



THE UNIVERSITY OF
MELBOURNE

Department of Economics

Working Paper Series

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August 2014

Research Paper Number 1186

ISSN: 0819 2642

ISBN: 978 0 7340 5018 2

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Abstract

A central feature of the constitutional changes imposed at the time of Federation in 1901 was the “fiscal union” of the six States. This union involved the abolition of tariffs on trade between the States, the harmonisation of the tariff rates and of the excise duty rates of the former six Colonies, and the establishment of the financial arrangements to distribute the surplus net customs and excise revenues among the States. This paper examines these four elements of the fiscal union. It provides, for the first time, a measure of the change in the level of tariff duties imposed on imports from outside the Commonwealth and in excise duties. The harmonisation of the customs duty rates increased the average rate of customs duty on dutiable imports from outside the Commonwealth by about 36 per cent while the harmonisation of the excise duty rates maintained the rates at about the mid-point of these rates in the colonies. The four aspects of fiscal union are intimately connected and together they laid the foundations of assistance policy, commodity taxation and Commonwealth-State financial relations for the future Commonwealth of Australia.

Key words: customs union, fiscal union, harmonisation, Commonwealth-State financial relations

JEL Codes: N1, F13, F14

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1. Introduction

A central feature of the constitutional changes imposed at the time of Federation in 1901 on all of the six States of the Commonwealth of Australia was the harmonisation of the tariff rates of the former six Colonies. This was accompanied by the abolition of tariffs on trade between States. Today these two changes are described as the formation of a customs union. Economic historians have analysed these events in Australia in terms of the formation of a customs union (for example, Forster, 1977 and Irwin, 2006).

At the time of Federation, the introduction of the first Commonwealth Tariff and the freeing of trade among the States were described as a “fiscal union”. Forster (1977, p.95) states that the term “...’fiscal union’ was used in the conventions and conferences preceding federation to mean inter-State free trade combined with a common external tariff.” This definition is too narrow. First, the term “tariff” was used generally in the debates about federation to cover excise duties as well as customs duties. The fiscal harmonisation also extended to the harmonisation of excise taxes, as the Commonwealth gained exclusive power over this measure too. Excise duties were an important part of the revenue system. Second, the debate concerning the levels at which the different tariff (and excise) rates of the six colonies were to be harmonised was concerned with two issues: the necessity to set rates which ensured enough revenue for the Commonwealth and for the States, and the protective effects of the harmonised tariff rates. Indeed, in introducing the tariff legislation to the first Parliament, the Minister of Customs and Excise in the Barton Government declared “The first condition is finance, but protection to existing industries at least must accompany it.” (Hansard, 1901-02, V, p. 5699). The financial arrangements involved reaching agreement on the distribution of customs and excise revenue between the Commonwealth and the States which had lost their main source of revenue.

I shall use the term “fiscal union” to cover the harmonisation of the colonial tariff and excise rates, the introduction of free inter-State trade and the establishment of a mechanism for distributing Commonwealth revenues to the States. All four elements were involved in the pre-Federation debate about “fiscal union” and the “financial clauses” of the Constitution, Sections 81-105 dealing with “finance and trade”, which provided the legal basis for fiscal union.

A fifth element could be added. Section 86 which gave the Commonwealth government the exclusive power to levy customs and excise duties also gave it exclusive power to pay bounties.¹ Some colonies had used bounties and export bounties before federation but these were a very small part of the levels of assistance. After federation, a bounty was paid from 1902 to 1914 on all sugar cane delivered for manufacture in the production of which white labour only was employed. This bounty was an inducement to Queensland to join the Federation as most of the cheap Melanesian labourers (“kanakas”) that had been used in the Queensland cane fields were repatriated after federation. It was financed by a special excise on the production of manufactured sugar. These arrangements had no significant effect on the other elements of the fiscal union and are, therefore, ignored here.

Section 2 provides brief historical background to federation and fiscal union. Section 3 considers the harmonisation of tariff rates. It provides a measure of the change in the level of tariffs duties on imports from outside the Commonwealth. Section 4 considers the abolition of tariffs on intra-State trade. It provides a measure of the pre-Federation average tariff on inter-Colony trade. Section 5 examines the harmonisation of excise rates. It measures the change in excise rates on Australian production of excisable goods at federation and it examines the interactions between the tariff system and the excise taxation system. The measures of changes in average tariff levels on imports from Other Countries and on inter-Colony trade and in excise duty rate levels are the first quantitative measures of these changes. Section 6 considers the Commonwealth-State relations aspect of fiscal union. In conclusion, Section 7 summarises the findings and looks at how fiscal union at federation set precedents for policies which influenced the subsequent evolution of tariffs, taxes and Commonwealth-State financial relations.

2. Historical background

In the colonial era of Australian history 1850 is a watershed. In that year the Australian Colonies Government Act passed by the Imperial Parliament granted responsible government to the colonies (except for Western Australia which remained a Crown Colony administered by the Colonial Office in London and did not get responsible government until 1890). In the domain of tariff-making, each Colony was now entirely free to determine its own tariffs on imports.

Importantly these powers were subject to the limitation that there were to be no “differential duties”, that is, a Colony could not discriminate among sources. Even the United Kingdom

could not receive preferential treatment. This had the important consequence that the Colonies could not establish inter-Colony free trade among themselves by means of a customs union or free trade area. This limitation was removed by the Australian Colonies Duties Act of 1873 but by this time the tariff policies of the Colonies had diverged too far for agreement. In particular, New South Wales had maintained a policy of (almost) free trade while Victoria had from 1866, after the end of the Gold Rush, become a protectionist Colony. (For accounts of tariff policies in the colonial era, see Allin (1918) and Patterson (1968).

Each Colony having its own tariff schedule soon created problems. First, many goods from other countries were first shipped to one Colony and then transhipped to another. This trade gave rise to disputes about which Colony should collect and receive the customs duty. Second, goods which originated in one colony and were imported by another were subject to custom clearances and, in many cases, to duty. It was primarily these problems of inter-Colony trade which prompted the debates about uniform tariffs and later federation. There was little or no concern over the modern customs union theory issues of the distortion of the production allocation arising from differences among the colonies in the levels of trade restrictions on imports from outside the colonial area.

In particular, the trade on the Murray River became a source of many disputes. There were two types of import trade on the river; trade up the Murray River and trade across the river in both directions. After the navigability of the Murray River was established in 1853, traffic up the river involved goods sourced in other countries that had entered first in South Australia and then had been transported up the Murray for final consumption in Victoria or New South Wales. In the Gold Rush era, transport up the Murray River through South Australia was a major source of supply of foreign goods to the interiors of Victoria and New South Wales. Questions arose as to which Colony should collect duties, which Colony's tariff rate should apply to a particular item and how the tariff revenues should be distributed between the Colonies of South Australia, Victoria and New South Wales.² Inter-Colony trade across the river of goods originating in one Colony also occurred at various points between New South Wales and Victoria. The Murray River was the border between New South Wales and Victoria, the two biggest trading colonies, for most of the length of this border. The main river ports were Albury-Wodonga and Moama-Echuca. Trade across the Murray River was exempt from duties for most of the first two decades after the granting of responsible government. The two colonies of Victoria and New South Wales progressively established customs houses at a string of river ports along this border at towns or at some border stations.

All border trade became subject to duties, where applicable, in 1872 (Quick and Garran, 1976, p.103). These River Murray border entries were the cause of much rural and regional complaint in the colonial era (see Patterson, 1962). Allin (1918, p. 1) begins his history of tariff relations of the colonies with the statement that “The history of tariff relations of the Australian colonies, it must be confessed, is a sorry record of inter-colonial jealousy and strife.”

From the 1860s onwards, there were many attempts to solve these problems by means of bilateral border treaties or reciprocal waivers, or inter-Colony free trade (a free trade area of the six or seven³ colonies) or a customs union of the six or seven colonies or a subset of them. (See Quick and Garran, 1901, Part IV.) Several Inter-colonial Conferences were attended by representatives from all seven colonies and two River Murray Conventions were concluded by the colonies of Victoria, South Australia and New South Wales in 1856 and 1857. All failed to resolve the problems. These tariff problems were a major motivation for federation, along with defence issues, the desire to control entry of aliens and the need for uniform social, industrial and transport legislation (Greenwood, 1946). Tariff problems were finally resolved by the decision of the six Colonies to federate in 1901 and, as a part of federation, to establish a “fiscal union”.

