: vegetable fibres such as flax and jute, rice, rubber, coffee, tobacco leaf, cotton, and some dried fruit. It also provided the first export subsidy (called officially an "export bounty") on combed wool and wool tops. This Act was part of the "new protection" policy of that year and it was accompanied by similar infant industry subsidies to new manufactures under the Manufacturer's Encouragement Act 1908. The rates of subsidy for agricultural products under the Bounties Act 1907 were low, mostly at the rate of 10 per cent (of "market value"), the subsidy payments were small and irregular and lasted for only 12 years. These bounties were discontinued in 1918.

New measures to assist some Australian farmers were introduced in the 1920s. To encourage further sugar production, in 1920 the Commonwealth raised the domestic price of sugar by 50 per cent, to a level well above the world price. To prevent imports, it instituted in 1923 a prohibition on sugar imports that lasted until 1988. In the early 1920s, as farm prices fell and soldier settlers got into difficulties, home price schemes operated over some periods by some State Governments for products such as dried vine fruits, canned fruit and butter. The 1926 Paterson Scheme introduced a Commonwealth home consumption price scheme for butter. (The scheme was intended to cover cheese but there was insufficient industry cooperation to make it operational.) It imposed a (voluntary) levy on the production of all factory butter of 1 1/2d per lb which financed a subsidy on exports of 3d per lb, later raised to 4 1/2d per lb. The scheme ceased in May 1934, after it was declared invalid by a decision of the High Court. The Paterson Plan provided a Commonwealth prototype for home consumption price schemes which was later followed in wheat and other markets in the post-World War II period.

In 1922-23, subsidies were introduced on major farm inputs, chiefly fertilisers and tractors, to assist farmers. These subsidies, raised the value added in farm production rather than the prices received by farmers for their outputs and as such are not included in measures of nominal assistance to the Agriculture sector. The Commonwealth endeavoured to assist export industries by legislating for the

establishment of a number of export control boards: dried vine fruits in 1924, canned fruits in 1926 and wine in 1929. Their main functions, however, were to regulate overseas marketing and to maintain minimum product quality standards.

Further new measures to assist some Australian farmers were introduced in the 1930s. Prices slumped in the Depression years; during the 1930s agricultural prices averaged 33 per cent less than the average for the five years ending 1927-28 (Crawford, 1954, p. 17). Prices for wheat were particularly badly hit[5] and the Commonwealth Government held a Royal Commission on the wheat industry. From 1931-32 relief assistance was granted by the Commonwealth government to wheat growers, dairy farmers, fruit growers and some other rural producers. Drought relief was given by the Commonwealth government to wheat growers in the War years 1940-41 and 1941-42 and grants were made to the States to be passed on to farmers for drought relief. The leaf content plan for tobacco growers was introduced in 1936.[6] Legislation for a wheat stabilisation scheme was introduced in 1938 but war intervened and the scheme did not operate until 1948. The State Governments also introduced new measures but these are outside the scope of this study.

A number of producer groups which produced importable commodities were protected by tariffs from the time of Federation. These included producers of products such as tobacco, maize, dried vine fruits, bacon and ham, and pork, the first two of which remained net import goods throughout the pre-World War II period. Some goods which were exported also received significant tariff protection; for example, butter and cheese. All of the duties levied on imported agricultural products were specific and the rates of duty in ad valorem equivalent terms were sometimes high.[7]

Some import-competing agricultural products received substantial implicit protection from the quarantine regulations. These are a type of prohibition conditional on events such as an outbreak of plant disease in the exporting country or the threat of these events. The New Zealand historian Keith Sinclair gives a graphic account from the New Zealand point of view of the Australian quarantine restrictions on imports from New Zealand of fruit such as apples and citrus and plants such as potatoes and hops in the 1920s and 1930 (Sinclair, 1988).[8]

Our coverage of assistance to agricultural producers in the pre-World War II period is as broad in terms of the instruments covered as we could make it; it includes bounties, export bounties, relief assistance, tariffs, the dairy industry arrangements (the Paterson Plan and the relief payments during the 1930s and price equalization scheme) and the wheat industry arrangements (the relief payments during the 1930s and the price equalization scheme that operated from 1939). We cover all of the major Commonwealth measures except those involving quantitative restriction on trade; the tobacco content plan, the colouring of butter substitutes and, most importantly, the sugar import ban.[9] Bounties on minor agricultural products are also omitted, as are some other financial assistance to agricultural producers through the Commonwealth bearing the losses on various pools for fruit products and guaranteeing the advances to export boards, again mostly for fruits, under the Export Guarantee Act 1924 (see Rural Reconstruction Commission, 1946, Appendix 2).

Under the Australian constitution, the peacetime powers of the Commonwealth government in relation to rural affairs are limited by section 51 to matters associated with external trade and the payment of bounties on production and exports and to financial assistance. (For contemporary discussions of the constitutional problems facing the Commonwealth in its attempts to regulate the Agriculture sector, see Copland and Janes, 1938, chapter II and Rural Reconstruction Commission, 1946, Chapter I.) Some State Governments, most notably Queensland, were more active during the pre-World War II period in assisting Agriculture than Manufacturing production. They pioneered some of the methods of intervention in agricultural markets; for example, the State Governments of Queensland and New South Wales introduced a home consumption price scheme for dairy products in the 1920s.[10]

A general feature of the pattern of assistance to agricultural producers in Australia is the complexity of some of the schemes. For some products, the prices received varied greatly among Australian farmers, differing between home and export markets and among states. In industries such as butter, home price schemes, which raised home prices above export and import parity prices, required regulations to prevent import competition. Bounties and tariff rates were all specific with only a couple of exceptions. Hence, ad valorem rates must be calculated for all the covered measures.

As a generalisation, the schemes that operated to assist agricultural producers were much more complex than the Australian Tariff for import-competing manufacturers.

Bounties

To begin the quantitative analysis, we report the output-based subsidies paid to agricultural producers during the pre-World War II period in Appendix Table 1. Most of the agricultural goods subject to bounties were minor products. The bounties paid under the Bounties Act 1907 for primary products which were not produced or produced on a small scale in Australia were mostly ad valorem rates at 10 or 20 per cent. All later bounties are specific rates. Each bounty scheme lasted only a few years, with the exception of bounties on cotton which were paid in 19 of the 46 years.[11] Thus only two major agricultural products received substantial assistance by means of bounties - sugar and cotton. Both of these products were produced solely in the state of Queensland during the period.

To be comparable with tariff rates on both agricultural and non-agricultural products, bounty payments need to be converted to ad valorem rates. For the two products subject to bounties and included on our list – cotton and sugar– these ad valorem rates are reported in Appendix Table 2. For each of these commodities, they were calculated by dividing in each year the value of bounty payments by the value of production and multiplying by 100.

For each of these products, there is considerable year-to-year variability in the ad valorem bounty rates. This occurs because of frequent legislated changes in the specific rates and in some years limits on the quantities subject to bounties or on the total payments, both of which affect the numerator of the ad valorem rates, and variation in the prices and quantities produced, which affect the denominator. As an example of the complexity of the bounty arrangements, the Raw Cotton Bounty Act 1934 increased the bounty rate substantially from the old rate of ½ penny (halfpenny) per lb for higher grade cotton and ¼ penny (farthing) per lb for lower grade cotton to 5¼ penny per lb. This bounty was payable on cotton produced in Australia from Australian grown seed but the rate varied according to the Liverpool price of raw cotton and the bountiable quantity was limited to the requirements of Australia plus 20 per cent.

Tariffs

Next, in Appendix Table 3, we estimate the ad valorem equivalent tariff rates in the pre-World War II period for the major agricultural products that were imported and produced in Australia. Four of these commodities are classified as exportables – apples, butter and cheese, dried vine fruits. The ad valorem equivalent rates for each commodity were calculated at the tariff item level by dividing the average duty paid per unit of quantity in the year by the average unit value (price).

A notable feature of the entries in this table is the year-to-year variability in the columns for each product. This arises because all of the tariffs on these agricultural imports were specific rates. There are two sources of variability in these equivalent rates apart from occasional changes in the tariff rates themselves[12]. One is shifting between import sources that have different Preferential and non-Preferential tariff rates from year to year. This causes variability in the numerator of the equivalent rate. The second source is variability from year to year in the denominator, the unit values of the products.

The final column reports the (unweighted) average of the rates across all 44 years for each commodity. While the average for these commodities is substantial, it is less than the average tariff on all dutiable imports (Lloyd, 2008, Table 5, column 5) in all but three years. That is, these importable agricultural products received less tariff protection than manufactured goods that were both imported and produced in Australia.

The final row in Appendix Table 3 reports the unweighted average of the rates for all twelve commodities for each year. All of these importable commodities, apart from cotton, received substantial assistance through protective tariffs in this period. Bananas (50.1 per cent), Dried Vine Fruits (42.9 per cent) and Cheese (28.7 per cent), in that order, received the highest levels of protection. The average for all entries – all commodities in all years – is 22.9 per cent.

Excise

Although tobacco was one of the largest items of agricultural imports and was produced in Australia, tobacco grown in Australia was subject to excise taxation when it was used by manufacturers and most of the tariff rates on unmanufactured tobacco exceeded the excise rates. Hence, the protective tariff must be defined as the specific tariff duty less the specific excise duty on the corresponding item, expressed in ad valorem terms by dividing the net duty by the unit value of the product. Appendix Table 4 provides estimates of these protective rates in ad valorem terms. From the time tariff and excise duties were introduced in 1901 until 1919-20, this tariff/excise system gave high rates of protection to growers of tobacco.[13] (The tariff/excise system also gave protection from 1903 to Australian manufacturers of cigarettes, cigars and other manufactured tobacco products.)

