

Australia and the First World War – A re-evaluation of its long term economic impact

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The First World War was a significant event in the formative years of Australia. Coming as it did just fourteen years after federation, the external shock of the war and the exigencies of having to fight it, placed enormous and unanticipated strains upon the institutions of government. This paper concentrates upon the business aspects of the war and discusses how those events acted as precursors to later economic development.

The first area examined is that of metals. Australia was a major producer of important war related metals, particularly zinc, copper and tungsten ores (sheelite and wolfram). However the smelting and marketing of the metals, which were relatively new to manufacturing, was in the hands of German companies. This was the consequence of the German lead in chemistry (refining ores to their finished metal state is a complex chemical process). The paper discusses the response to the loss of refining capacity and subsequent attempts of Australian and empire related interests to bring the metals under British control. This included the application of the Australian Enemy Contracts Annulment of 1915 to the sale of metal ores and the Imperial Non-Ferrous Industry Bill of 1918. Physical action taken by the Australian government included the establishment of the zinc refinery in Risdon near Hobart. The leading part played by Australia in promoting empire interests and the breaking of German domination of these industries is discussed. The effectiveness of the policy is also highlighted as German industry never regained its dominance of these industries in the post war period.

A number of observations are made about the effects of the war upon subsequent developments. Australia had considerable leverage with the Imperial government, not just as a provider of troops but also as a source of raw materials. Once the US entered the war and unrestricted submarine warfare resumed, Australia's distance from Europe was an impediment to the war effort but active diplomacy ensured that this would not be to Australia's disadvantage. To use a contemporary phrase, probably no country punched above its weight more than Australia. Australia used its leverage with the Imperial government to aggressively promote and protect Australia's trading and other interests. This needs to be viewed within the context of a new country still unsure of its place in the world.

Large scale government involvement in the war paved the way for further government involvement in the economy, culminating in the period of extensive public ownership and regulation of industry after 1945. Government industrial and organisational initiatives in marshalling and managing resources for the war effort helped erode argument that markets and private ownership were the best promoters of economic development. Additionally, the repatriation of returned soldiers led to government involvement in social programs on a scale never before anticipated or expected. Thus the First World War paved the way for an expanded role of government in industry and society once the war was over.

The First World War also highlights how quickly globalisation can dissolve into mutually antagonistic groups and that mutual dependence upon trade is no guarantee of enduring peace.

Introduction

The First World War was the first ‘total war’ within living memory. As one of the contributors to the war’s cause was economic tensions and competition between nations, it is not surprising that the war was fought with economic and business outcomes in mind.

Australia’s contribution to the war was small in the overall scale of the war but big of heart and sacrifice relative to its size. Australia’s population stood at 5 million in 1914 and of these, 60 000 were killed and 150 000 wounded – one in four of the adult male military age population. Whilst the war involved considerable loss and heartache it made a major contribution to the nation’s sense of itself relative to other nations. Australia had only come into existence as a nation with federation in 1901, and the people harboured doubts about their abilities relative to the old world. The activities of Australian soldiers in the Boer War provided encouraging signs that there was strength in the national character, but it took the First World War to confirm that the “convict stain”, with overtones of social Darwinism, had not left permanent deficits.

On a less positive note the rise of Germany led to national concerns in Australia over both military security and access to markets. Prior to federation the six colonies were automatically protected by Britain but with federation the nation was responsible for its own defence and to lesser extent foreign policy and these issues became part of political discourse. The big emerging economies of USA and Germany were not only highly protectionist but were also structured in such a way that, particularly in the case of Germany, access to markets was controlled by cartels. Cartels were a significant form of business organisation at the time and their influence dominated the thinking of business and government. For the nation, it became important to compensate for its isolation and small population by being part of a trading bloc where it had access to markets for its products. These considerations provide the background to Australian activism over base metals during the First World War.