3. Customs union: The harmonisation of tariff rates on external trade

There are a number of discussions of the establishment of the Australian Tariff (notably, Reitsma, 1960; Forster, 1977; Pincus, 1995 and Irwin, 2006). These characterise NSW, the most populous Colony at the time of federation, as the “free trade” Colony and Victoria, the second most populous Colony, as the “protectionist” Colony. These discussions are qualitative, with the exception of Irwin (2006) who used a gravity model to analyse trade quantity flows. Forster provides the most detailed account of the changes in tariff rates and concludes that “for the colonies as a whole the tariff was raised significantly” (Forster, 1977, p. 101). However, there has been no measurement of the tariff changes at federation. Thus, we do not know the magnitude of the change in tariffs when the rates were harmonised.⁴ This aspect of Australian economic history is in marked contrast to the detailed examination in Europe of the harmonisation of tariffs when the European Economic Community, the archetype of a modern customs union, was formed in 1957.⁵

The first step is to measure tariff levels applied to trade with other countries in the individual Colonies before federation. Two measures are basic to an analysis of tariff levels. The first

is the average duty on total imports from other countries and the second is the average duty on dutiable goods only imported from other countries. Both are useful indicators. The first has the disadvantage that it includes all goods which are duty free, most of which are used as inputs in the production of other goods and which raise the effective rates of protection in the economy. The second measure is the preferred measure. (Appendix 1 considers the problem of choosing an index of tariff levels.) Unfortunately, the data required for the calculation of these average tariff rates are not available. Appendix 2 reviews briefly the data which is available and its limitations.

From the available data one can calculate, for each Colony, the average duty on all merchandise imports from all sources by dividing the total value of duty collected by the total value of the merchandise trade. This is the average tariff on total imports, in ad valorem form, using the actual shares of imports as weights.

Table 1 Column (2) reports the average duty on all merchandise imports from all sources (including Other Colonies) in the year 1900. These averages are available for all six colonies. 1900 is selected as the pre-Federation year for these calculations because it is last year before Federation. The table also reports the All-Colony or "Australian" average. This is the weighted average of the Colony figures, each weighted by its Colony share of total All-Colony imports.

Column (2) shows that there was considerable variation among the Colonies in the average duty on all merchandise imports. For the two biggest Colonies in terms of imports, the average rate in Victoria was almost double that in New South Wales. Of these two, Victoria was certainly the protectionist State. However, the average duty rate was higher in Tasmania, Queensland and Western Australia, in that order than in Victoria. In these smaller Colonies much of the tariff was not protective as the range of goods produced locally was much less in these Colonies than in New South Wales and Victoria. The revenue motive for tariffs was strong in these Colonies but it was also an important factor in Victoria and New South Wales (see Patterson, 1968).

Column (3) reports the average duty for all merchandise from all sources, with an adjustment for matching excise revenues. One should net out of the duty collected all duty on excisable goods which matches the rates of excise on the production of these goods within the colony. (See Section 5 below).

Comparison of Columns (2) and (3) shows that the exclusion of the non-protective matching excise revenues lowers all of these averages, except for Tasmania where it has no effect because the colony had little matching revenue. The adjustment is particularly large for New South Wales. However, the adjusted NSW average tariff rate is not zero. New South Wales has been regarded by as a “free trade” Colony, having most commodities subject to zero tariff duties. This free trade policy is usually explained by its much lower dependence on customs and excise revenue than other colonies as it realised large revenues from the sale of Crown land (for example, Patterson, 1968, chapters 3 and 6). However, a comparison of the rates of customs duties and the rates of excise duties on excisable products in NSW in this year shows that the customs duties on Beer and Tobacco products (but not the rates on Spirits) in NSW were quite protective: the average rate of protection across all of the “Narcotics [tobacco and tobacco products] and Stimulants [alcoholic beverages]” in this State was 20.7 per cent (see Lloyd, 2014, Tables 1-3). The average ad valorem rate of customs duty (both the matching and the protective components combined) on these products was 101.1%. Thus New South Wales’s reputation as a duty-free state does not extend to the Narcotics and Stimulants product group, though its protection of this product group is only half of that in Victoria. New South Wales apparently could not resist the opportunity to set the customs rates a bit higher than the excise rates on most of the excisable products where the implicit protection was not transparent.

Regrettably, one cannot calculate for each colony the second preferred average, namely, the average duty on all dutiable imports only, even without the adjustments for matching excise revenues. Some colonies do not report the total value of dutiable imports only.

The above measures all relate to the tariff rates levied on all imports, including imports from Other Colonies. Given the wide difference in tariff rates among commodities, it is quite possible that, for all or some Colonies, the average (ad valorem equivalent) rate of duty on inter-Colony imports differed widely from that on extra-Colony or “overseas” imports. Since reported inter-Colony trade was more than one third of general trade at the time of Federation (Commonwealth of Australia, 1908, p.526), these measures in Table 1 cannot be used as a measure of the level of tariffs imposed on trade either with Other Countries or with Other Colonies as these two groups are described in this paper.

However, for each colony, one can obtain an estimate of the average duty on all imports and on dutiable imports only from Other Countries by calculating the ad valorem or ad valorem

equivalent rate of duty on each good in a list of the major goods imported from Other Countries. The list of major import commodities is selected from the much longer list in the Commonwealth of Australia (1903, pp. 548-53) special tabulation of the Principal Articles Imported into the Commonwealth. This is available both for the two years immediately preceding federation and the three years immediately following federation. For the years from 1903 onwards, the year the Commonwealth began collecting trade statistics, the data use the new Commonwealth goods classification. For the years 1899 to 1902, these statistics of Principal Articles Imported were derived by matching items in the goods classifications of each colony with the goods classification of the Commonwealth, as best they could. From this list, the major goods for which annual imports averaged £200,000 or more in the five years 1899-1903 were selected. Averaging over five years is enough to remove the vagaries of imports in one or two years due to exceptional circumstances.⁶ Each of these articles was then matched with a corresponding article or articles in the Colonies to obtain articles or groups of articles for which there is an exact or close match of articles in the colonies and the Commonwealth. A handful of major articles where the coverage could not be matched were dropped from the list. The tariff rates for the Articles “Beer” and “All Spirits”, the only two excisable commodities included in the list, have been adjusted for matching excise revenues. There are 31 major import goods which together account for about 40 per cent of the total imports of all goods from Other Countries.

1900 is taken as the representative pre-Federation year and 1903 as the representative post-Federation year. 1903 is the first full year in which the tariff rates as laid down finally in the Customs Tariff 1902 applied. It is also the first year for which Commonwealth statistics of overseas trade and customs duties are available.

The data used to calculate ad valorem equivalent tariff rates for each colony must be available on a consistent basis. However, one result of responsible government is that data in each colony were collected on different bases in terms of goods classification and the treatment of sources for each article in this classification. Attempts were made in the period of responsible government to harmonise the statistical collections of the colonies. In fact four conferences were held from 1861 to 1900 “to secure uniformity in the collection and compilation of statistics.” (The problem of the “coordination of statistical effort” in this era is reviewed conveniently in the first Commonwealth of Australia *Year Book* (Commonwealth of Australia, 1908, pp. 5-6)). These attempts did bring about commonality in terms of the general coverage of the statistics of the colonies but they did not bring about uniformity. For

trade statistics, the goods descriptions and the details of the trade for each good differed substantially among the colonies.

For the calculation of ad valorem equivalent rates of duty which were levied on major imports from the Other Countries, the only measure which can be calculated for all six colonies on the same consistent basis is the rate of duty on the imports of each major import article from all sources. However, the rate of duty on each tariff item is the same for imports from other countries as it is for imports from other colonies. Hence, use of data including imports from other colonies does not affect estimation of the ad valorem rate on the major imports from Other Countries, apart from minor differences in the unit values of imports from the two sources.

The ad valorem equivalent rates of tariff duty on imports of the major articles imported from Other Countries have been calculated on this basis for each Colony in 1900. These rates are reported in Appendix Table 1. The articles are split into the categories of Dutiable Imports and Free Imports according to whether the article was dutiable or free in the Commonwealth of Australia in 1903.

The most notable feature of this table is the great differences among the Colonies in terms of the levels of their tariff rates. In Victoria, most of the major goods selected were subject to duty. Even among the goods which are free of duty when the Commonwealth was established, two of the eight (Tea and Explosives) were subject to duty. In contrast, in New South Wales, all of the major goods selected were free of duty with the exceptions of Beer and Sugar only. For all goods imported into New South Wales, their Customs Tariff schedule fills only one page and shows that the only goods subject to import duties were sugar, molasses and treacle, tea and a few minor products such as biscuits, confectionary and dried fruits, and the excisable goods. Most of these non-excisable goods were not produced in the Colony of New South Wales and the duties are revenue duties levied on goods which were considered luxuries. However, New South Wales is not quite the “free trade state” it is often reported to be. It imposed protective duties on three goods – Beer and Sugar as mentioned above and also Tobacco products. The other four Colonies had many high tariff rates, though more of these were non-protective revenue tariffs than in New South Wales and Victoria which produced a much wider range of goods in these economies.