From 1919-20 to 1934-35, the implicit rates of protection were negative in all but two years. This arises because, with effect from 17 September 1920, the excise duty rate on the item was raised from 1s 8d to 2s 4d as a result of an urgent need to raise revenue but the tariff rates were not increased. Negative rates appear again in the World War II years as excise rates were hiked to increase revenue for war purposes. Negative rates are possible for the net protective margin but they imply that Australian tobacco sellers received a lower price than the price of imported supplies. For the later period, the negative rates might be explained by the tobacco content scheme which had come into operation in 1936. When the content plan was the binding constraint on imports, it allowed the tobacco growers to raise their prices above the duty-paid price of imports without losing market share. Given the unreliability of protection from the tariff-excise system, it is not surprising that tobacco growers sought a more reliable protection measure in the content plan. But for the earlier period, the large negative rates are doubtful. The most likely source of error in estimating the rates is the matching of items in the tariff and excise classifications. Therefore tobacco is dropped from the list of covered commodities the ad valorem rates for which are reported in later tables.

Export Bounties

The fourth measure covered in this section is export bounties. Appendix Table 5 lists all payments of export bounties in the period up to the end of World War II. This table includes the export bounty payments for fortified wine and for combed wool and wool tops, both of which are classified as manufactured goods although they too use products of the Agriculture sector. (In fact, export bounties paid to wine producers dwarf all of the export bounty payments to agricultural products.) The export bounties are converted into ad valorem rates of assistance by dividing the value of the export bounty payments by the value of exports of the commodity in the year concerned.

Dairy industry arrangements

The pre-World War II dairy industry arrangements began with the Paterson Plan for butter, which is covered by the fiscal years 1926- 27 to 1933-34. Domestic factory butter output was subject to a levy the proceeds of which were expended on an export subsidy for butter. The rates of levy and/or bounty were changed eight times over the life of the scheme. (Rural Reconstruction Commission, 1946, p. 168 provides a table of the levy and the export subsidy rates.) The levy was voluntary as it was believed the Commonwealth lacked the powers under the constitution to tax production. The production levy-export bounty combination had the effect of maintaining the domestic price at a level equal to the export price plus the export subsidy. The increase in the average price due to the levy-bounty scheme is approximately the difference between the rate of bounty paid on exports and the rate of levy charged on domestic sales. However, under the Plan, it was necessary to protect the butter sales on the Australian market at higher prices from increased imports. The General tariff rate on butter was raised at the time of the introduction of the Plan from 3d to 6d and then 7d per lb and the Preferential tariff on imports of butter from New Zealand, the dominant supplier before the Plan, was raised from 2d to 6d per lb; as Shann (1948, p. 445) expressed it, "lest greedy New Zealanders should seek to make profit out of the improved Australian market." Imports from New Zealand, which had been running at a level of around 7 million lbs per year before the Plan, ceased from 1928-29. This tariff permitted an increase in the average price greater than the difference between the bounty and the levy. Giblin (1934) concluded that "For rough purposes, we may say without qualification that the home price raises the price of butter by 6d per lb." This

compares with an increase of 3.4d due to the export bounty during the life of the Plan. The tariff was in fact the binding constraint on the ability of butter producers to raise prices on the domestic market. Consequently, we take the increase in the average price during this period to be 6d less the levy paid each year, an average of 1.6d during the life of the Plan, yielding an average net increase of 4.4d. The difference for each year is converted into an ad valorem rate of assistance by dividing by the export unit price.

The Plan was superseded by a price equalization scheme which equalised the price to the manufacturers of the prices on the domestic market and the lower price on the export markets. This scheme covered cheese as well as butter from 1934-35 until after the end of World War II. This scheme also permitted price discrimination. There was no subsidy on exports. For the years of the price equalization scheme, the rate of assistance is taken to be the difference between the overall return on all sales and the average price realised on export sales, expressed as a percentage of the average export price. The rates of assistance to the dairy industry during the Paterson Plan and price equalization periods are reported in Appendix Table 6.

Wheat industry arrangements

The pre-World War II assistance to the wheat industry began with relief payment to the industry over the period of the Great Depression. This assistance lasted from 1931-32 till after the end of World war II. (The various Acts providing relief, payment of bounties and the flour tax are conveniently collected in Copland and Janes, 1938, pp. 296-305.) The payments were made in the first two years on the basis of acreage planted but, from 1934-35, the bounty payments were in the form of a bounty of 3d per bushel. The bounty payments were financed by a tax on the domestic consumption of flour, as recommended by the Royal Commission on the wheat industry, which varied inversely with the price of flour. However, 85 per cent of relief assistance was financial assistance and drought relief. Consequently, these relief payments are treated as an output subsidy. After the outbreak of war, the Wheat Board was formed and assistance continued to be granted to the industry under a price equalization scheme. In its outline of the history of wheat industry stabilization in Australia, the Rural Reconstruction Commission noted “For the past fifteen years the wheat industry has been the chief problem-child of Australian agriculture.” (Rural

Reconstruction Commission, 1946, Appendix 3) Relief assistance to the wheat industry is reported in Appendix Table 7.

Aggregation

The next step is to combine all five covered forms of assistance into a single measure for each commodity of the percentage deviation of the Australian producer price from the world price. In most cases an assisted commodity is subject to assistance from only one covered measure. However, in the list of importables, cotton and tobacco are subject to tariffs and to bounties in some years. Ad valorem equivalent rates of bounties and tariffs are additive and are therefore combined for cotton (but not for tobacco as there are no value of production data from which to calculate the ad valorem equivalents). For the exportables butter and cheese, the earlier period when tariffs were the form of assistance is linked to the period when the industry assisted in some years by home price schemes and by relief assistance.[14]

Tables 1 and 2 report the nominal rates of assistance for the exportable and the importable commodities respectively. The row average is the production-weighted average for the year (measured at unassisted value) and the column average is the unweighted average across all years for the commodity. Figure 2 graphs the averages for the groups of exportables and importables and the weighted average for all covered commodities. The weights used in Tables 1 and 2 and Figure 2 are current period weights for the years from 1925-26. This was the earliest year for which value of production statistics are available for all commodities covered. Statistics for the current value of production for some of the commodities are not available, however, for the years from 1903-4 to 1924-25 and we have used the average weights for the first three years of current period weights, 1925-26 to 1927-28 for all commodities.[15]

TABLE 1

TABLE 2

FIGURE 2

In the table for the exportables, wool, the largest export commodity by far, was unassisted throughout the pre-World War II period. As Copland and Janes (1938, p. xviii) observed, “The wool industry of Australia remains the one great opponent to

government interference." Similarly, producers of sheepmeat, barley, oats and rice received no direct assistance from the Commonwealth throughout the period. Beef received a small amount of assistance in two years only when an export bounty applied. Wheat received no Commonwealth assistance until the Great Depression devastated the industry and the assistance it received thereafter averaged less than 10 per cent in ad valorem terms. Sugar received substantial assistance only in the 12 year period of subsidies after Federation (but this does not include the benefits of the ban on sugar imports from 1923). Applegrowers were lightly assisted, the average over the 42-year period being less than 10 per cent (but this does not include the benefits of the ban on imports of apples from New Zealand under quarantine regulations that began in 1921).

Only five of the 14 exportable commodities received an average of more than 10 per cent over the whole period; in descending order of the commodity average for the whole period, these were dried vine fruits (44 per cent), cheese (26 per cent), butter (25 per cent), bacon and ham (19 per cent) and pork (16 per cent). Butter and cheese are the most important commodities in this group. Before the Paterson Plan, assistance to butter producers came from tariffs on imports, almost all from New Zealand. When the Paterson Plan came in the rate of assistance roughly trebled. It then fell sharply when the price equalization scheme replaced the Plan.

For the exportable commodities as a group, the average is just below 5 per cent for the whole period. This is partly due to a majority of the commodities receiving no or very little assistance over the period and partly to the larger weight of this group, especially wool. The average level of assistance for all exportable commodities was remarkably stable, fluctuating around 5 per cent with no significant trend.

In the table for the importables, all commodities receive more than 10 per cent on average over the whole period. The average for all importables over all years is just over 20 per cent, that is, four times the average for exportables. Most of this comes from tariff assistance. Although the tariff rates were specific duties which give rise to variable ad valorem equivalent rates, they were a more reliable source of assistance than bounties and industry-specific plans which tended to be switched on and off.

Looking at the time series, for the first twenty years of Federation, Australian farm products were unassisted or very lightly assisted with the exception of sugar. Bounties and tariffs to assist agricultural producers were not increased substantially during the Great Depression (see Appendix Tables 2 and 3). In this respect the treatment of the Agriculture sector was very different than that of Manufacturing sector as many of their tariff rates were increased substantially in the early 1930s. However, very substantial payments were made to some agricultural producers, chiefly wheat growers and the dairy industry, in the form of relief payments from 1931-32 up to 1944-45 (and in the three years after the end of World War II). After the Great Depression some new measures to assist agricultural producers were introduced. Tobacco growers received high levels of protection from the content plan which operated from 1936 to 1995.

4. The long-term 105 year series and the Relative Rate of Assistance

The average levels of assistance to the Agriculture sector for the period until the end of World War II from Section 3 can be linked to the series of the average levels of assistance for the post-World War II period reported in Anderson, Lloyd and MacLaren (2007), to give a 100-year series. The Anderson-Lloyd-MacLaren study of the post-Second World War II period covers 25 commodities. The annual weights in the long-term series are current period weights (as in Anderson, Lloyd and MacLaren (2007)) for the years from 1925-26. For the years from 1903-04 to 1924-25 the weights are the average values for the first three years of the period from 1925-26, the earliest years for which current period weights are available for all covered commodities.

This linking provides a consistent series. The sub-series for agricultural assistance before the end of World War II covers most of the measures assisting the sector in this period, with the major exception of quantitative import measures applying to butter, sugar and tobacco. This leads to an understatement of the average assistance to the Agriculture sector. However, the weight attached to these commodities assisted by quantitative measures is much smaller than that for wool, wheat, beef and lamb so that the extent of the understatement is small. Similarly, the Anderson, Lloyd and MacLaren (2007) for the post-World War II period covers all major Commonwealth

measures other than quantitative restrictions in the years they were applied. Again these apply to a small share of agricultural output and the understatement is small.