The metals industry prior to the war

Prior to the First World War, Australia was predominantly an agricultural exporter but it did have a significant trade in base metals with sales in 1914 amounting to £15 million. The history and development of the metals industry has been well documented but most writing has focussed upon the discovery and winning the metal; the processing, sale and distribution of the metal has often been overlooked.¹

The metals relevant to this paper are lead, zinc and copper and to a lesser extent wolfram, tungsten, sheelite and molybdenum. These metals, particularly copper, zinc and lead, although known since antiquity, became the focus of the second industrial revolution. In particular copper was required in quite large quantities for electrical

¹ See for example Blainey, Geoffrey (1978) *The Rush that Never Ended* 3rd ed. Melbourne University Press Melbourne

transmission and generation, as well as cabling for the telegraph system. Zinc was useful as galvanising agent and tungsten and molybdenum for metal alloying and hardening. In times of war these metals took on even greater significance. Copper and zinc were alloyed to make brass, an essential component of cartridges and artillery shells, and the hardening metals were necessary for manufacturing various mechanical components and in machining and shaping them.

German industrial interests realised the importance of these metals before most others.² German firms had already introduced systems where electricity was generated at a considerable distance from the consumer, requiring copper electrical cabling to connect the two. As demand for copper grew new sources of supply had to be found. These were generally lower grade ores with complex chemistry to refine into a pure metal. The same applied to zinc, lead and tin. Generally ores went through early stage processing close to source and then were shipped to refineries closer to markets where they were purified into base metal. It was this complex final stage where German interests dominated. Also German interests had extended their control to the distribution and marketing of the metal, with firms often being involved in both stages. Even though there had been an important metals exchange in London since the 1880s, this did not prevent German firms from dominating the industry often using the exchange as an intermediary. However their dominance was far greater in lead and zinc than in copper, where US interests diluted German influence.

The German metal refiners and traders formed a loose cartel, a common form of amalgamation at the time and which the German government tolerated. The centre of their operations was at Frankfurt. Ownership was tightly controlled and there was poor public awareness of their activities. The key firms were *Metallgesellschaft*, *Aron Hirsch und Sohn*, *Bear, Sondheimer and Co*, and *H.R. Merton and Company* of Frankfurt. These firms had parlayed themselves into a dominating position in the zinc and lead markets and to a lesser extent the copper market. These firms could source their dominance to three important advantages: their lead in chemistry which enabled them to take concentrates and refine them in to finished metal, a feat beyond many companies at that time, their access to finance through the Berlin based banks, and their distribution networks and relationships to the final customer.³ Two other aspects were important: the use of long term contracts with miners to lock in supply and refinery feed, and the collusive nature of their relationship which acted to exclude new entrants into the industry.⁴ These firms provided valuable services to both miners and customers. Prices were set by various conventions dominated by German interests, such as the International Lead Convention and the International Zinc Syndicate, acting on a cartel basis. Much of the refining capacity, as opposed to the concentrating and early stage processing was located in Germany or in neutral areas in the early stages of the war such as the USA, Belgium, Holland. Belgium was lost as an important refining centre when invaded by Germany and shipping into Holland became more risky as the war progressed.

² Becker, Susan *The German metal traders before 1914* in Jones, Geoffrey ed. (1998) *The Multinational Traders* Routledge London, Ball, Simon (2004) *The German octopus: The British Metal Corporation and the Next War* *Enterprise and Society* Vol. 5, No. 3, pp451-488

³ Ibid.

⁴ Ibid

The operating companies often had local names, such as the *Australian Metal Company of London and Melbourne*, *The African Metal Company* and the *Metallurgical Company of America*. Further a prominent company involved in metal trading, *H.R. Merton And Company*, was a family owned concern with British and German branches of the family but before the war, the Frankfurt branch dominated. Whilst the activities of individual companies may not have been widely broadcast, the metal companies of Frankfurt had champions ready to promote their achievements and influence and write poems in praise of their activities. In particular, an article published in *Weltwirtschaftliches Archiv*, and translated into English in 1913 detailing the activities, reach and dominance of the Frankfurt firms was to prove critical in the emerging debate about them.⁵

Prior to the war, the Australian government did not seem to be concerned about the German dominance of non-ferrous metal refining and marketing; indeed it seemed not to know it existed. Australian interests, mainly those associated with the Broken Hill mines, were satisfied with the business and technical arrangements and the Commonwealth government's vision of Australia being a raw material supplier was not in conflict with existing industry arrangements. Early stage processing was already being carried out at refineries established at Port Pirie and Cockle Creek. What made this issue important from an Imperial government perspective was the relevance of base metals to both the second industrial revolution and modern warfare and the opportunity the war presented to seize control over their refining and distribution, thus negating an important area of German dominance.