Using these calculations of the ad valorem equivalents for each of the main articles in each Colony, an estimate can be obtained for each colony of the average duty on all imports into

the Colony from Other Countries and of the average duty on “dutiable” imports only from Other Countries”, that is, goods which were dutiable after the introduction of the first Commonwealth Tariff. These rates are listed in Table 2. The weights used to calculate these averages were the shares of each good in the imports into the Colony of the selected major items in 1903.⁷ Thus, the weights differ among the colonies, reflecting the pattern of trade in each Colony. The table also reports the average rate of duty on goods which are “free of duty”. Several of these goods were subject to duty in some colonies before federation.

The ranking of the colonies in terms of the average tariff duty on all major imports is, in descending order, Tasmania, Western Australia, Queensland, South Australia, Victoria and New South Wales. The average for the two colonies of Western Australia and Tasmania is inflated by the inclusion of the goods group, spirits. In these two colonies there were no excise duties on this product group because there was no production in the colonies of spirits at the time but there were very high ad valorem equivalent rates of duty on imports; 175.2 per cent in Western Australia and 230.2 per cent in Tasmania.

These rates can now be compared with the average rate on the same list of major import goods into the Australian Commonwealth after federation. For all major import goods, the average duty across all six colonies before federation is 10.8 per cent. This compares with the average duty on the same goods after federation of 13.5 per cent. For all dutiable goods in the list (as classified by the goods’ status in 1903), the average duty across all six colonies is 13.1 per cent. This compares with the average duty on the same dutiable goods after federation of 17.5 per cent. The second measure is the preferred index of average tariff levels.

Thus, the main result of this somewhat elaborate exercise in determining the average duties on imports from Other Countries is that the average duty on dutiable imports rose after federation by about 34 per cent. This is consistent with the judgement of Forster (1977) that “for the colonies as a whole the tariff was raised significantly” but it adds a quantitative magnitude to his qualitative view.

This estimate may understate the increase in levels of protection for another reason. It is effective tariff rates rather than the nominal rates reported above which distort the production allocation in the national economy. Effective rates are determined by the levels of tariffs on intermediate goods used as inputs in the production of downstream goods as well as the levels of tariffs on the outputs. Coghlan (1904, p. 284) notes that the proportion of goods on

the free list in the Commonwealth is lower than that in all colonies except Tasmania. But it is not the number of goods on the list which matters. Some are final goods (for example, tea and kerosene) and some are minor intermediate inputs. In the list of major articles imported into the Colonies from Other Countries in Appendix Table 2, some are intermediate inputs; for example, Iron and Steel (free) and Iron and Steel – Galvanized, Agricultural Implements and Timber, Dressed. For most of these, the rates of duty decreased on average after federation. Furthermore, the abolition of inter-Colony tariffs lowered the price of important colonial inputs; Live Animals, Sugar, Wheat, Agricultural Implements, Mining Machinery and Coal were all subject to substantial tariffs in several colonies before federation. In both cases, more free access increased the effective rates of protection for goods produced in Australia, given the levels of tariff rates on the outputs.

4. Customs union: The abolition of inter-Colony tariffs

The Australian Constitution provides that trade shall be free among the States. In fact, restraints on inter-State trade are doubly prohibited by the Constitution. Section 92 provides that “On the imposition of uniform duties of customs, trade, commerce and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free”. This prohibits the State and Commonwealth Governments from restricting inter-State trade. Section 90 provides, again after uniform duties have been imposed, that the powers to impose duties of custom are reserved exclusively for the Commonwealth. This prohibits the State Governments from restricting inter-State trade.

Hence, all tariffs on inter-State trade have been zero since the new Commonwealth tariff rates took effect on 8 October 1901.⁸ Any assessment of the effects of abolishing tariffs on inter-Colony trade requires a measure of the average duty levied by Colonies on imports from the Other Colonies before federation. Over the five years before federation, 45 per cent of the total imports into the colonies from all sources were recorded as coming from Other Colonies (Commonwealth Year Book No. 1, p. 526, column 2). It is important, therefore, that the extent of the liberalisation of this trade at federation be quantified.

The commodity mix of imports from the Other Colonies into each Colony may have been very different than that of imports from the Other Countries. For the purpose of identifying the restraints on inter-colonial trade, it is desirable to identify the major goods which were traded between the colonies and which are of colonial origin.⁹ This can be done for the three Colonies of Victoria, Western Australia and Queensland.

For these three colonies a list of major goods imported from Other Colonies and of colonial origin was compiled by inspection of trade data under each article in each of these colonies. The goods selected were those for which annual imports from Other Colonies and of “Australasian” origin were over £50,000 in at least one of these colonies in the year 1900. There are 16 goods on this list. None of the excisable goods were traded in sufficient volume to make the list of major goods imported from Other Colonies.

Only two of the 16 goods, Sugar and Agricultural Machinery, are common to the list of major goods imported from Other Countries. Sugar was imported into Victoria and the other colonies excluding the main producing Colony, Queensland, from both Queensland and Other Country sources, principally Mauritius and Java. Agricultural Machinery was imported into the colonies from both Other Colonies and Other Countries, principally from the UK and USA. This is a strong verification of the very different, almost disjoint, sets of goods imported from Other Colonies and from Other Countries.

13 of the 16 goods were land products. Indeed, all of these were farm products, apart from Coal. Two of the other three goods were inputs into land production, Mining Machinery and Agricultural Machinery. The five big items in terms of the value of inter-colonial trade were Wool, Live Animals, Sugar, Coal, and Hides and Skins in that order. However, the relative importance of these goods and other goods on the list varies considerably from colony to colony.

The tariff rates for the selected goods are reported in Appendix Table 2 for each colony. Most of the non-zero rates were specific. These have been converted into ad valorem equivalent rates.

In New South Wales only one of the 16 goods was subject to import duty, Sugar (raw and refined). Sugar was produced in New South Wales on a much smaller scale than in Queensland, the only other sugar-producing colony, and the tariff was protective. In Victoria, 9 of the goods were free of duty.¹⁰ The highest rate of duty was that levied on raw and refined sugar but in this colony this was a revenue tariff. In contrast, the other four smaller colonies imposed tariffs on most goods imported from other colonies, including most farm products. Many of the rates were substantial. Only two of the major goods traded among the colonies were free of duty entering all colonies – Wool and Hides and Skins.

The column averages for each Colony are the averages calculated using the current import weights, that is, the share of each good in the aggregate imports of all 16 goods in that Colony in 1900. For Victoria, the average for all major goods imported from the Other Colonies was 4.5 per cent and for New South Wales it was 3.7 per cent. The NSW average is not much less than that of Victoria, despite the tariff rates being lower on all goods in the list, because of the much higher weight in New South Wales trade to the good with the highest rate, Sugar. For the other four colonies, the average rate on imports of these goods from the Other Colonies is higher than those in Victoria and New South Wales. Western Australia and Tasmania in particular imposed high rates of duty on many imports from the Other Colonies of the major traded goods.

Finally, the average tariff on all major goods traded among all six colonies can be calculated, weighting the average for each Colony by its share of the total trade among the colonies. This rate was 6.6 per cent. It was substantially less than the comparable average for all major goods imported into the colonies from Other Countries, which was reported above as 10.8 per cent. This comparison reveals that the bundle of goods traded among the colonies were generally subject to lower rates of duty than the rather different bundle of goods imported from Other Countries. The overall conclusion is that, with the clear exception of sugar, tariff rates were not a substantial discouragement of inter-Colony trade at the time of federation.

How can this result be reconciled with the enormous attention devoted to restraints on inter-colonial trade in the political debate about federation in the second half of the 19th century? First, the transport of goods up the Murray from South Australia diminished after the end of the Gold Rush. Data in Appendix Table 2 show that the goods traded among the colonies in 1900 were land products that were traded across the Murray and, for the more distant colonies via seaports. A second possible explanation is that the main trade-restricting effect of pre-Federation tariff on imports from the other colonies was the cost of compliance and trade discouragement resulting from all inter-Colony imports having to go through customs houses and procedures. Today, in the language of the World Trade Organisation, we call these trade costs and the elimination of these costs is called trade facilitation.