Table 3 reports the series for the average level of assistance to agricultural producers for the period up to the end of World War II and Figure 3 graphs it for the 100-year period.[16] The series is fairly constant throughout the period up to the end of World War II. There is a sharp negative spike at the beginning of the post-World War II period. In the 1960s and 1970s the average levels of assistance rose to the peak levels for the 100 years. New measures were introduced, including more home consumption price schemes. (For discussions of these regulatory arrangements, see Sieper (1982 and Mauldon 1990.) By the end of the 1970s assistance averaged 17 per cent for all covered commodities. A feature of agricultural assistance at that time was that it applied to export industries – notably wheat, dairy products, sugar and dried vine fruits – almost as much as to the import-competing commodities (see Anderson, Lloyd and MacLaren, 2007). This was very different from the pre-World War II pattern where most agricultural exportable commodities received zero or very low levels of assistance. After 1970 the levels of assistance declined in an irregular path as agricultural assistance programmes were reformed.

TABLE 3

The sharp negative spike at the beginning of the post-World War II period is due to the negative rates for the exported products wheat, barley, rice and sugar in the years 1946-47 to 1951-52. (See the Bureau of Agricultural Economics figures reported in Lloyd (1973, Table 10.3) and also Harris (1964, Tables II and III).) In these years the payouts to producers of these products were less than the prevailing export prices.

These rates for the Agriculture sector need to be compared with measures for the Manufacturing sector to provide the relative rates of assistance. Anderson, Lloyd and MacLaren (2007) used an index of the Relative Rate of Assistance (*RRA*) that was used in the World Bank study of agricultural incentives of which their Australian country study was part. It is an index that compares the average (nominal) rate for two sectors the outputs of which are tradable. Suppose the sectors are Agriculture and Non-Agriculture and let the measured average nominal rates of assistance to these two sectors, expressed as a percentage, be $NRAag^t$ and $NRAnonag^t$ respectively in period t.

With assistance, the relative price of the outputs of the two sectors is now $(1+NRAag^t)/(1+NRAnonag^t)$. The Relative Rate of Assistance is defined as:

$$RRA = [(1+NRAag^t/100)/(1+NRAnonag^t/100) - 1]100 \quad (1)$$

This measures the distortion of the relative price of the outputs of these sectors away from the free trade ratio (of unity) that results from the assistance regime. If *RRA* is negative, it indicates the extent to which the assistance regime has an anti-agricultural bias, and conversely if RRA is positive, it measures the bias in favour of the sector.[17]

Historically, the main debate concerning protection of Australian producers has been over the protection of import-competing manufacturers and its effect on farmers, especially those competing in exposed export markets. We calculate the Relative Rate of Assistance for the Agriculture sector relative to the import-competing Manufacturing sector.[18] In the numerator of the *RRA* is the series reported in Table 3. In the denominator we use a modification of the series from Lloyd (2008). His is the only series available for the entire 100 years on a consistent basis. We use his series of the average tariff rate on dutiable imports only as this is comparable to the series for agricultural commodities which are final produced goods. While this series does not include non-tariff measures, it does include anti-dumping and countervailing and Primage duties. However, for the period from 1968-69, we use the series of the average nominal rate of assistance to the Manufacturing sector, which has been compiled by the Tariff Board and its successor statutory bodies. The statutory body series includes a wider range of measures, including non-tariff measures. This procedure parallels the method used by Anderson, Lloyd and MacLaren (2007) in their construction of the RRA series for the post-Second World War II period. The modified series for the period until the end of World War II is reported in Table 4.

TABLE 4

Figure 3 graphs the series for assistance to the Agriculture and the Manufacturing series, and the Relative Rate of Assistance for the 100 years.

FIGURE 3

This graph shows clearly that the basic result of the Australian regime of assistance to industries has been to discriminate persistently against agricultural producers. This holds for every year in both the period up to the end of World War II and the post-

World War II period. The bias is particularly strong against producers of exportables, and most particularly producers of wool, beef, mutton and lamb, wheat and oats who received no or very low levels of assistance throughout the 100 year period. The only agricultural producers to receive levels of assistance as high as the average for the manufacturing sector for most of the 100 years were producers of butter and cheese, dried vine fruits and bananas.

There is some variation in the extent of discrimination over the years. It increased markedly during the years of the Great Depression when tariff rate hikes were not matched by a corresponding increase in assistance to producers of agricultural commodities. Discrimination again increased in the immediate post-World War II years, declined in the 1950s and the 1960s as assistance to manufacturers fell a little and some assistance to agricultural producers was increased, and increased again in the 1970s as assistance to manufacturers again increased.

We note again that both the series for Agriculture and for Manufacturing omit quantitative measures. This is a serious omission for a handful of agricultural commodities but it is a more serious omission for the whole Manufacturing sector for the period of comprehensive import licensing from 1939 to 1962. During this period import licensing was the binding constraint on imports of most manufactures. It is a serious omission too beyond the period of import licensing for the major manufacturing industries of passenger of Passenger Motor Vehicles and of Clothing Textile and Footwear which continued to receive most of their protection from quotas into the 1980s (Productivity Commission, 2003, Appendix E gives a brief history of assistance to these two industries). The overall effect of omitting quantitative restrictions on trade from both the Agriculture and the Manufacturing series is to understate the bias against Agriculture. This strengthens the conclusion that the pattern of assistance in the economy discriminated against the Agriculture sector.

5. Analysis of assistance to Agriculture relative to Manufacturing

In the decades of the 1910s and 1920s assistance was offered to producers of a small but increasing number of agricultural products. Observing higher tariffs for manufacturers under a system that came to be centred on the Tariff Board from 1921

and the protection of wages by the Arbitration Board, farmers argued that they too deserved income protection. (Shann, 1948, chapter 24 describes the evolution of rural protectionism.) A pro-agricultural assistance policy was pushed in parliament by the Country Party which had joined the Federal coalition in 1922. Its leader, Earle Page, coined the phrase "protection all round" (Graham, 1966, pp. 229-31).[19] In practice, the Country party argued mainly for a reduction in the very high tariff rates imposed by the Scullin Labor Government in 1931-32 to their levels in the 1920s and a reduction of all tariffs on goods not manufactured commercially in Australia, especially machinery and tools of trade. (See Page (1934) and Graziers' Association (1937).) At this stage, rural protectionism was based on the equity principle of a little something for everyone.

The Report of the Brigden Committee (1929) took on an economy-wide view of the issues. It reviewed assistance to agricultural producers as well as the tariff assistance to import-competing manufacturers. It regarded tariff assistance as a tax on exporters whose prices are fixed on world markets, who were almost entirely agricultural producers at that time.[20] The Brigden Committee calculated that the protection of manufactures had directly increased the cost of exporters by 9 per cent but they had received offsetting assistance to a little over only 1 per cent. The Committee considered a compensating subsidy on exports but regarded the tax resources required as severely limited. These inter-sectoral effects were again considered in the *Report of the Royal Commission on the Wheat, Flour and Bread Industries* (1934-35). By the end of the decade of the 1930s the assistance to wheat, which had been recommended by the Royal Commission, was being justified by the doctrine of "protection all round" .

This policy stance re-surfaced during the vigorous debate on tariff policy during the late 1960s and 1970s, the time of the Tariff Review conducted by the Tariff Board. In an unpublished but much-cited paper, Gruen (1968) restated the argument formally in terms of the Theory of the Second Best. For the first time the analysis was cast in terms of general equilibrium theory. This view led to a sharp debate about the desirability of a policy of "tariff compensation" for agricultural producers. Some agricultural economists supported increased assistance to agricultural producers on second-best grounds (for example, Harris, 1975) but other economists regarded this

policy as an undesirable or unworkable policy (especially Lloyd, 1975 and Warr, 1978). (For other references, see Edwards and Watson, 1975, pp. 203-208 and Lloyd, 1978, pp. 265-68). The important *Green Paper on Rural Policy* proposed tariff compensation assistance to rural export producers (Report of the Working Group on Rural Policy, 1974, pp. 41-5).

The policy debate about the level of assistance to agricultural producers relative to that received by import-competing manufacturers quietened after tariff rates on manufactures began to fall from the mid-1980s. It eventually ceased when the view became accepted by Australian Governments that assistance levels in both the Agricultural and Manufacturing sectors of the economy should be reduced.

The Australian industry assistance regime can also be examined from a political economy point of view. From the 1920s the interests of farmers and other producers of other land-based products were represented in the Australian polity by the Country Party. As noted above, the Country Party at that time pressed for a reduction in tariff rates. Later the policy of "protection all round" led to home price consumption schemes, subsidies and other interventions in markets for agricultural products.

In the post-World War II period, John McEwen became leader of the Country Party and Deputy Prime Minister in1958 in the Menzies Coalition (Liberal/Country Parties) Government. He was Minister for Commerce and for Trade for an uninterrupted period of 21 years. Unlike his predecessors in the pre-World War II period, he strongly defended assistance to import-competing manufacturers. Indeed, "By the late 1950s McEwen was the indisputable champion of the traditional Australian view that high protection of local industry was a principal tool of economic and social policy" (C. J. Lloyd (2000)). He fought fiercely with economists and senior public servants who sought to lower tariff protection, notably with Sir Leslie Melville, who resigned as Chairman of the Tariff Board after two years because of disagreements with Minister McEwen, and with his successor Alf Rattigan, the Chairman of the Tariff Board and later the Industries Assistance Commission at the time when the Tariff Board initiated the Tariff Review in the 1970s. McEwen sought to offset tariff assistance to import-competing producers by increased assistance to agricultural

producers through more schemes to stabilize export markets and home price consumption schemes.

Country Party leadership in rural assistance earned it considerable support in rural electorates. However, our series show that while the average level of assistance to agricultural producers did in fact increase in the 1950s and 1960s it continued to fall persistently below the average level of assistance to the Manufacturing sector. Producers of most individual major agricultural commodities also received less assistance than the Manufacturing sector with the exception of butter and cheese, dried vine fruits and bananas. "Protection all round" failed to protect the economic interests of agricultural producers.

6. Conclusion

From the time of Federation, the economy-wide pattern of industry assistance discriminated persistently and heavily in favour of the Manufacturing Sector. This severely depressed the relative prices of agricultural products and the relative income of agricultural producers compared with what would have prevailed under a free trade regime for both sectors. The effect was most severe for the exportable commodities. Efforts by the Country Party and Coalition governments to offset the effects of assistance to import-competing industries by providing assistance to specific agricultural producers failed to protect agricultural producers.