The declaration of war did not automatically trigger confiscation of enemy assets or annulment of contracts. Indeed many of these were associated with neutral countries such as Holland and the USA. Upon the outbreak of war, the Royal Navy instituted a blockade of Germany which lasted for the duration of the war. Although an irritant to the United States during its period of neutrality, much German commercial activity still continued. In particular, although enemy ships were confiscated, ownership of other assets was often not significantly affected, although of course the belligerent governments exercised control over outputs, pricing and management direction. Unlike in a revolution where assets and businesses may be confiscated, the First World War was fought between countries with globalised business interests and with the expectation, at least in its early stages, that some semblance of pre war commercial relationships would be resumed. There was also a concern that large scale confiscations would result in retaliatory action by Germany. Additionally the law courts with their strong emphasis upon property rights could be appealed to by firms which had their assets confiscated or contracts annulled, particularly where there was not full ownership by German interests. There were also a large number of firms which were of Anglo-German origin, *Mertons* being an example. The German firms also had extensive cross shareholdings and directorship where control was exercised indirectly. Long term contracts were often with neutral countries.⁶ Efforts to determine what was actually German were fraught with difficulty.

The war had barely started when concern with German dominance of base metal refining was raised in Australia. The main driving force of the metals case was

⁵ Scott, Sir Ernest (1940) *Australia During the War, Official History of Australia in the War of 1914-1918*, Vol IX Angus and Robertson Sydney

⁶ Becker op.cit.

William Morris Hughes, Commonwealth attorney-general until October 1915 when he became prime minister. Hughes was born in London in 1862 and came to Australia 1884. He entered the first federal parliament in 1901 and remained a member until his death in 1952.

In 1914 the *Official War History* states that Hughes attention was drawn to the German domination of the base metals industry.⁷ In December 1914, Hughes cabled the Imperial government suggesting that the outbreak of hostilities presented an opportunity for Empire interests to sequester control from Germany of the base metal industries. Apart from geopolitical considerations, as a major producer of base metal concentrates, Australia's interests were fairly clear as the industry was a major Australian exporter.

The Imperial government was slow to respond and in July 1915 cabled Hughes that the situation was complex and that any action along the lines suggested by Hughes could lead to retaliatory action from Germany.⁸ By this stage Hughes had assumed the task of dispossessing the German metal companies almost as personal struggle and had pre-empted the Imperial parliament by passing the Enemy Contracts Annulment Act, 1915, in May 1915. For annulment of contracts to be put into effect, an application had to be made to the Attorney-General by one of the parties to the contract, typically a mining company or refiner. But as of July 1915, not one application had been made. However doubts surrounded the validity of the act, and companies were naturally concerned about its effect on normal commercial relations after the war. These issues were clarified over time, including the authority of the Commonwealth's war powers by the High Court, and by August 1916, most contracts with German metal firms had been annulled.

Hughes was able to pursue his interests in this matter more thoroughly once he became prime minister. His constant proselytising on this matter finally awakened concern in London, both in parliament and in the popular press. During 1916, with the war hardening into one of attrition, the press popularised the issue of German control of base metals. The matter was further raised at the Imperial War Conference of 1917. As a response, in 1918 the British parliament passed the Non-Ferrous Metal Industry Bill, which required all firms carrying on business in base metals to be licensed by the Board of Trade, the licenses intending to be limited to British interests. Hughes was inflamed by this Act which he considered was far too tame for the circumstances.

One of the difficulties for any legislation was determining what constituted control and what was controlled by whom. The wave of globalisation had generated cross and minority shareholdings, front companies and minority interests as well as long term contracts.⁹ Also as in the case of *HR Merton*, different branches of the same family had a presence in different countries with each branch of the family claiming to be nationals of their country of domicile. There was also a low level of public shareholding so business activity was less open to public scrutiny than firms listed on the stock exchange.

⁷ Ibid.

⁸ Ibid. All subsequent reference to the Commonwealth's actions are derived from this source.

⁹ Becker op.cit.