5. Harmonisation of the excise rates¹¹

New South Wales introduced the first excise tax, a tax on spirits produced locally (“colonial” spirits) in 1819. This applied also to production in the areas of Victoria, Queensland and

Tasmania (then Van Diemen's Land) which were then all part of the Colony of New South Wales but not of course to production in the other two colonies. Geographically, excise taxes then spread as local production of goods subject to excise taxation increased, directly as a result of the high tariff which restricted competition from outside the Colony. South Australia introduced an excise tax on spirits in 1842. Tasmania and Western Australia were the last colonies to introduce excise taxes in 1880 and 1898 respectively. Hence, at federation each of the colonies had its own excise taxation system, just as it had its own tariff system.

Table 4 reports the goods subject to excise taxation and the excise duty rates in each of the six colonies in 1900, immediately before federation. At this time only two product groups were subject to excise taxation: the alcoholic beverages spirits and beer (but not wine), and tobacco and tobacco products. Western Australia, South Australia and Tasmania levied no excise on tobacco and tobacco products as there was no production of these products in these colonies. Western Australia and Tasmania levied no excise on spirits. In both product groups, where they were applied, different rates were levied on different products within the groups. For this reason the alcoholic beverages group has been split into Beer and Spirits in the table. All excise duties were based on domestic colonial production of the products and all the rates were specific.

While the rates on each product, where they existed, varied from colony to colony, they were within a moderately narrow range. The rates on beer ranged from twopence in South Australia and Western Australia to fourpence in Tasmania. The rates on spirits ranged from eight shillings in South Australia to 14 shillings in New South Wales.

At federation the constitution of the new Commonwealth Government provided that, upon the imposition of uniform customs duties, the Commonwealth gained exclusive power to impose excise duties and that these rates should be uniform among the States¹². The Excise Tariff Act 1902 introduced excise on goods subject to the tax from October 1901, the same time as the application of new Commonwealth tariff duties on imported products. Hence, as with tariffs, uniform Commonwealth excise duties replaced non-uniform colonial excise duties.

The last row of Table 4 reports the rates of excise duty imposed by the Commonwealth in the year 1903. 1903 is the chosen year of the federation era as this is the first full year in which

the new tariff rates as laid down in the Custom Tariff Act 1902 applied. This choice enables comparison of the Commonwealth excise duty rates with the Commonwealth tariff duty rates on the same products.

The Commonwealth imposed excise duties on the same products groups as those which had been subject to excise taxation earlier by the colonies. In debate on the Excise Tariff Bill in the House of Representatives, the Minister for Customs and Excise stated the principle that the Commonwealth did not wish to introduce excise taxes on any new commodities as it did not wish to introduce a new impost on Australian industries, with the special exception of the sugar excise (which is discussed below) (Commonwealth Parliamentary Debates, House of Representatives, 6 February 1902, vol. VIII, p. 9787.)

The Commonwealth did introduce new excise taxes on starch and manufactured sugar. The duty on starch was a revenue duty but it collected little revenue and was abolished in 1927. Unlike the other excise duties, the sugar excise duty was not a revenue duty. It was a levy on domestic producers of manufactured sugar to pay a bounty on all sugar cane delivered for manufacture in the production of which white labour only had been employed. This bounty was an inducement to the State of Queensland to join the federation as most Melanesian labourers (“kanakas”) that had been used in the cane fields of Queensland were repatriated after federation. The rates of excise duty on these two products have not been reported in Table 4. All Commonwealth excise duties were based on Australian production of the products and all rates were specific.

These initial Commonwealth excise duty rates in Table 4 can be compared with the pre-Federation rates in the six colonies in the table. For beer, ignoring the very small amounts collected for beer brewed exclusively from barley and hops, the Commonwealth rate (threepence) is the same as that levied in the more populous Colonies of New South Wales, Victoria and Queensland, with South Australia and Western Australia levying a duty of one penny less and Tasmania a duty of one penny more. Hence the rate is about equal to the average Colonial rate. For spirits other than brandy, which collected the great bulk of the revenue from spirits, the Commonwealth rate of 13 shillings per proof gallon is lower than the New South Wales rate (14 shillings) but higher than the rates in Victoria (10 shillings), Queensland (12 shillings) and South Australia (8 shillings). On the other hand, the rate for brandy (11 shillings) is in the middle of the Colonial rates applying to this liquor. For the

group as a whole, again, the Commonwealth rates are about the same as the average of the colonial rates. For Tobacco and Tobacco Products, the Commonwealth rates for Manufactured Tobacco and for Cigars and for Cigarettes are all in the middle of the range for the three Colonies that levied excise on these products.

Over all three product groups, one can conclude that the Commonwealth harmonised the rates at about the mid-point of the colonial rates that were applied just before federation. This must have been a deliberate policy but I have found no reference to it. The Minister of Customs and Excise had the responsibility for tabling the Tariff and Excise Bills in Parliament. When introducing the Tariff Bill he gave a lengthy explanation of the structure of the tariff rates in the bill and the reasons for it but no such explanation of the rates was provided when the Excise Bill was introduced.

The excise tax system interacted with the tariff system. In the colonial era, when a good was subject to an excise tax, the like good when imported was subject to a customs tariff. The same has applied in the Commonwealth era. This system of excise cum customs taxation imposes a set of taxes based on consumption of the products. However, the rates of customs duties which were levied on imported products were not generally the same as the rates of excise duties levied on the home-produced product. In both the colonial and commonwealth eras the rates of tariff duty have been higher than the corresponding rates of excise duty on the like product in most cases. In no case have they been lower. The difference between the tariff duty rate and the excise duty rate on a like product is a margin of protection which is comparable to the tariff on a non-excisable tariff item.

When the Tariff Bill and the Excise Bill were debated in the Commonwealth Parliament, there was lengthy debate about the levels of tariff duty being above the levels of excise duty for corresponding items. (See Commonwealth Parliamentary Debates [Hansard], House of Representatives, vol. VIII, 6 February 1902, pp. 9771-9813). This was opposed by representatives from the State of New South Wales who wished the tariff duty rates to be set at the same levels as the excise duty rates, as they had been in pre-Federation New South Wales. However, the Commonwealth Government wished to have a margin of protection for excisables, as there had been in Colonies other than New South Wales. This was part of the Government's policy of maintaining protection for existing industries and the principle was adopted by Parliament.

Lloyd (2014) calculates these margins for excisable products and expresses them in ad valorem equivalent terms for both the Colonies in 1900 and the Commonwealth in 1903. These adjusted ad valorem equivalent tariff rates were used when excisable products appeared in the product lists used to calculate average tariff levels in Sections 3 and 4 above.

6. Commonwealth-State financial relations in the fiscal union

The late 19th century debate about federation led eventually to the National Australasian Convention. This met first in 1891 and then in other sessions up to 1898 to consider federation and at the end to draft the constitution. In their authoritative and contemporary survey of the Constitution, Quick and Garran (1901, p. 188) described the discussion of the “financial clauses” of the Constitution being drafted in the following terms:

“The great central difficulty was to formulate – while the nature of the federal tariff, and its operation, were still unknown quantities – some scheme of distributing the federal surplus which would not only be fair in itself, but would guarantee all the states against any dislocation of their finances. This difficulty arose out of the widely-differing character of the existing tariffs of the colonies, and the differing degrees of their dependence on customs and excise revenue... The two problems were to guarantee that there would be a large surplus to distribute, and to find a basis of distribution which would meet the needs of all the colonies.”

The first of these two problems was resolved by the adoption of the “Braddon Clause”, named after the then Premier of Tasmania, an ardent federalist. He proposed the clause at the Constitutional Convention of 1897 as a form of “guarantee” of sufficient revenues to the States after other forms had been rejected. This clause stipulated that at least three-quarters of the Commonwealth’s net customs and excise revenue should be returned to the States. The clause became Section 87 of the constitution. Its term was limited in operation to ten years because of opposition from the Colony of New South Wales.

This clause called for a level of customs and excise duties that was considered sufficient in the aggregate to finance the activities of the States that had lost the power to impose customs and excise duties. The details of the levels of individual duties were to be determined by the Commonwealth after federation. Under the constitution a period of two years was allowed before the uniform tariff duties became compulsory. The calculations of the Commonwealth

were laid out in the Budget session of the 1901 Parliament by the Treasurer and the Minister of Customs and Excise. These are described in detail in speeches to the House of Representatives by the Treasurer in the Budget Session of 1901 and the associated Budget Papers. The Commonwealth estimated the annual value of imports into the Commonwealth (after subtracting the estimated inter-State trade and the value of imports on the free list and gold and government stores, then estimated the revenue from customs and excise duties levied on the excisables (“stimulants and narcotics”). The tariff rates on the remaining dutiable goods were then adjusted to give the required revenue. The structure of these rates reflected the twin objectives of revenue collection and the protection of goods already protected by the colonies, and the compromises after pressures from individual States.