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[1] The sole estimate we have found is that by Alan Lloyd (1950, p.44) for assistance to butter producers over the period of the 5 years Paterson Plan. His estimate of the increase in farm incomes was £2,677,500 per annum.

[2] Harris produced a number of series but his series in terms of deviations from world prices accords with the modern perception of price distortions.

[3] The status of a net export could be reversed to one of being a net import good under a free trade regime. This might be the case for bananas and sugar and even butter.

[4] For wool, the UK Government agreed to purchase the whole of the Australian production for the duration of the War and one season thereafter. For wheat, the Commonwealth Government acquired all wheat held in Australia from September 1939 and established the Wheat Board. The Board fixed the price of wheat on Australian markets and negotiated sales of wheat and flour in the UK and other markets, and equalised the payout price across markets. For butter and cheese, the domestic prices were fixed and supplemented by a subsidy from 1942/43, and the export prices were those agreed with the UK under wartime bulk purchase agreements supplemented by an export subsidy. For sugar, the UK government contracted with the Queensland government to purchase all surplus Australian output and the prices were fixed on the Australian markets. Meat prices were controlled from February 1942.

[5] The Adelaide wheat price halved in the two years from 1929 to 1931, from over 400 shillings to less than 200 shillings per bushel (Commonwealth of Australia, 1935, Figure III).

[6] The minimum content was originally set at 2.5 per cent but it was increased several times, reaching 57 per cent in 1977.

[7] The sole ad valorem tariff for the products on our list was the New Zealand Preferential rate on pork of 10 per cent which was introduced in 1922 (see Appendix Table 3, column on "Pork").

[8] New Zealand also imposed quarantine restrictions on Australian exports of some plants and fruits during this period.

[9] From 1941, State Governments imposed quotas on Australian production of table margarine (Drane and Edwards, 1961, Table 96). As all six States imposed quotas, there was, in effect, a national quota

on the production of table margarine. This was a significant trade barrier because butter and table margarine had become close substitutes as the nutritional value and quality of table margarine steadily improved from the products made at the start of Federation from whale oil (see Rural Reconstruction Commission, 1946, para 2240) .

[10] There had been earlier short-lived home consumption price schemes operated by the Commonwealth for sugar and dried vine fruits (Rural Reconstruction Commission, 1946, pp. 163-75).

[11] The cotton bounty paid for the period 1907-08 to 1915-16 was a bounty on cotton ginned but the bounty paid over the later period1926-27 to 1945-46 was a bounty on raw cotton (before ginning). This was subject to a requirement that cotton yarn contain 50 per cent Australian cotton. There was also for a period a bounty paid to manufacturers downstream of cotton fabrics which used Australian-grown cotton. White (1934) gives an account of the different bounties applied to the cotton industry.

[12] The main changes in tariff rates were occasional changes in the legislated substantive rates but there were other rate changes too. On the downside, in a few entries there were large quantities of goods re-imported into Australia and subject to duty-free entry. On the upside, there were occasional extra duties due to anti-dumping action or high duties which were later rebated.

[13] Indeed, these protective rates are understated because of a peculiarity of the excise system as applied to unmanufactured tobacco. Protection was delivered by means of the tariff on imported unmanufactured tobacco being higher than the corresponding excise on manufactured tobacco which was made from locally grown leaf. But the excise item applied to both imported and locally grown leaf. Thus we have a strange case of an excise duty being levied on imports, in addition to the tariff levied on the same imports. This anomaly was partially corrected (but not eliminated) in 1932 when the rate of excise duty on the import content was lowered below the rate of excise on locally-grown leaf.

[14] In the tariff period assistance is related to the import parity price whereas in the period of the Paterson Plan and the equalization scheme it is related to the export parity price. The import parity price is consistently higher than the export parity price; Drane and Edwards (1961 , Figure 15) have a long-term series of the export and domestic prices. Consequently, the tariff rates for butter and cheese understate the average increase in the prices received by producers.

[15] For some commodities and for some years, the value of production data are not given in the Commonwealth Yearbooks. Where these data are missing, quantity data were multiplied unit import or unit export values for importables and exportables, respectively, as an estimate of the missing values.

[16] We have adjusted upward the nominal rate of assistance to the agriculture sector for the three years 1946-47, 197-48 and 1948-49 by adding in the relief assistance paid in these years to the dairy industry and wheatgrowers. This assistance was substantial but it was omitted from the series in Anderson, Lloyd and Maclaren (2007).

[17] For example, if $NRAag^t$ and $NRAnonag^t$ are 10 per cent and 20 per cent respectively, *RRA* is -8.3 per cent (= [(1.1/1.2)-1]100).

[18] In Anderson, Lloyd and MacLaren (2007), the Non-Agriculture tradables sector is taken to be all tradables other than Agriculture; that is, Forestry and Fishing, and Mining as well as Manufacturing.

[19] Page was Deputy Prime Minister to Prime Minister Bruce for the period 1923-29.

[20] "We may say, therefore, that the cost of tariff protection, falling ultimately on the export primary industries, falls chiefly on the owners of land, as such." (Report of the Brigden Committee,1929, p. 90). Today we express this insight in terms of the Lerner Symmetry Theorem.

Figure 1. Commodity Composition of Agricultural Commodity Exports, Australia, 1901-02 to 1937-38

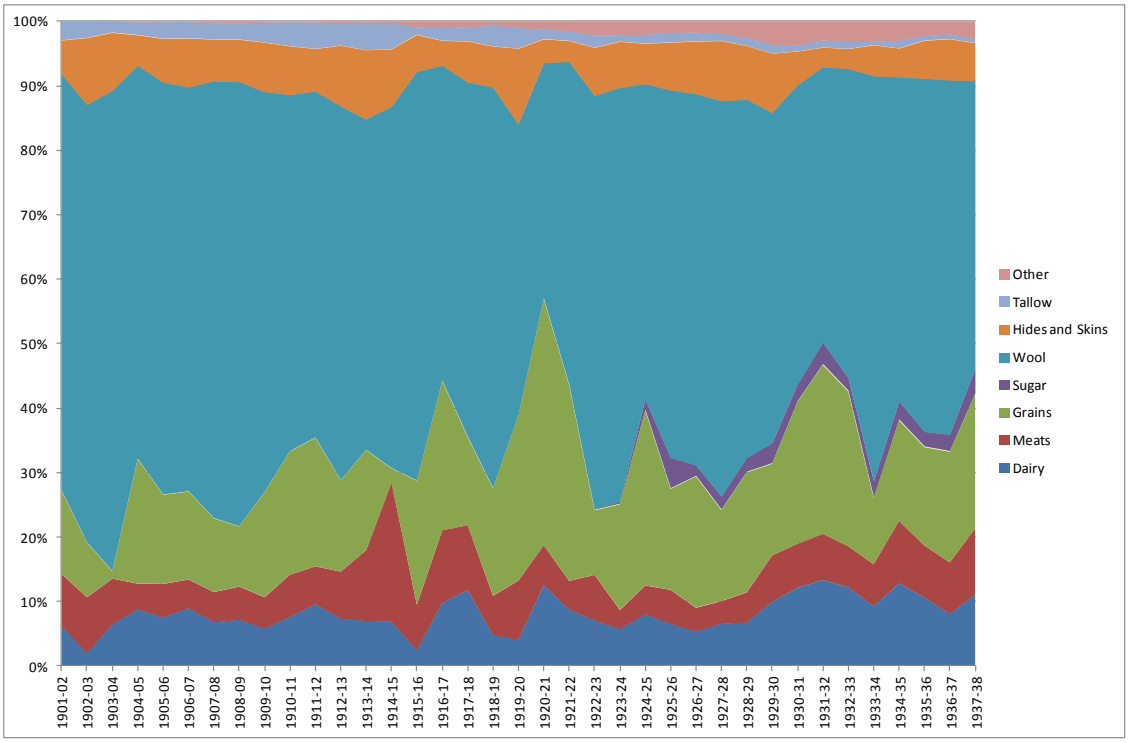

Figure 2. Nominal Rates of Assistance to Agriculture, Australia, 1903-04 to 1945-46

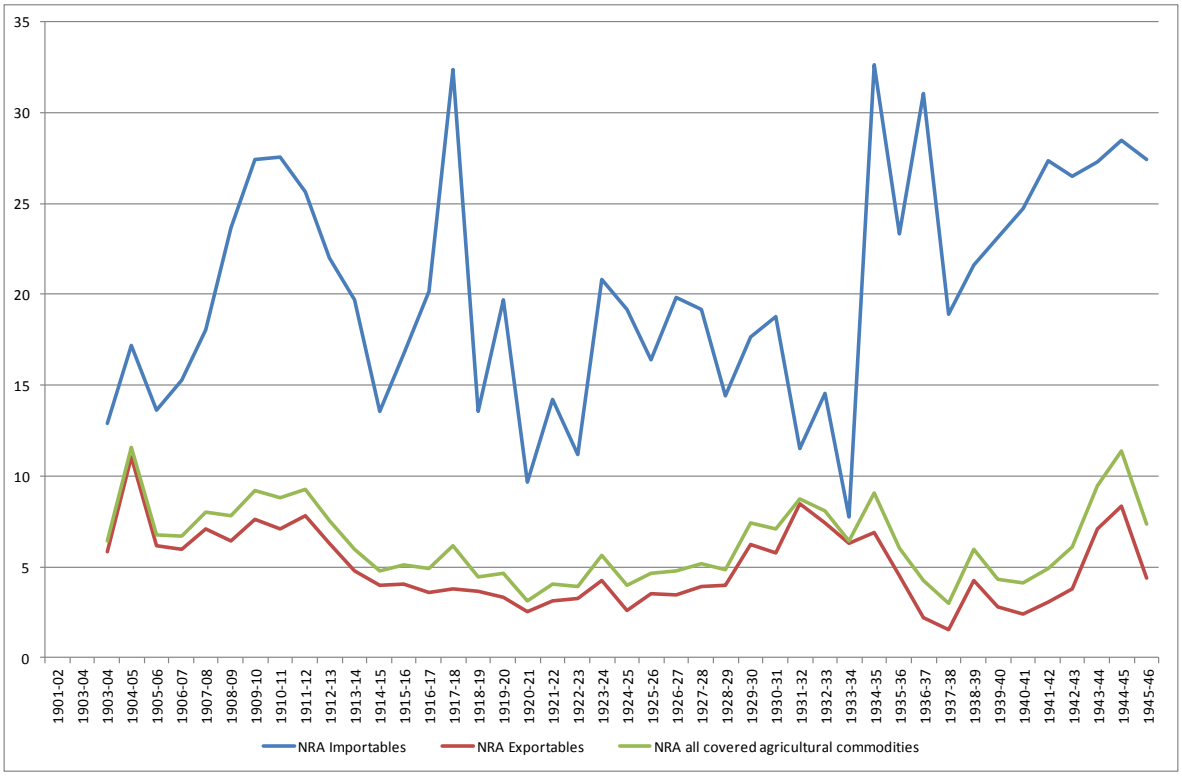

Figure 3: Nominal Rates of Assistance to Agriculture and Manufacturing, Australia, 1903-04 to 2004-05