There were legal difficulties in confiscating assets of foreign nationals or suspected foreign nationals and retaliation, such as the confiscation of British assets in Germany, was also a cause for caution. The law courts often took a different attitude towards ownership of assets than politicians or the general public, which were often informed by the emotion of the moment.

Hughes was able to implement his policies in Australia with far more success. It became the policy of the government to have, if possible, all ores and metals treated and refined within the commonwealth, to control sales of the product and to provide organisations which could assume contractual obligations on behalf of producers. The services of Sir John Higgins were sought to put the policy into effect. An unwritten requirement was to avoid dislocation to normal trade upon the coming of peace and to remove foreign domination of the industry. Higgins response to the problems was twofold; the creation of an Australian metals exchange, and the processing of concentrates into refined metals in Australia.

The Australian Metals Exchange came into existence on 6th September 1915 and was the mechanism through which the government exercised control over the metals industry. The exchange was a voluntary organisation but firms had to be registered with it in order to export. There was a nationality test for registration. It was hoped that through the exchange producers could get closer to the market and the final consumers of their product thus negating the intermediary role of the German firms.

In relation to refining, the metals need to be divided into two groups: zinc and the rest, primarily silver, lead and copper. The latter metals presented less difficulty and Australia already had a presence in refining them. The primary source of lead was ore from the Broken Hill mines and this was processed at Port Pirie. The zinc contained in the Broken Hill ores presented considerable chemical difficulties even in processing them to the concentrate stage. However lead and silver could be separated and during the war the refineries at Port Pirie in South Australia and Cockle Creek in NSW were upgraded to produce purer metal. Ownership also changed as the Broken Hill Associated Smelters, owned by the three Broken Hill mining companies and the Sulphide Corporation which owned Cockle Creek, took over the refineries and considerably upgraded them. A similar ownership change took place at the main copper refinery in Australia, at Port Kembla, with Queensland mining interests displacing the interests of *Aron Hirsch*. It was subsequently expanded and *Metals Manufacturing* established a plant close by to manufacture final products, such as cabling, from its output.

Zinc was by far the most difficult metal to process because of the sulphides in the ores. By 1910, most of the complex chemistry had been resolved and saleable concentrates were being produced.¹⁰ However these contained a number of metals and had to be refined overseas. The government was anxious to refine the zinc in Australia, both for reasons of national development and to deny German interests their dominant position once peace returned. After considerable negotiation, a cooperative of mining companies formed the *Electrolytic Zinc Company of Australasia Proprietary Limited* to refine zinc at Risdon in Hobart, using Tasmanian hydro electricity. Sale of the output was under a firm contract to the British

¹⁰ Blainey op.cit.

government for sale at predetermined price levels until 1930. The Risdon plant was large in scale and used the latest electrolytic refining techniques.

All of this work was associated with the Collins House group of companies. The close knit nature of the Melbourne mining business community undoubtedly assisted in the government in garnering their cooperation. Whilst this group no doubt had noble motives, the government, by ensuring that a market for the refined metal was available, minimised risk. The war was good to Australian mining interests, particularly the Collins house group. In 1914, they were almost pure miners, sending most of their product overseas to be processed and having virtually no contact with the final customer. By 1918, they were the owners of a number of modern smelters and refineries, and marketers of their product, a position almost unthought-of four years before. They also saw the virtual extinction of the German firms. In turn these Australian firms formed a loose informal cartel like association to protect their own interests.

The Imperial government, at the prompting of British metal interests, namely those associated with Sir Cecil Budd, formed the British Metals Corporation as a state sponsored business to undertake the development of base metals in the British Empire.¹¹ The barely disguised motive was to eliminate the influence of *Mertons* from the metals industry and Budd was motivated by a combination of patriotism and opportunism in eliminating a successful rival. *Mertons* went into voluntary liquidation in 1918.

Discussion of outcomes

How does this passage of Australian business history resonate with our wave of globalisation? First, it confirms that resources generate a more emotional response than almost any other product. It is difficult to discern why. One suggestion may be resentment at foreign firms and countries making profits from resources, or perhaps it is a response to their finite nature. There may even be the suggestion that firms or foreigners make effortless and riskless profit from them. Either way, there is greater political activism over resources than with almost any other industry. The impact of oil discoveries upon the politics of developing countries provides ample illustration of this. This perception is rather strange as factories become obsolete, often very quickly.