The second distributional problem led to proposals at the National Australasian Convention for distribution of revenues among the states. Some colonies suggested that the distribution be based on revenues collected in each state and some that it be based on population, that is, an equal *per capita* payment. New South Wales strongly opposed the latter. It argued that with lower pre-Federation tariff rates than the other colonies, it would, before adjustments to the new tariff rates, contribute more to the Commonwealth revenue than it would receive in return. As a compromise, South Australia put forward a “sliding scale” that began with a contribution basis and slid over five years to a population basis. The problem was resolved by the adoption at the Convention in 1897 of the principle that, for an interim period after federation, the distribution of combined net customs and excise revenues to the States should be in exact proportion to the contribution of the individual States to that revenue. In the constitution, under Sections 89 and 99, arrangements provided for the distribution of the surplus of these revenues to the States in the period prior to the imposition of uniform customs duties and then for the first five years after that. These arrangements credited each State with the customs and excise revenues collected in the State and debited the expenditures incurred in connection with departments transferred from the States to the Commonwealth and its share on a population basis of the new expenditures of the Commonwealth. There was an additional provision, under Section 95, applying to Western Australia because of the exceptional circumstances of that State, including its large and immediate loss of tariff revenue with the abolition of duties on trade among the States. It was, along with the other small colonies of Tasmania and South Australia, one of the three colonies where, before federation, more than one half of its imports came from other colonies (Commonwealth of

Australia, 1908, p. 526) and it levied the highest average tariff rate on inter-colonial imports apart from Tasmania (Appendix Table 2 below).

These two principles were designed to give each State about the same revenues to pay for the expenditures it retained after federation as it would have received without federation.

After the interim period, Section 94 stated that the Parliament “may provide, on such basis as it deems fair” for payment each month to the States. A series of Inter-State Conferences were held from 1906 to 1909 to consider the replacement of the interim provisions for the distribution of the surplus Commonwealth revenue. In the meantime, a legal dispute arose between the States and the Commonwealth. The Commonwealth moved to reduce the surplus by paying revenues into a Trust Fund. This was done in order to build up reserves to guarantee the payment of old age pensions under the Commonwealth old age pension scheme which passed Parliament in 1908 and began payments on 1 July 1909. The States objected but the Commonwealth action was upheld by the High Court. In August 1909 a conference between the Commonwealth and the States reached a new agreement that was approved by a subsequent referendum. The enabling legislation, the Surplus Revenue Act 1910, introduced the new financial arrangements between the Commonwealth and the States. These gave the Commonwealth the whip hand and effectively made Section 94 a “dead letter” (McMinn, 1979, p. 133). They scrapped the Braddon Clause and the old method of distribution of surplus revenues, substituting in their place a distribution to each State of “an annual sum amounting to twenty-five shillings per head of the number of people of the State”. The arrangement applied for a period of ten years beginning 1 July 1910. It was to be the first of many changes in the formula for the annual payments from the Commonwealth to the States.

These financial arrangements reflected the reliance of the colonies before federation and the Commonwealth after federation on customs and excise taxes as their principal source of revenue.

7. Conclusions

The four aspects of fiscal union considered here are intimately connected. The federation had to provide revenues to the new State governments which would enable them to continue the functions and associated expenditures reserved for the States under the constitution. Customs and excise taxes were the main source of taxation revenue for the new Commonwealth government, as they had been for the colonial governments. The arrangements agreed upon

for the Commonwealth-State financial relations largely determined the levels of the customs and excise duties when these were harmonised among the States.

The Commonwealth-State financial arrangements were designed to give each State about the same revenues to pay for the expenditures it retained after federation as it would have received without federation. The Commonwealth also had to fund the new Commonwealth level of Government. This necessitated an increase in the general level of the rates of combined customs and excise duties above that of the colonial period. One might say that this increase in commodity tax levels was the “cost of Canberra”.¹³ (The Commonwealth also had to make up for the loss of the customs revenue formerly collected on inter-colonial trade.) The Commonwealth chose to generate the increase in combined customs and excise tax revenues by increasing customs duty rates while maintaining the excise duty rates at about the average of these rates in the six colonies before federation. The outcome of the resulting harmonisation of the customs duty rates at federation was that the average rate of customs duty on dutiable imports, the preferred measure of the average level of these duties, rose after federation by about 34 per cent; from about 13.1 per cent in the colonies to about 17.5 per cent in the new Commonwealth. On major goods traded among the colonies before federation, the average rate of customs duty was only 6.6 per cent. These rates were not themselves a major deterrent to inter-colonial trade. However, the customs procedures were an irritant to inter-Colony traders and played a major role in the debate that led ultimately to federation.

Together the four aspects of fiscal union laid the foundations of trade policy, excise taxation and Commonwealth-State financial relations for the future Commonwealth of Australia.

With respect to trade policy, the new tariffs set the Commonwealth on a path of higher levels of protection than had applied in the colonies. Dissatisfaction by manufacturers with the levels of protection in the Australian Tariff led quickly to the appointment of a Royal Commission on Customs and Excise Tariffs and soon after to a new and more protective Tariff, the Lynne Tariff of 1908 (see Reitsma, 1960, chapter II).

The Commonwealth Tariff also inherited other features from the tariff schedules of the Colonies. One was a general propensity to exempt from duty goods which were used as intermediate inputs in the production of other goods. This was a feature of the tariff schedules of all colonies other than New South Wales. It had the effect of raising effective rates of protection in both the colonies and the Commonwealth. Another inherited feature

was the complex differentiation within product groups or industries of tariff levels. All colonies other than New South Wales had a complex pattern of different rates within product groups such as live animals, timber and iron and steel products.

The changes in tariff rates upon federation varied among the States because of the wide differences between their tariff schedules before federation. New South Wales had the largest increase on average duty rates. Although not quite the “free trade” Colony it is often portrayed as, it had the lowest levels of tariffs of all six colonies by a wide margin. For Victoria, my estimates of the average tariff rate on major imports from Other Countries are that these rates rose slightly after federation. This holds for both All Imports and Dutiable Import categories (Table 3 and Appendix Table 1). Offsetting this rise in Victoria, as in other States, was the abolition of tariffs on imports from the Other Colonies; my estimates show that imports from the Other Colonies into Victoria were, on major items, 4.5 per cent. The changes in tariff barriers to imports from Other Countries were small, on average, for Queensland and South Australia. Tariff rates on imports from Other Countries fell substantially in the States of Western Australia and Tasmania but most tariffs in these two States were revenue duties and many were levied on inter-colonial imports.

With respect to excise taxation, the exclusive reservation of the power to levy these taxes to the Commonwealth Government had far-reaching effects on the evolution of the Australian fiscal system. Quick and Garran (1901, p.854) noted presciently that the extent of this provision depends upon the meaning assigned to the term “excise”. A broader interpretation limits the powers of the States with respect to commodity-based taxation. This is how it turned out in Australia. After federation, decisions of the Australian High Court have interpreted the term very broadly with the result that the States have been prohibited from introducing sales taxes, value added taxes and other commodity taxes as alternative sources of revenue.

With respect to Commonwealth-State financial relations, the initial basis of distribution of the surplus Commonwealth revenues did not survive the review five years after tariff harmonisation. The distribution changed from a revenue collection to a population basis, though this change too did not endure.

Collectively the “fiscal union” features of federation laid the foundation for the regulation of much of the Australian economy.

Appendix 1

Choice of Index to Measure the Average level of Tariffs

The individual colonies before federation and the Commonwealth after Federation each had a structure of tariffs on imported goods with a high degree of differentiation in the tariff rates. Within any one jurisdiction, when all tariff rates are expressed in ad valorem terms, the distribution of these rates varies widely from zero to high numbers, a few in excess of 100 per cent. A scalar measure is needed to summarise the distribution. There are a number of possible measures of the average level of tariffs in a distribution to choose from.

Consider one jurisdiction, say the Commonwealth. The choice of a statistic to measure the level of tariffs is an index number problem that has vexed Australian statisticians and economists since Federation. The first calculations of the average rate of duty in the Commonwealth were in the official *Year Book* of the Commonwealth for the year 1906. This estimated the average rate of duty on all merchandise imports. The average was calculated as the total duty collected divided by the total value of imports, expressed as a percentage. The duties included all specific and ad valorem rates of duty. For 1906, the number was 17.5 per cent (Commonwealth of Australia, 1908, p. 523).