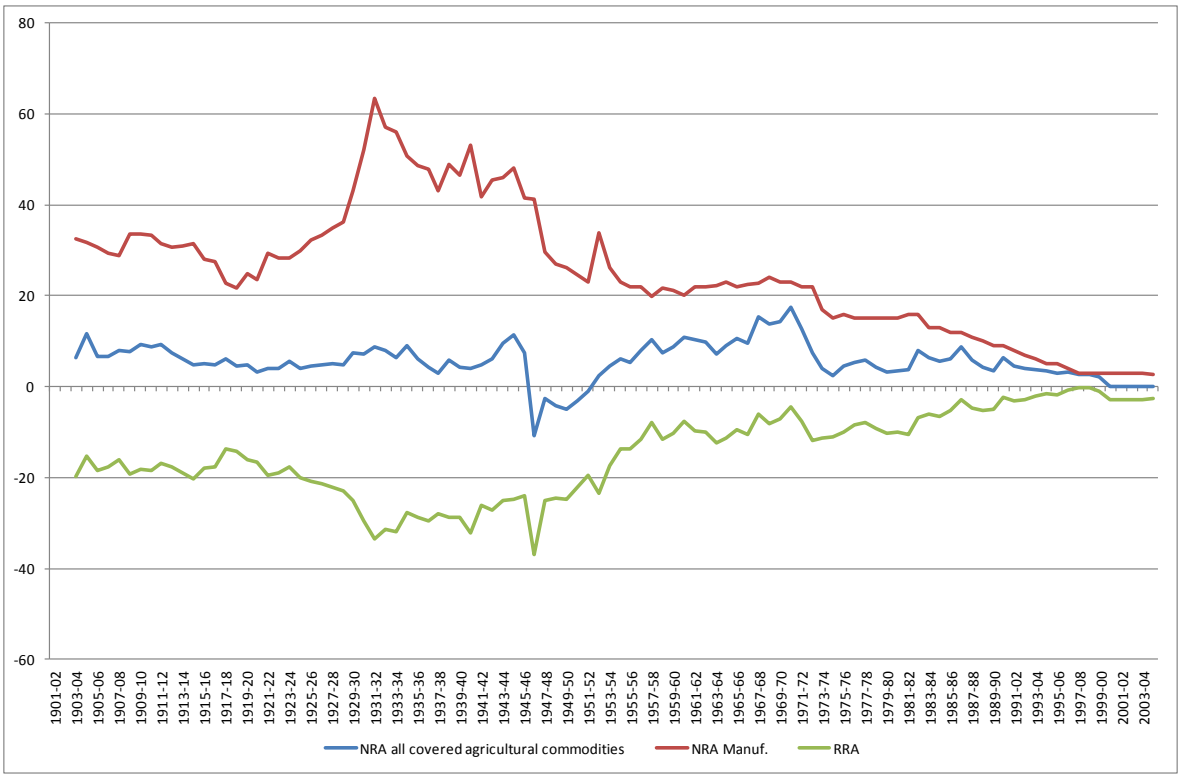

Table 1. Nominal Rates of Assistance to Exported Agricultural Commodities, Australia, 1903-04 to 1945-46

Year	Apples	Bacon & Ham	Barley	Beef	Butter	Cheese	Dried Vine Fruit	Oats
1903-04	13.8	32.8	0	0	20.9	41.7	93.6	0
1904-05	7.7	38.2	0	0	73.2	38.9	129.8	0
1905-06	12.9	44.6	0	0	27.9	41.7	60.4	0
1906-07	11.8	33.8	0	0	28.0	33.0	68.1	0
1907-08	9.5	31.2	0	0	28.7	30.2	106.5	0
1908-09	9.1	34.2	0	0	21.6	34.7	85.3	0
1909-10	8.1	22.3	0	0	26.5	31.2	110.8	0
1910-11	9.6	29.4	0	0	25.0	27.5	107.4	0
1911-12	10.6	29.4	0	0	26.1	27.6	136.6	0
1912-13	9.7	30.8	0	0	27.7	27.7	48.4	0
1913-14	8.8	25.2	0	0	13.4	26.3	49.1	0
1914-15	9.4	26.4	0	0	16.5	27.3	36.0	0
1915-16	8.9	33.0	0	0	16.3	28.6	39.2	0
1916-17	7.8	28.0	0	0	16.6	19.5	30.1	0
1917-18	8.3	20.6	0	0	18.2	19.7	38.9	0
1918-19	8.5	29.4	0	0	18.9	15.8	27.9	0
1919-20	8.5	19.7	0	0	20.1	12.0	24.0	0
1920-21	8.6	16.4	0	0	14.3	10.8	13.7	0
1921-22	9.3	25.9	0	0	15.6	14.2	22.8	0
1922-23	9.3	20.1	0	0	13.1	15.9	46.5	0
1923-24	9.3	14.2	0	10.5	10.5	17.6	70.2	0
1924-25	9.3	14.7	0	0.3	13.7	11.3	27.9	0
1925-26	9.3	12.7	0	0	26.2	13.8	24.7	0
1926-27	0.0	13.8	0	0	26.4	14.1	22.8	0
1927-28	9.0	14.8	0	0	26.9	20.5	30.5	0
1928-29	9.0	14.6	0	0	25.5	32.3	68.3	0
1929-30	9.0	14.4	0	0	43.7	37.9	56.0	0
1930-31	9.0	15.4	0	0	35.6	34.1	57.3	0
1931-32	9.0	9.3	0	0	35.4	30.6	57.3	0
1932-33	9.0	5.6	0	0	43.3	37.0	58.6	0
1933-34	14.6	1.7	0	0	52.8	37.5	13.0	0
1934-35	23.3	15.2	0	0	26.7	57.9	5.0	0
1935-36	23.1	8.4	0	0	15.6	44.2	46.3	0
1936-37	7.9	19.1	0	0	12.8	27.4	19.6	0
1937-38	4.6	3.3	0	0	6.6	15.9	14.9	0
1938-39	0.0	18.4	0	0	12.3	27.0	13.9	0
1939-40	0.0	9.4	0	0	7.0	10.8	7.5	0
1940-41	0.0	4.0	0	0	7.7	12.2	4.6	0
1941-42	0.0	6.6	0	0	12.2	11.0	4.6	0
1942-43	0.0	6.6	0	0	24.8	20.9	4.6	0
1943-44	0.0	6.6	0	0	59.6	38.8	4.6	0
1944-45	0.0	6.6	0	0	57.0	36.8	4.6	0
1945-46	0.0	6.6	0	0	33.6	18.1	4.6	0
Unweighted average all years	**8.0**	**18.9**	**0.0**	**0.3**	**25.2**	**26.3**	**44.1**	**0.0**

Table 1 (con'd).

Year	**Pork**	**Rice**	**Sheep-meat**	**Sugar**	**Wheat**	**Wool**	**Weighted average**
1903-04	0	0	0	6.2	0.0	0	5.9
1904-05	0	0	0	7.5	0.0	0	11.1
1905-06	0	0	0	7.5	0.0	0	6.2
1906-07	0	0	0	10.5	0.0	0	5.9
1907-08	24.8	0	0	18.4	0.0	0	7.1
1908-09	27.7	0	0	21.6	0.0	0	6.4
1909-10	28.5	0	0	39.2	0.0	0	7.6
1910-11	27.6	0	0	28.3	0.0	0	7.1
1911-12	26.5	0	0	29.0	0.0	0	7.8
1912-13	25.4	0	0	30.6	0.0	0	6.3
1913-14	26.7	0	0	27.3	0.0	0	4.8
1914-15	23.9	0	0	5.8	0.0	0	4.0
1915-16	33.5	0	0	0.0	0.0	0	4.1
1916-17	34.2	0	0	0.0	0.0	0	3.6
1917-18	50.4	0	0	0.0	0.0	0	3.8
1918-19	30.4	0	0	0.0	0.0	0	3.7
1919-20	30.4	0	0	0.0	0.0	0	3.3
1920-21	30.4	0	0	0.0	0.0	0	2.5
1921-22	30.4	0	0	0.0	0.0	0	3.2
1922-23	30.4	0	0	0.0	0.0	0	3.3
1923-24	10.5	0	0	0.0	0.0	0	4.3
1924-25	10.0	0	0	0.0	0.0	0	2.6
1925-26	10.0	0	0	0.0	0.0	0	3.6
1926-27	10.0	0	0	0.0	0.0	0	3.4
1927-28	10.0	0	0	0.0	0.0	0	3.9
1928-29	10.0	0	0	0.0	0.0	0	4.0
1929-30	10.0	0	0	0.0	0.0	0	6.3
1930-31	4.6	0	0	0.0	0.0	0	5.8
1931-32	10.0	0	0	0.0	10.2	0	8.4
1932-33	10.0	0	0	0.0	6.0	0	7.4
1933-34	10.0	0	0	0.0	10.9	0	6.3
1934-35	10.0	0	0	0.0	16.3	0	6.9
1935-36	10.0	0	0	0.0	6.4	0	4.5
1936-37	10.0	0	0	0.0	0.0	0	2.2
1937-38	10.0	0	0	0.0	0.0	0	1.5
1938-39	10.0	0	0	0.0	8.2	0	4.2
1939-40	10.0	0	0	0.0	6.4	0	2.8
1940-41	10.0	0	0	0.0	8.7	0	2.4
1941-42	10.0	0	0	0.0	7.5	0	3.1
1942-43	10.0	0	0	0.0	4.8	0	3.8
1943-44	10.0	0	0	0.0	9.1	0	7.1
1944-45	10.0	0	0	0.0	23.9	0	8.3
1945-46	10.0	0	0	0.0	0.0	0	4.4
Unweighted average all years	**16.4**	**0.0**	**0.0**	**5.4**	**2.8**	**0.0**	**5.0**