The metals case is also revealing about Australian and British attitudes. With an isolated population of 5 million Australia was in great need of friends and Britain was the obvious choice. In this Australia virtually had to force itself upon a Britain which was not all that grateful for the attention. Australia was a greater booster of the empire as a trading entity than Britain was. Britain had a worldwide geopolitical view, compared to Australia's more narrow focus and it took considerable lobbying from Australia to be heard in British political circles. Hughes managed this admirably and his constant promotion of Australia's interests, both during the war and in negotiating the peace treaty led to Australia having an influence upon world events which it has never since enjoyed.

¹¹ Ball op.cit.

By perverse chance, the metals issue permitted Australia to pursue its own interests which were to seek greater economic and military advantage from being a dominion of Britain and a key component of the Empire. Even though Britain had an extensive empire, there was no direct empire preference. Britain had extensive trade and political relationships with a large number of countries outside the empire, which were arguably of more importance to it than intra-empire commercial relationships. South America provides an example. At no time before or since has Australia had such a significant influence upon the evolution of British economic and political policy. The main motivation for this was the perceived vulnerability of Australia in the absence of strong backer and protector. The empire relationship provided a strong foundation upon which such appeals could be built and potential competitors sidelined.

Britain was initially reluctant to follow Australian promptings to act against the German cartel but eventually did so when influential British business men involved in the metals trade saw gain in it for themselves. Indeed, when considering business organisation and development, local business interests in Australia and Britain did quite well out of the war

Untangling various trading interests in an interconnected business world presents difficulties. The German metals cartel had hidden cross ownerships, management linkages based upon ethnic and national origins, an extensive range of contractual relationships in different jurisdictions, and relationships with a wide range of customers. Whilst it may be viewed as an “octopus”, to quote Hughes, the reality was it functioned effectively. Product was of high quality, there was no great evidence of exploitative pricing, product was always available and there were reliable deliveries. Close contact was kept with both producers and consumers. Australian miners were initially reluctant to sever contact with German firms as they considered they were well served by them, even if much of the profit from metals accrued to them. But the cartel could only operate in an environment of a lead in chemistry and immature communication technologies. Over time these would be inevitably eroded leading to the breaking of the cartel.

The new federal government took an active role in industry development, a role which it had not previously pursued. It acted as a catalyst for business combinations, provided legislative backing for contracts and the metal exchanges and negotiated uptake agreements with the British government for refined metal output. In all this it acted to reduce risk for local business interests. The end result was not one of great cost to the taxpayer, but which delivered an industry with a scale and scope never previously envisaged. This provided a positive lead for further government involvement in industry, a role which expanded during the twentieth century.

Nationalism and business are related and will not go away. There are always countries which seek to promote national interests through participating in markets and others which see markets as a threat to their national interests. Currently the activities of sovereign funds are causing concern because of the intermingling of national and commercial interests. In other words they are not perceived as impartial players seeking to maximise profit in an open market, but promoters of national interests within a market to the disadvantage of others. In the absence of information it does not take a great deal of paranoia for emotions to be ignited and fanned. Alternatively

of course, some level of concern may be justified particularly if nations take the view that business is a zero sum game.

Whilst most industries were not as badly hit as the German metals firms, their loss of markets, influence and prestige provides a useful reminder of the adjustment problems faced by Weimar Germany. The removal of German influence was accompanied by considerable anti-German rhetoric which, whilst comforting to the allies would have been discomfoting to German ears. The “German octopus” was common anti German rhetoric. It was another burden of adjustment which Germany had to come to terms with and another contributor to a feeling of being unjustly treated. The cartel probably was doomed anyway. Eventually other companies would have caught up with the technology and the business organisation would have been significantly challenged by modern communication technologies which would have brought miners and consumers closer together. In the same way the Collins House domination of mining in Australia eroded over time.

The metals case reinforces the observation that personalities make a difference at important times. The almost single minded pursuit of the German dominated Zinc Syndicate and Lead Convention by Hughes raised allied awareness of the issue. Other prime ministers may have had other priorities and the issue may not have reached the significance that it did.

Historians have always claimed that the First World War had significant business overtones. The case of the metals industry provides a further contribution to this proposition.