By simple manipulation, this measure is shown to be the arithmetic mean, using actual import shares as weights:

$$\begin{aligned}
 T &= \frac{\sum_{i=1}^n \tau_i m_i}{\sum_i p_i^* m_i} = \frac{\sum_{i=1}^n t_i p_i^* m_i}{\sum_i p_i^* m_i} \\
 &= \left[\sum_{i=1}^n t_i w_i \right] \quad \text{where } w_i = p_i^* m_i / \sum_i p_i^* m_i
 \end{aligned} \tag{1}$$

τ_i is the specific (or specific equivalent) tariff rate; most rates were specific. t_i is the ad valorem equivalent rate (τ_i / p_i^*) on good i . p_i^* is the border price of commodity i and m_i is the quantity imported of this commodity. n is the number of goods imported. In index number terms, T is a Paasche index number with current period weights.

Australian economists have long questioned the use of this index and explored a number of alternatives (see Brigden Committee, 1926, Appendix B; Crawford, 1935 and Carmody, 1952). The usual objection was that the use of actual import weights biases the index downwards because the quantity imported of the commodities with high tariff rates in the

upper tail of the distribution and, consequently the weights for these commodities, are reduced. If a high tariff rate is prohibitive, the weight is zero.

There is a second problem with this measure at the lower end of the distribution of rates. Many commodities in 1903 entered the Commonwealth free of duty. These were either final goods that were not produced in Australia or intermediate inputs into the production of other commodities in Australia which were not competitive with Australian-produced goods. As an alternative measure of the protective effects of tariff rates, the Year Book also reported the average rate of duty on the subset of dutiable imports only, excluding all goods imported free of duty. For 1906, this number was 27.1 per cent, substantially higher than the average rate on all merchandise.

These index number problems were not resolved until recent developments in tariff theory around the concept of the Trade Restrictiveness Index (Anderson and Neary 1994, 2005). The main insight of this theory is to define the average tariff rate as that uniform rate which replicates the effect of the differentiated tariffs on some variable.

They also show that the appropriate index depends on the choice of variable. If one is interested in the effects of a tariff regime on the national welfare (itself measured by some index), one gets one TRI index but if one is interested in, say, the effect on the volume of imports, one gets a different index. The index resulting from the first choice is known in the literature as the Trade Restrictiveness Index (TRI) and the second was called by Anderson and Neary the Mercantilist Trade Restrictiveness index or MTRI for short.

The volume of imports, or more precisely the aggregate value of imports in constant prices, is here taken as the appropriate choice of target variable. Most of the Australian literature concerned with the analysis of the effects of harmonisation in the first Australian Tariff is concerned with the effects on the level of imports; for example, Coghlan (1904) and Forster (1977). Irwin (2006) takes bilateral trade as the dependent variable in his models. (In recent decades, the main interest in Australia has been in the effects of industry assistance on welfare which calls for the use of the TRI.)

The choice of the volume of imports as the variable under investigation implies that the MTRI is the appropriate form of the average. The general equilibrium version of the MTRI is not available for the period of federation. Consequently it is useful to begin with the partial

equilibrium version of the MTRI. This is given by the expression (Anderson and Neary, 2005, p. 21),

$$T = \left[\sum_{i=1}^n t_i v_i \right] \quad \text{where } v_i = p_i^{*2} dm_i / dp_i / \sum_i p_i^{*2} dm_i / dp_i \quad (2)$$

The expression in Equation (2) is the theoretically-correct (partial equilibrium) choice of index when concerned with the effects of tariffs on the volume of imports. It is the arithmetic mean with weights, v_i , that reflect the marginal changes in the quantities imported in response to price changes brought about by the tariff rates. One can rewrite the weights as

$$v_i = \varepsilon_i^*(p_i^* m_i^*) / \sum_i \varepsilon_i^*(p_i^* m_i^*) \quad (3)$$

$\varepsilon_i^* < 0$ are the elasticities of the import demand function at the free trade point. $(p_i^* m_i^*)$ are the values of imports in the free trade situation. This index differs from that in Equation (1) mainly in that it uses weights with the value of imports in the free trade situation rather than the actual trade situation. This corrects the bias in the standard measure due to the underweighting of goods with high tariffs.

The MTRI is an average of the nominal rates of tariff. Yet, tariff theory tells us that, from the point of view of the effects of tariffs on production, it is the effective rates which determine primary resource allocation. In the general equilibrium form of the MTRI, there is no contradiction. The general equilibrium MTRI captures all of the effects of differences between tariff rates on outputs and tariff rates on inputs, such as those in Australia because of zero rates on many inputs. However, the partial equilibrium form explored here has ignored the cross-market effects due to the use of inputs of other goods in the production of most commodities.

Lloyd and MacLaren (2010, Equation (22)) have developed a “semi-general equilibrium” form of the MTRI index which adds cross-market effects due to input-output relationships to the own market effects of the partial equilibrium expression. This is a big step towards the general equilibrium expression but it does not require a cge model. When tariffs are the only form of industry assistance, this is given by the expression

$$M^S = \left[\left(\sum_i t_i c_i \right) (a) + \left(\sum_i g_i e_i \right) (b) \right] \text{ where } c_i = p_i^{*2} dx_i / dp_i / \sum_i p_i^{*2} dx_i / dp_i \text{ and}$$

$$e_i = p_i^{*2} du_i / dp_i / \sum_i p_i^{*2} du_i / dp_i \quad (4)$$

t_i is the ad valorem tariff rate and g_i is the effective tariff rate on good i . x_i and u_i are the quantities consumed and value-added of good i .

This semi-general equilibrium form has split the import effects in the MTRI (Equation (2)) into separate consumption and production effects and added input-output effects on production. This expression shows that the appropriate form of the semi-general equilibrium MTRI is a combination of the effective rates, which determine the effects of a tariff structure on production, and of the nominal rates, which determine the effects on consumers. In each component, the commodity weights c_i and e_i attached to the nominal and effective rate for good i reflect the marginal changes in the quantities consumed and value-added respectively in response to price changes brought about by the tariff rates. a and b then weight the consumption and production components of the index by the shares of the consumption and production response respectively in total import responses.

Estimates of this semi-general form of the index are not available for the federation period because of the absence of input-output coefficients. However, this semi-general equilibrium form does indicate that the form of the import-weighted mean which is restricted to averaging the tariff rates across dutiable imports only is preferable to the form which averages tariff rates across all goods, including those which are duty-free. The average tariff rate on dutiable imports is given by the index

$$D = \left[\sum_{i=1}^d t_i w_i \right] \text{ where } w_i = p_i^* m_i / \sum_i p_i^* m_i \quad (5)$$

Here $d < n$ is the number of goods subject to a strictly positive rate of duty. The index D is closer to the MTRI than the arithmetic mean rate for all imports. Comparing equation (5) with equation (1), the index for all imported goods, the former is obviously greater than the latter because of the exclusion of duty-free goods. Comparing equation (4) with equation (1), the semi-general equilibrium form is also greater than the common index in equation (1) because the production component uses the numerically greater effective tariff rates rather than the nominal tariff rates. The average duty on dutiable imports only is as close as we can get to the theoretically-correct MTRI in the absence of a cge model.

Appendix 2. A Note on Import Data in the Colonial Period.

Import data in the late colonial period are surprisingly detailed and rich in all colonies but it was collected by the Colonial administrations in ways which lack consistency and do not allow us to separate accurately trade flows among the colonies from trade flows with foreign countries. The Statistical Registers (SRs) for all six Colonies recorded details of imports at the individual tariff item level or “articles” as they were called then. For each article, they recorded the source of imports, “countries whence imported” (including the six colonies which now comprise the Commonwealth of Australia). Imports of each article from each source were cross-classified by the quantity (where available), value of imports and duty collected.

The basic problem is that all data were collected for “General Imports”, i.e. imports both from the Other Colonies and from Other Countries combined. The latter was referred to at the time, a little inaccurately, as “overseas” trade.

The data on the value of trade and customs duty collected need to be separated into data from trade with Other Countries from that with Other Colonies. Then tariff levels for trade with Other Countries and for inter-Colony trade could be computed separately. These former average tariff rates would be comparable with the average tariff rates in post-Federation years.