Table 2. Assistance to Imported Agricultural Commodities, Australia, 1903-04 to 1945-46

Year	Bananas	Cotton	Maize	Oranges	Potatoes	Poultry & Eggs	Weighted average
1903-04	17.9	0.0	24.2	14.8	31.4	4.9	12.92
1904-05	20.9	0.0	48.8	14.2	32.2	7.3	17.20
1905-06	20.9	0.0	25.8	12.4	14.7	11	13.63
1906-07	19.8	0.0	32.1	13.1	19.5	11.2	15.28
1907-08	13.6	10.0	20.2	14.8	29.7	15.1	18.06
1908-09	10.3	10.0	20.2	20.8	27.2	24.9	23.66
1909-10	10.6	10.0	20.2	20.2	32.9	29.7	27.41
1910-11	10.4	10.0	23.2	21.3	28.3	30.6	27.53
1911-12	9.5	10.0	24.1	20.7	31	26.5	25.64
1912-13	11.8	10.0	17.0	20.1	11.4	27.4	21.99
1913-14	9.2	10.0	17.6	19.7	29.4	18.1	19.68
1914-15	8.6	0.0	21.0	17.3	19.9	10.4	13.56
1915-16	9.6	10.0	16.0	16.6	11.9	19.0	16.72
1916-17	14.1	0.0	17.9	13.2	31.9	18.9	20.16
1917-18	12.9	0.0	17.6	22.4	70	27.3	32.39
1918-19	11.4	0.0	12.4	7.9	13.6	15.0	13.55
1919-20	9.4	0.0	10.2	7.9	7.4	28.0	19.68
1920-21	15.6	0.0	9.3	15.9	1.5	11.2	9.69
1921-22	37.3	0.0	17.1	21.2	0	15.7	14.21
1922-23	39.0	0.0	19.4	23.0	0	9.7	11.19
1923-24	42.4	0.0	21.6	24.7	0.2	25.3	20.79
1924-25	48.6	0.0	16.3	29.2	0	22.5	19.18
1925-26	46.9	0.0	15.8	22.0	10.5	15.7	16.37
1926-27	44.4	3.7	40.7	25.8	11.6	16.2	19.82
1927-28	40.7	56.2	44.4	22.2	0	17.4	19.15
1928-29	25.6	30.3	10.5	20.8	3.7	16.9	14.45
1929-30	22.7	38.0	47.3	20.8	4.1	15.1	17.66
1930-31	34.1	28.7	56.7	0.0	0	19.0	18.78
1931-32	51.7	21.1	9.1	0.0	0	13.7	11.50
1932-33	39.9	45.0	70.9	38.5	0	7.7	14.52
1933-34	60.2	31.0	7.8	57.0	0	0.1	7.75
1934-35	90.4	19.7	26.3	100.0	14.3	29.9	32.65
1935-36	92.4	20.6	47.8	42.9	0	20.9	23.35
1936-37	101.6	15.4	41.4	33.7	20	27.4	31.05
1937-38	110.0	46.3	68.6	37.3	17.2	6.7	18.88
1938-39	109.2	50.0	4.5	63.4	14.3	16.7	21.61
1939-40	113.0	20.1	4.7	31.7	31.5	16.7	23.14
1940-41	116.8	7.1	4.9	31.7	48.6	16.7	24.72
1941-42	116.8	12.6	5.0	31.7	48.6	16.7	27.33
1942-43	116.8	29.1	5.0	31.7	48.6	16.7	26.50
1943-44	116.8	0.0	5.0	31.7	48.6	16.7	27.30
1944-45	116.8	0.0	5.0	31.7	48.6	16.7	28.51
1945-46	116.8	28.3	5.0	31.7	48.6	16.7	27.44
Unweighted average all years	**48.5**	**13.6**	**22.8**	**25.5**	**20.1**	**17.4**	**20.2**

Table 3. Nominal Rates of Assistance to Australian Agriculture, 1903-04 to 1945-46

Year	Importables	Exportables	% NRA
1903-04	12.9	5.9	6.5
1904-05	17.2	11.1	11.6
1905-06	13.6	6.2	6.8
1906-07	15.3	5.9	6.7
1907-08	18.1	7.1	8.0
1908-09	23.7	6.4	7.8
1909-10	27.4	7.6	9.2
1910-11	27.5	7.1	8.8
1911-12	25.6	7.8	9.3
1912-13	22.0	6.3	7.6
1913-14	19.7	4.8	6.0
1914-15	13.6	4.0	4.8
1915-16	16.7	4.1	5.1
1916-17	20.2	3.6	4.9
1917-18	32.4	3.8	6.2
1918-19	13.5	3.7	4.5
1919-20	19.7	3.3	4.7
1920-21	9.7	2.5	3.1
1921-22	14.2	3.2	4.1
1922-23	11.2	3.3	3.9
1923-24	20.8	4.3	5.6
1924-25	19.2	2.6	4.0
1925-26	16.4	3.6	4.6
1926-27	19.8	3.4	4.8
1927-28	19.2	3.9	5.2
1928-29	14.5	4.0	4.9
1929-30	17.7	6.3	7.4
1930-31	18.8	5.8	7.1
1931-32	11.5	8.4	8.7
1932-33	14.5	7.4	8.1
1933-34	7.8	6.3	6.4
1934-35	32.7	6.9	9.1
1935-36	23.4	4.5	6.0
1936-37	31.1	2.2	4.2
1937-38	18.9	1.5	3.0
1938-39	21.6	4.2	5.9
1939-40	23.1	2.8	4.3
1940-41	24.7	2.4	4.1
1941-42	27.3	3.1	4.9
1942-43	26.5	3.8	6.1
1943-44	27.3	7.1	9.5
1944-45	28.5	8.3	11.4
1945-46	27.4	4.4	7.4
Unweighted average all years	**20.2**	**5.0**	**6.3**

Table 4. Nominal Rates of Assistance to Manufacturing, Australia, 1903-04 to 2004-05

Year	(%)		(%)		(%)
1903-04	32.6	1940-41	53.2	1977-78	15.0
1904-05	31.7	1941-42	41.7	1978-79	15.0
1905-06	30.8	1942-43	45.6	1979-80	15.0
1906-07	29.4	1943-44	46.0	1980-81	15.0
1907-08	28.8	1944-45	48.2	1981-82	16.0
1908-09	33.7	1945-46	41.4	1982-83	16.0
1909-10	33.5	1946-47	41.3	1983-84	13.0
1910-11	33.3	1947-48	29.7	1984-85	13.0
1911-12	31.5	1948-49	27.0	1985-86	12.0
1912-13	30.6	1949-50	26.2	1986-87	12.0
1913-14	30.9	1950-51	24.5	1987-88	11.0
1914-15	31.6	1951-52	23.0	1988-89	10.0
1915-16	28.1	1952-53	33.9	1989-90	9.0
1916-17	27.5	1953-54	26.3	1990-01	9.0
1917-18	22.8	1954-55	22.9	1991-02	8.0
1918-19	21.8	1955-56	22.0	1992-03	7.0
1919-20	24.8	1956-57	21.9	1993-04	6.0
1920-21	23.5	1957-58	19.8	1994-05	5.0
1921-22	29.4	1958-59	21.7	1995-06	5.0
1922-23	28.2	1959-60	21.2	1996-07	4.0
1923-24	28.4	1960-61	20.0	1997-08	3.0
1924-25	30.0	1961-62	22.1	1998-99	3.0
1925-26	32.2	1962-63	22.0	1999-00	3.0
1926-27	33.4	1963-64	22.3	2000-01	3.0
1927-28	35.0	1964-65	22.9	2001-02	3.0
1928-29	36.2	1965-66	22.0	2002-03	3.0
1929-30	43.2	1966-67	22.4	2003-04	3.0
1930-31	52.2	1967-68	22.8	2004-05	2.6
1931-32	63.4	1968-69	24.0		
1932-33	57.2	1969-70	23.0		
1933-34	56.0	1970-71	23.0	**Unweighted**	
1934-35	50.8	1971-72	22.0	**average**	
1935-36	48.6	1972-73	22.0	**all years**	**25.2**
1936-37	47.9	1973-74	17.0		
1937-38	43.0	1974-75	15.0		
1938-39	48.9	1975-76	16.0		
1939-40	46.5	1976-77	15.0		

Source: 1903-04 to 1967-68: Lloyd (2008, Table 5, column 5), 1968-69 onwards: Anderson, Lloyd and MacLaren (2007, Appendix 1, column 5).

Appendix Table 1. Bounty Payments for Agricultural Products (£), 1903 to 1945-46

	Cotton	Tobacco leaf	Sugar	Other Agricultural products	Total Agricultural products
1901-02					
1902-03			60,827		60827
1903-04			90,806		90806
1904-05			121,408		121408
1905-06			148,106		148106
1906-07			328,210		328210
1907-08	10		577,148	2150	579308
1908-09	32	121	477,090	977	478220
1909-10	34	276	402,132	1028	403470
1910-11	91	90	630,762	2708	633651
1911-12	137	78	543,503	4728	548446
1912-13	95	215	370,306	2113	372729
1913-14	21	344	149,244	1994	151603
1914-15		349		839	1188
1915-16	22	145		2329	2496
1916-17		488		5151	5639
1917-18		13		1109	1122
1918-19				8108	8108
1919-20					
1920-21					
1921-22					
1922-23					
1923-24				63477	63477
1924-25				64752	64752
1925-26				10963	10963
1926-27	7,038				7038
1927-28	81,454			4731	86185
1928-29	64,930				64930
1929-30	70,307				70307
1930-31	100,848				100848
1931-32	64,206			1561	65767
1932-33	56,182			412	56594
1933-34	87,268			205	87473
1934-35	21,729			599	22328
1935-36	77,089			62	77151
1936-37	50,643				50643
1937-38	95,044				95044
1938-39	115,012				115012
1939-40	60,391				60391
1940-41	14,523				14523
1941-42	38,439				38439
1942-43	93,136				93136
1943-44					
1944-45					
1945-46	11,887				11887

Source: Commonwealth Year books, various.

Notes: The column "Other agricultural Products" covers all bounty payments to agricultural products outside the three products which received most of the payments. For various periods producers of oilseeds (flax and linseed oil, cottonseed oil), raw coffee, flax and hemp, canned and dried fruits and evaporated apples were paid bounties.

Appendix Table 2. Ad Valorem Bounties for Cotton and Sugar Cane, 1903-04 to 1945-46

Year	Cotton	Sugar	Year	Cotton	Sugar
1901-02	0		1938-39	50.00	0
1902-03	0		1939-40	20.10	0
1903-04	0	6.17	1940-41	7.10	0
1904-05	0	7.54	1941-42	12.60	0
1905-06	0	7.49	1942-43	29.10	0
1906-07	0	10.45	1943-44	0	0
1907-08	10	18.39	1944-45	0	0
1908-09	10	21.63	1945-46	28.30	0
1909-10	10	39.22	1938-39	50.00	0
1910-11	10	28.34	1939-40	20.10	0
1911-12	10	29.02	1940-41	7.10	0
1912-13	10	30.65	1941-42	12.60	0
1913-14	10	27.29	1942-43	29.10	0
1914-15	0	5.79	1943-44	0	0
1915-16	10	0	1944-45	0	0
1916-17	0	0	1945-46	28.30	0
1917-18	0	0			
1918-19	0	0	**Unweighted**		
1919-20	0	0	**average**		
1920-21	0	0	**all years**	**13.6**	**5.4**
1921-22	0	0			
1922-23	0	0			
1923-24	0	0			
1924-25	0	0			
1925-26	0	0			
1926-27	3.70	0			
1927-28	56.20	0			
1928-29	30.30	0			
1929-30	37.80	0			
1930-31	28.40	0			
1931-32	20.80	0			
1932-33	44.90	0			
1933-34	30.90	0			
1934-35	19.40	0			
1935-36	20.50	0			
1936-37	15.30	0			
1937-38	46.30	0			

Source: Commonwealth Year books, various.
Notes: Computed from the values in Appendix Table 1 and the value of production data from Commonwealth Year books, various.

Appendix Table 3. Ad Valorem Equivalent Tariff Rates on Selected Imports, 1903-04 to 1946-47

Year	Cotton	Butter	Cheese	Maize	Bananas	Bacon & Ham	Pork
1903-04	0.0	20.9	41.7	24.2	17.9	32.8	0.0
1904-05	0.0	73.2	38.9	48.8	20.9	38.2	0.0
1905-06	0.0	27.9	41.7	25.8	20.9	44.6	0.0
1906-07	0.0	28.0	33.0	32.1	19.8	33.8	0.0
1907-08	0.0	28.7	30.2	20.2	13.6	31.2	24.8
1908-09	0.0	21.6	34.7	20.2	10.3	34.2	27.7
1909-10	0.0	26.5	31.2	20.2	10.6	22.3	28.5
1910-11	0.0	25.0	27.5	23.2	10.4	29.4	27.6
1911-12	0.0	26.1	27.6	24.1	9.5	29.4	26.5
1912-13	0.0	27.7	27.7	17.0	11.8	30.8	25.4
1913-14	0.0	13.4	26.3	17.6	9.2	25.2	26.7
1914-15	0.0	16.5	27.3	21.0	8.6	26.4	23.9
1915-16	0.0	16.3	28.6	16.0	9.6	33.0	33.5
1916-17	0.0	16.6	19.5	17.9	14.1	28.0	34.2
1917-18	0.0	18.2	19.7	17.6	12.9	20.6	50.4
1918-19	0.0	18.9	15.8	12.4	11.4	29.4	30.4
1919-20	0.0	20.1	12.0	10.2	9.4	19.7	30.4
1920-21	0.0	14.3	10.8	9.3	15.6	16.4	30.4
1921-22	0.0	15.6	14.2	17.1	37.3	25.9	30.4
1922-23	0.0	13.1	15.9	19.4	39.0	20.1	30.4
1923-24	0.0	10.5	17.6	21.6	42.4	14.2	10.5
1924-25	0.0	13.7	11.3	16.3	48.6	14.7	10.0
1925-26	0.0	10.1	13.8	15.8	46.9	12.7	10.0
1926-27	0.0	11.5	14.1	40.7	44.4	13.8	10.0
1927-28	0.0	10.6	20.5	44.4	40.7	14.8	10.0
1928-29	0.0	27.1	32.3	10.5	25.6	14.6	10.0
1929-30	0.2	40.1	37.9	47.3	22.7	14.4	10.0
1930-31	0.3	111.8	34.1	56.7	34.1	15.4	4.6
1931-32	0.3	84.6	30.6	9.1	51.7	9.3	10.0
1932-33	0.1	57.4	37.0	70.9	39.9	5.6	10.0
1933-34	0.1	45.3	37.5	7.8	60.2	1.7	10.0
1934-35	0.3	43.9	37.8	26.3	90.4	15.2	10.0
1935-36	0.1	44.2	39.6	47.8	92.4	8.4	10.0
1936-37	0.1	46.6	39.5	41.4	101.6	19.1	10.0
1937-38	0.0	46.5	42.8	68.6	110.0	3.3	10.0
1938-39	0.0	0.0	44.4	4.5	109.2	18.4	10.0
1939-40	0.0	0.0	39.5	4.7	113.0	9.4	10.0
1940-41	0.0	0.0	34.6	4.9	116.8	4.0	10.0
1941-42	0.0	0.0	29.6	5.0	116.8	6.6	10.0
1942-43	0.0	0.0	29.6	5.0	116.8	6.6	10.0
1943-44	0.0	0.0	29.6	5.0	116.8	6.6	10.0
1944-45	0.0	0.0	29.6	5.0	116.8	6.6	10.0
1945-46	0.0	0.3	29.6	5.0	116.8	6.6	10.0
1946-47	0.0	5.0	24.5	5.0	116.8	9.1	10.0
Average - All Years	**0.0**	**24.5**	**28.7**	**22.4**	**50.1**	**18.7**	**16.3**

Appendix Table 3 (cont'd).

	Poultry	Dried Vine Fruits	Apples	Oranges	Potatoes	Average - All Commodities
1903-04	4.9	93.6	13.8	14.8	31.4	24.7
1904-05	7.3	129.8	7.7	14.2	32.2	34.3
1905-06	11.0	60.4	12.9	12.4	14.7	22.7
1906-07	11.2	68.1	11.8	13.1	19.5	22.5
1907-08	15.1	105.7	9.5	14.8	29.7	27.0
1908-09	24.9	85.3	9.1	20.8	27.2	26.3
1909-10	29.7	110.7	8.1	20.2	32.9	28.4
1910-11	30.6	106.9	9.6	21.3	28.3	28.3
1911-12	26.5	136.0	10.6	20.7	31.0	30.7
1912-13	27.4	48.2	9.7	20.1	11.4	21.4
1913-14	18.1	49.0	8.8	19.7	29.4	20.3
1914-15	10.4	36.0	9.4	17.3	19.9	18.1
1915-16	19.0	39.2	8.9	16.6	11.9	19.4
1916-17	18.9	29.7	7.8	13.2	31.9	19.3
1917-18	27.3	38.9	8.3	22.4	70.0	25.5
1918-19	15.0	27.9	8.5	7.9	13.6	15.9
1919-20	28.0	24.0	8.5	7.9	7.4	14.8
1920-21	11.2	13.7	8.6	15.9	1.5	12.3
1921-22	15.7	22.8	9.3	21.2	0.0	17.5
1922-23	9.7	46.5	9.3	23.0	0.0	18.9
1923-24	25.3	70.2	9.3	24.7	0.2	20.5
1924-25	22.5	27.9	9.3	29.2	0.0	17.0
1925-26	15.7	24.7	9.3	22.0	10.5	16.0
1926-27	16.2	22.8	0.0	25.8	11.6	17.6
1927-28	17.4	30.5	9.0	22.2	0.0	18.3
1928-29	16.9	68.3	9.0	20.8	3.7	19.9
1929-30	15.1	56.0	9.0	20.8	4.1	23.1
1930-31	19.0	57.3	9.0	0.0	0.0	28.5
1931-32	13.7	57.3	9.0	0.0	0.0	23.0
1932-33	7.7	58.6	9.0	38.5	0.0	27.9
1933-34	0.1	13.0	9.0	57.0	0.0	20.1
1934-35	29.9	5.0	18.1	100.0	14.3	32.6
1935-36	20.9	43.8	16.7	42.9	0.0	30.6
1936-37	27.4	17.1	0.0	33.7	20.0	29.7
1937-38	6.7	13.6	0.0	37.3	17.2	29.7
1938-39	16.7	13.6	0.0	63.4	14.3	24.5
1939-40	16.7	7.4	0.0	31.7	31.5	22.0
1940-41	16.7	4.6	0.0	31.7	48.6	22.7
1941-42	16.7	4.6	0.0	31.7	48.6	22.5
1942-43	16.7	4.6	0.0	31.7	48.6	22.5
1943-44	16.7	4.6	0.0	31.7	48.6	22.5
1944-45	16.7	4.6	0.0	31.7	48.6	22.5
1945-46	16.7	4.6	0.0	31.7	48.6	22.5
1946-47	16.7	1.8	0.0	31.7	48.6	22.4
Average - All Years	**17.4**	**42.9**	**7.2**	**25.7**	**20.7**	**22.9**

Source: Data for duty paid and value of imports for each product are taken from the annual *Overseas Trade* volumes produced by the Commonwealth Bureau of Census and Statistics from 1903. These volumes are available online in the ABS AUSSTATS Historical Publications series.