In each colony, further detail is available for each article but the detail varies among the colonies. In Victoria, imports from each of the Other Colonies are broken down further into those which are “Australasian” and those which are “Other”. The latter are goods which originated in another country then entered another colony and then were transported to the colony recording the imports. “Australasian” imports are goods which are manufactured or produced in another colony, that is, they are colonial in origin. Queensland and Western Australia provides a simpler two way split between imports which are “British and Foreign Produce” and those which are “Australasian Produce” or “Produce of the Australasian Colonies”. On the other hand, New South Wales, South Australia and Tasmania merely provide the source for each article. There is no further breakdown according to the origin of the goods imported.

Looking at the data, one finds in Victoria, for example, 13 of the goods in Table 2 have no imports originating in Other Colonies and in the other colonies the percentage originating in Other Colonies is less than 10 per cent with the sole exception of sugar. Similarly, in the case of the other two colonies which do provide a further breakdown according to the colonial/non-colonial origin of the imports, Queensland and Western Australia, the ad valorem rates of duty for the selected goods were also calculated for imports of “British and Foreign Produce” only. These ad valorem rates differ very little, and in some cases not at all, from the ad valorem rates calculated for imports from all sources. The latter data set is available for all colonies and is used for the calculation of the ad valorem equivalent tariff rates in Table 2,

Similarly, in the inter-colonial imports of Victoria, Western Australia and Queensland, it is possible to identify the major goods which were traded among the colonies and which are of colonial origin. The inclusion of imports from New Zealand in the goods of “Australasian” origin, which was then one of the “Seven Colonies” but became one of the Other Countries after federation, overstates the Australian content but this error is very small. For many articles, “Australasian” imports are broken down again into imports which entered “Overland” and those which entered “Seaward” but this breakdown has not been used in this study.

For New South Wales, the absence of data on imports from the other colonies which are of colonial origin does not matter as imports of all the major commodities imported from Other Colonies were free with the exception of sugar where the imports from Queensland are certainly of colonial origin.

For the other two colonies, South Australia and Tasmania, the ad valorem rates of duty for the major goods traded among the colonies have to be calculated for imports from all sources. However, a comparison of the rates for a sample of goods imported into the colonies of Victoria, Western Australia and Queensland again showed little difference between the rates calculated on the basis of all imports from the Other Colonies and those calculated on the basis of imports which entered from Other Colonies and which were of colonial origin.

Coghlan (1904, p. 284) reports the average duty on imports of dutiable goods only from foreign countries for each colony but only for one year, 1900. It is not clear what these statistics are exactly as the colonies did not define trade with Other Countries on a consistent basis.

REFERENCES

- Allin, C. D. (1918), *A History of the Tariff Relations of the Australian Colonies*.
Minneapolis: University of Minnesota Studies in Social Sciences No. 7.
- Anderson, J. E. and Neary, J. P. (1994), "Measuring the Restrictiveness of Trade Policy",
The World Bank Economic Review, 8, 151-169.
- Anderson, J. E. and Neary, J. P. (2005), *Measuring the Restrictiveness of International Trade Policy*. Boston: MIT Press.
- Boehm, E. A. (1965), "Appendix: Unrecorded Transshipments in Australia's Trade of the Nineteenth and Early Twentieth Centuries", *Economic Record*, 41, 232-39.
- Coghlan, T. A. (1904), *A Statistical Account of Australia and New Zealand*. Sydney: Government Printer.
- Commonwealth of Australia (various), *Year Book of the Commonwealth of Australia*.
- Feenstra, R. C. (1995), "Estimating the Effects of Trade Policy", in G. N. Grossman and K. Rogoff (eds.), *Handbook of International Economics*, volume 3. Amsterdam: Elsevier.
- Forster, C. (1977), "Federation and The Tariff", *Australian Economic History Review*, 17 (2), 95-116.
- Greenwood, G. (1946), *The Future of Australian Federalism*. Melbourne". Melbourne: Melbourne University Press.
- Irwin, D. A. (2006), "The Impact of Federation on Australia's Trade Flows", *Economic Record*, 82, 315-324.
- Lloyd, P. J. (2008), "100 Years of Tariff Protection in Australia", *Australian Economic History Review*, 48, 99-145.
- Lloyd, P. J. (2014), "Excise Tax Harmonisation in Australia at Federation," University of Melbourne Department of Economics.
- Lloyd, P. J. and D. MacLaren (2010), 'Partial and Semi-general Equilibrium Measures of Trade Restrictiveness', *Review of International Economics*, 18 (5), 1044-57.

- McMinn, W. G. (1979), *A Constitutional History of Australia*. Melbourne: Oxford University Press.
- Patterson, G. D. (1968), *The Tariff in the Australian Colonies 1856-1900*. Cheshire: Melbourne.
- Patterson, G. D. (1962), "The Murray River Border Customs Dispute, 1853-1880, *Business Archives and History*, 2 (NO.2), 122-36.
- Pelkmans, J. (1997), *European Integration: Methods and Analysis*. Harlow: Addison Wesley Longman Ltd
- Pincus, J. (1995), Evolution and Political Economy of Australian Trade Policies", in R. Pomfret (ed.), *Australia's Trade Policies*. Melbourne: Oxford University Press.
- Quick, J. and R.R. Garran (1901, reprinted 1976), *Annotated Constitution of the Australian Commonwealth*, facsimile edition. Sydney: Legal Books.
- Rietsma, A. J. (1960), *Trade Protection in Australia*. Brisbane: University of Queensland Press.

Table 1. Average Tariff Duty Rates on Imports from All Sources, All Colonies, 1900

Per cent

Colony	Average Duty on All Merchandise Imports from All Sources	Average Duty on All Merchandise Imports from All Sources, excluding Matching Excise Revenue
New South Wales	6.1	2.1
Victoria	11.8	9.5
Queensland	19.8	19.4
South Australia	7.1	6.3
Western Australia	15.9	15.8
Tasmania	22.4	22.4
All Colonies	10.8	8.6

Source: Author's calculations.

Note: All revenues used in the numerator are net of Refunds and Drawbacks and all values of total import trade which were used in the calculations are net of imports of Gold and Bullion.

Table 2. Ad Valorem or Ad Valorem Equivalent Tariff Rates on Imports of Major Items from Other Countries, All Colonies, 1900 and the Commonwealth of Australia, 1903

	All Imports	“Dutiable” Imports	“Free of Duty” Imports
New South Wales	3.2	3.8	2.0
Victoria	12.1	14.5	6.1
Queensland	16.1	15.0	19.9
South Australia	12.2	14.1	8.2
Western Australia	22.9	30.5	19.9
Tasmania	34.2	36.9	22.9
Average- Six Colonies	10.8	13.1	5.2
Commonwealth of Australia	13.5	17.5	0.0

Source: Appendix Table 1

Table 3. Ad Valorem Equivalent Tariff Rates on Imports of Major Items from Other Colonies, All Colonies, 1900

Per cent

Colony	Average Tariff Rate
New South Wales	3.7
Victoria	4.5
Queensland	9.1
South Australia	5.7
Western Australia	11.7
Tasmania	19.3
All Colonies	6.6

Source: Appendix Table 2

Table 4. Excise Duty Rates in the Colonies, 1900 and in the Commonwealth, 1903

Colony/Commonwealth	Beer (per liquid gallon)	Spirits (per proof gallon)	Tobacco & Tobacco Products (per lb)
Colony			
New South Wales	3d	All spirits 14/-	Tobacco 1/3 Cigars 2/6 Cigarettes 2/6
Victoria	Brewed from: Malt and hops 2d Other 3d	Whisky 8/- Other spirits 10/-	Manufactured and snuff 9d Cigars 9d Cigarettes 1/6
Queensland	3d	All spirits 12/- Methylated colonial spirits 2/-	Tobacco 1/- Cigars 2/- Cigarettes 2/- Snuff 1/-
South Australia	2d	Spirits 8/- Fortified wines 6d Perfumed spirits 1/-	
Western Australia	2d		
Tasmania	4d		
Commonwealth of Australia	Brewed from: Malt and hops 2d Other 3d	Brandy 11/- Other spirits 13/- Methylated spirits 6d	Manufactured 1/- Cigars 1/6 Cigarettes 2/-

Source: For each Colony, the *Statistical Register* of the Colony. For the Commonwealth of Australia, the Excise Tariff Act 1902.

Notes. 1. The classification of products and their definitions differ among the Colonies. In some cases the descriptions of goods have been altered to make comparisons across Colonies plainer.

Appendix Table 1. Ad Valorem Tariff Rates for Major Articles Imported into the Colonies from Other Countries, 1900 and the Commonwealth of Australia, 1903

Major Article	VICTORIA Ad Valorem Tariff Rate (%)	NSW Ad Valorem Tariff Rate (%)	QUEENSLAND Ad Valorem Tariff Rate (%)	WA Ad Valorem Tariff Rate (%)	SA Ad Valorem Tariff Rate (%)	TASMANIA Ad Valorem Tariff Rate (%)	COMMONWEALTH Ad Valorem Tariff Rate (%)
Dutiable Imports							
Piece Goods							
Cotton & Linen	0	0	5.0	10.0	0	20.0	5.0
Silk	13.8	0	15.0	10.0		20.0	15.0
Woollen	12.2	0	15.0	10.0	12.1	20.0	15.0
Velvets	0	0	25.0	10.0		20.0	15.0
Boots and Shoes	29.5	0	19.5	16.3	60.1	20.0	9.9
Chinaware	15.0	0	25.0	15.0	20.0	20.0	20.0
Fancy Goods	10.0	0	25.0	20.0	15.0	20.0	20.0
Fish-Preserved in Tins	31.7	0	39.5	22.2	34.8	20.0	22.8
Furniture	27.0	0	25.0	15.3	25	20.0	20.0
Hats and Caps	20.9	0	18.3	14.9	15.2	20.0	21.4
Rice	23.3	0	71.4	0	18.9	71.0	38.7

Implements & Machines							
Agricultural	10.3	0	20.7	2.2	11.6	0	7.1
Iron & Steel - Galvanized	0	0	10.0	1.0	2.2	9.6	2.9
Jewelry & Precious Stones	21.7	0	21.6	20.0	14.1	20.0	18.7
Leather	2.5	0	3.0	12.6	4.0	20.0	15.4
Metals- Pipes and Tubes	0	0	0	0	12.8	10.0	20.0
Milk- Preserved	41.8	0	40.7	15.0	15.0		24.6
Paints and Colours	9.8	0	9.8	10.0	8.6	16.5	8.2
Railway Materials	0	0	0.2	0		10.0	12.5
Sugar-Produce of cane	46.9	17.7	30.9	0	12.8	41.2	50
Timber - Dressed	9.8	0	18.0	20.0	8.2	39.2	1.6
Beer (bottled and draught)	28.1	12.8	38.0	44.9	24.2	31	36.1
Spirits (brandy, gin,rum,whisky)	48.7	0	29.5	175.2	45.9	230.2	22.8
Sum - Dutiable Imports Only							
Free of Duty							
Explosives	6.6	0	0	0	0	10.0	0

Bags and Sacks, free	0	0	0	0	0	0	0
Books and Periodicals	0	0	0	0	0	0	0
Canvas	0	0	0	5	5	0	0
Iron & Steel (free)	0	0	0	0	0	0	0
Metals - Wire (excl. Barbed)	0	0	0	0	0	0	0
Kerosene	0	0	63.8	0	36.8	62.8	0
Tea	34	6.1	64	0	42.6	28.8	0
Average Tariff - All Imports	12.1	3.2	16.1	22.9	12.2	34.2	13.5
Average Tariff -Dutiable Imports Only	14.5	3.8	15.0	30.5	14.1	36.9	17.5
Average Tariff - Free of Duty	6.1	2.0	19.9	0.3	8.2	22.9	0

Source: Colonies: Statistical Registers of each Colony for the year 1900

Commonwealth of Australia: Overseas Trade 1903 (available online at AUSSTATS Historical Publications Online).

Note 1. The descriptions of the Articles listed in Column (1) are taken from the descriptions in the Commonwealth Overseas Trade volume.

In each Colony, each Commonwealth article has been matched with a Colonial Article or Articles which contain the Commonwealth Article

In some cells in the Colony of Tasmania there is insufficient breakdown of the value of colonial imports

for the Article described by the Commonwealth. In these cases the articles enter the calculation of the Colonial average with a weight of zero.

Appendix Table 2. Ad valorem Equivalent Tariff Rates on Imports of Major Items from Other Colonies, All Colonies, 1900

Major Article	NSW Ad Valorem Tariff Rate (%)	VICTORIA Ad Valorem Tariff Rate (%)	QUEENSLAND Ad Valorem Tariff Rate (%)	SA Ad Valorem Tariff Rate (%)	WA Ad Valorem Tariff Rate (%)	TASMANIA Ad Valorem Tariff Rate (%)
Agricultural Implements	0	0	1	10.9	3.5	0
Animals Live	0	5.5	0	10.5	6.4	13.1
Apparel & Drapery	0	12.1	25	25	15	20
Butter	0	1	24.4	5.7	19.7	19.8
Coal	0	0	7.7	0	0	36.2
Eggs	0	0	22.5		18.6	
Flour	0	0	12.2	1.8	22.5	60.7
Fresh Fruit	0	12.7	0	16.5	4.4	13.4
Hay & Chaff	0	0	16.4	10	43.8	0
Hides & Skins	0	0	0	0	0	0
Machinery, mining	0	17.5	25	25	5	10

Meats	0	4.3	33	17.3	20.3	14.9
Oats	0	0	24.6	21.3	14.5	
Sugar	24.2	44.8	33.4	12.8	0	40.6
Wheat	0	0	10.6	10.2	16.9	
Wool	0	0	0	0	0	0
Average tariff rate	3.7	4.5	9.1	5.7	11.7	19.3

Source: Colonies: *The Statistical Register* of each Colony for the year 1900

Note 1. The descriptions of the Articles listed in Column (1) are taken from the descriptions in the Commonwealth Overseas Trade volume. In each Colony, each Commonwealth article has been matched with a Colonial article or articles which contain the Commonwealth article. In some cells there are no imports of the Article(s) for that Colony in 1900 or, mainly in the Colony of Tasmania, some cells with insufficient breakdown of the value of colonial imports for the Article described by the Commonwealth. In these cases the article enter the calculation of the average with a weight of zero.

2. The entries for Victoria, Western Australia and Queensland relate to imports of the article which came from Other Colonies and are of Australasian origin whereas those for New South Wales, South Australia and Tasmania relate to all imports which from the Other Colonies and may be of Australian or non-Australian origin.

¹ Commonwealth powers extended to other non-tariff restrictions on trade. The colonies all had lists of prohibited goods and the power to prohibit the importation of goods passed exclusively to the Commonwealth.

² Large differences between customs and excise duty rates of contiguous States on some goods also gave rise to cross-border smuggling. This tax avoidance resulted in the under-reporting of inter-Colony trade. It probably occurred mostly frequently with high-duty high-value items, including the excisable product groups of spirits and tobacco and tobacco products.

³ New Zealand was also included in the discussions at this time.

⁴ In the absence of quantitative estimates of the levels of tariffs on imports from Other Countries, Irwin (2006) used a gravity model which only required data of the volume of trade between States and between Australian Colonies/States and Other Countries.

⁵ Article 19(1) of the Treaty of Rome specifies that “the duties under the common customs tariff shall be at the level of the arithmetical average of the duties applied in the four customs territories covered by the Community” (that is, France, Germany, Italy and the BeneLux area). This means a simple unweighted average of the four rates for each tariff item. The Article also specified that the rates for each customs territory were to be the applied rates. However, all kinds of exceptions and amendments were introduced via six lists with modified rates. The process of harmonisation used by the EEC has been examined in fine detail by European economists: see, for example, Pelkmans, 1997, chapter 5.2.2.

⁶ For example, imports of wheat and flour into the Commonwealth in 1903 were £1,909,483 and £647,485 respectively in the drought year 1903 but they averaged a mere £22,000 and £107,000 in the other four years of the sample period. Consequently this Article has not been included in the list.

⁷ In calculating the average All-Colony rate of duty on dutiable imports only, it would have been preferable to use the shares of each colony in total all-colony trade in dutiable goods but this statistic is not available for most colonies.

⁸ Western Australia was permitted to levy customs duties on goods entering that State for the first five years after the imposition of uniform duties.

⁹ The introduction to the table of imports classified by articles in the Victorian *Statistical Register* 1900 states that “General imports [are] inclusive of Border Traffic (principally, wool, wheat and livestock)”.

¹⁰ Wheat was subject to a duty of 2/11 per cent but duty was not collected on most of the imports.

¹¹ This section borrows heavily from Lloyd (2014).

¹² Uniformity is not specifically required of excise duties, as it was of customs duties under Section 88. Uniformity of excise duties is required indirectly, by virtue of the Sections 51(ii) and 99 which prohibit the Commonwealth from discriminating in its laws and regulations among the States.

¹³ While the seat of government for the Commonwealth was initially in Melbourne and did not move to Canberra for three decades after federation, this phrase is a modern metaphor to describe the change.