Notes:

1. There was no publication for the 1939-40 year because of a change in classification and there were no publications for five of the War years, 1940-41 to 1945-46. To ensure continuity of the series, we have, for 1939-40, substituted the average of the rates in the two preceding years, 1939-40 to 1940-41 and for the War years we have similarly substituted the average of the years 1940-41 and 1946-47.
2. In the years from 1903 to 1913 the data were collected on a calendar year basis. To make these consistent with other series in this table and other tables, these calendar years have shifted forward six months.
3. In a few cells during the depression years of the 1920s and 1930s and the War years, there was no trade or an extremely small value of clearances. In these cases the average of the rates in the years immediately preceding and following this year has been entered.
4. In the case of butter, in some years in the 1930s the source of the imports is not given. In these cases, the General tariff rate has been used. In the year 1931-32, there were no recorded dutiable imports. In this case, the average of the rates in the preceding and following years has been used.

Appendix Table 4: Implicit Ad Valorem Tariff Rates for Tobacco, 1903-04 to 1945-46

Year	Specific tariff duty (shillings/lb)	Excise duty (shillings/lb)	Net protection (shillings/lb)	Unit value (shillings/lb)	Ad valorem equivalent tariff rate (%)	Implicit ad valorem tariff rate (%)
1903-04	1.50	1.00	0.50	0.898	167.0	55.7
1904-05	1.50	1.00	0.50	0.703	213.3	71.1
1905-06	1.50	1.00	0.50	0.756	198.4	66.1
1906-07	1.50	1.00	0.50	0.756	198.4	66.1
1907-08	1.56	1.00	0.56	0.834	187.1	67.1
1908-09	1.50	1.00	0.50	0.706	212.5	70.8
1909-10	1.50	1.00	0.50	0.663	226.2	75.4
1910-11	1.50	1.00	0.50	0.641	234.0	78.0
1911-12	1.50	1.00	0.50	0.660	227.3	75.8
1912-13	1.54	1.00	0.54	0.815	189.0	66.3
1913-14	1.55	1.00	0.55	0.887	174.7	62.0
1914-15	1.79	1.00	0.79	0.997	179.5	79.2
1915-16	2.02	1.00	1.02	0.997	202.6	102.3
1916-17	2.02	1.00	1.02	1.094	184.6	93.2
1917-18	2.02	1.00	1.02	0.983	205.5	103.8
1918-19	2.02	1.66	0.36	1.489	135.7	24.2
1919-20	2.03	1.66	0.37	1.995	101.8	18.5
1920-21	2.02	2.11	-0.09	3.010	67.1	-3.0
1921-22	2.02	2.33	-0.31	3.131	64.5	-9.9
1922-23	2.02	2.33	-0.31	2.408	83.9	-12.9
1923-24	2.02	2.33	-0.31	2.176	92.8	-14.2
1924-25	2.02	2.33	-0.31	2.099	96.2	-14.8
1925-26	2.02	2.33	-0.31	2.042	98.9	-15.2
1926-27	2.02	2.33	-0.31	1.823	110.8	-17.0
1927-28	2.02	2.33	-0.31	1.831	110.3	-16.9
1928-29	2.01	2.33	-0.32	1.803	111.5	-17.7
1929-30	2.72	3.58	-0.86	1.744	156.0	-49.3
1930-31	4.24	3.66	0.58	1.262	336.0	46.0
1931-32	4.66	4.50	0.16	0.761	612.4	21.0
1932-33	3.61	4.50	-0.89	0.923	391.1	-96.4
1933-34	3.84	4.50	-0.64	1.166	329.3	-54.9
1934-35	4.02	4.50	-0.48	1.526	263.4	-31.5
1935-36	4.04	4.50	-0.46	1.578	256.0	-29.2
1936-37	4.06	3.83	0.23	1.552	261.6	14.8
1937-38	4.06	3.83	0.23	1.63	249.4	14.1
1938-39	4.09	4.50	-0.41	1.55	264.7	-26.5
1939-40	4.11	4.50	-0.61	1.233	333.3	-49.5
1940-41	5.22	5.58	-0.46	1.286	405.9	-35.8
1941-42	5.86	7.33	-1.47	1,238	0.5	-0.1
1942-43	5.80	9.58	-4.03	1.56		-258.30
1943-44	5.87	10.33	-4.38	2,520		-173.80
1944-45	5.89	10.33	-4.44	2,650		-167.50
1945-46	na	10.33	na	na	na	na

Sources: Excise duty rate: Table of excise duty rates supplied to Peter Lloyd by the former Commonwealth Department of Customs and Excise. All other columns: The annual Overseas Trade volumes produced by CBCS. These are available online in ABS AUSSTATS Historical Publications

Notes. 1. The pence have been decimalised in order to calculate the equivalent tariff and implicit ad valorem rates.

2. From 1907-08, the specific tariff duty rate is the average of the different rates levied on imports by source, after the introduction of preferential rates for imports from South Africa and some other British Empire sources. For a few years when the excise rate was changed during the fiscal year, the excise duty rate is the average of the two rates.

3. The main problem in constructing the table is the difficulty of matching the item in the excise classification with the item in the tariff classification. The tariff item used is that for "unmanufactured tobacco to be used in local manufacture". This is the largest item of imports. For most of the period, the excise item matching this has been taken to be "Tobacco, unmanufactured, nei".

4. In 1945-46 there were no imports.

Appendix Table 5. Export Bounties, 1903-04 to 1945-46

Year	Beef	Live cattle	Fruit	Total-Agriculture	Wine	Total - Manufactures
1901-02						
1902-03						
1903-04						
1904-05						
1905-06						
1906-07						
1907-08						
1908-09						
1909-10						
1910-11						
1911-12						
1912-13						
1913-14						
1914-15						
1915-16						
1916-17						
1917-18						
1918-19						
1919-20						
1920-21						
1921-22						
1922-23						
1923-24	136,900	3,632			28,417	28,417
1924-25	1,039	3,991			217,109	217,109
1925-26		919			217,109	217,109
1926-27					442,410	442,410
1927-28					482,843	482,843
1928-29					76,455	76,455
1929-30					83,210	83,210
1930-31					165,009	165,009
1931-32					201,268	201,268
1932-33					178,491	178,491
1933-34					183,981	183,981
1934-35					184,330	184,330
1935-36			95,640		194,467	194,467
1936-37			106,647		214,886	214,886
1937-38			64,450		184,693	184,693
1938-39			9,820		167,872	167,872
1939-40			3,872		146,592	146,592
1940-41			1,953		56,547	56,547
1941-42					38,610	38,610
1942-43					15,049	15,049
1943-44					22,506	22,506
1944-45					34,613	34,613
1945-46					53,649	53,649

Source: Commonwealth Bureau of Census & Statistics, Year Books Australia, various.

Appendix Table 6. Assistance to the Dairy Industry, 1925-26 to 1945-46

I. The Paterson Plan - Butter

Year	Specific tariff less Production levy (d)	Unit export value (d per lb)	Ad valorem rate (%)
1925-26	4 1/2	17.18	26.2
1926-27	4 1/2	17.03	26.4
1927-28	4 1/2	16.71	26.9
1928-29	4 1/2	17.68	25.5
1929-30	4 3/8	15.61	43.7
1930-31	4 1/4	11.94	35.6
1931-32	4 1/4	11.68	35.4
1932-33	4 1/4	9.82	43.3
1933-34	4 1/4	8.05	52.8

II The Price Equalization Scheme - Butter

	Overall return (d)	Price realised on export sales (d)	Net (d)	Ad valorem rate (%)
1934-35	10.9	8.6	2.3	26.7
1935-36	12.6	10.9	1.7	15.6
1936-37	13.2	11.7	1.5	12.8
1937-38	14.6	13.7	0.9	6.6
1938-39	14.6	13	1.6	12.3
1939-40	15.2	14.2	1	7
1940-41	15.3	14.2	1.1	7.7
1941-42	15.6	13.9	1.7	12.2
1942-43	17.6	14.6	3.1	21.2
1943-44	20.4	14.6	5.8	39.7
1944-45	20.9	15.1	5.8	38.4
1945-46	21.9	19.5	3.4	17.4
The Price Equalization Scheme - Cheese				
1934-35	6	3.8	2.2	57.9
1935-36	7.5	5.2	2.3	44.2
1936-37	7.9	6.2	1.7	27.4
1937-38	8	6.9	1.1	15.9
1938-39	7.7	6.3	1.7	27
1939-40	8.2	7.4	0.8	10.8
1940-41	8.3	7.4	0.9	12.2
1941-42	9.1	8.2	0.9	11
1942-43	10.6	8.8	1.8	20.4
1943-44	12.1	8.9	3.2	36
1944-45	12.2	9.1	3.1	34.1
1945-46	12.7	11	1.7	15.5

Source: Paterson Plan
Production Levy: Rural Reconstruction Commission T*enth Report*
Unit export values: CBCS, *Overseas Trade*, annual.
Price Equalization scheme
Columns (1)-(3): Crawford (1954, Table XXA)

Notes 1. For butter and cheese, the overall return includes subsidies from 1942-43 to 1945-46.
2. In 1925-26, the Plan operated for only the six months from January to July 1926

Appendix Table 7. Assistance for Relief of Primary Producers

Year	Assistance to Wheat-growers			Assistance to Dairying Industry		
	Payments £	Value of output	Ad valorem rate %	Payments £	Value of output	Ad valorem rate %
1931-32	3,429,314	33728000	10.17			
1932-33	2,000,000	33316000	6.00			
1933-34	3,053,000	27897000	10.94			
1934-35	4,040,608	24738000	16.33			
1935-36	1,915,869	29768000	6.44			
1936-37	...	40471000	0.00			
1937-38	...	37000000	0.00			
1938-39	1,808,693	21989000	8.23			
1939-40	2,486,067	38775000	6.41			
1940-41	1,498,593	17145000	8.74			
1941-42	2,468,593	33041000	7.47			
1942-43	1,667,339	34460000	4.84	1,186,306	29062198.98	4.08
1943-44	2,582,739	28387000	9.10	7,346,120	32402598.46	22.67
1944-45	4,152,739	17409000	23.85	6,812,197	31911148.63	21.35
1945-46	3,245,366			6,373,511		

Source: Commonwealth Year book, No. 36, 1944 and 1945, page 847