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How to kill a country?: The US–Australia Free Trade Agreement, pharmaceuticals and intellectual property

John Quiggin
Australian Research Council Federation Fellow, University of Queensland

Schools of Economics and Political Science
University of Queensland
Brisbane, 4072
rsmg@uq.edu.au
http://www.uq.edu.au/economics/rsmg

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John Quiggin

Australian Research Council Federation Fellow
School of Economics and School of Political Science and International Studies
University of Queensland

EMAIL j.quiggin@uq.edu.au
PHONE + 61 7 3346 9646
FAX +61 7 3365 7299
http://www.uq.edu.au/economics/johnquiggin

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How to kill a country?: The US-Australia Free Trade Agreement, pharmaceuticals and intellectual property

In February 2004, the Australian government announced the successful conclusion of negotiations for a Free Trade Agreement with the United States. The Agreement, which was to come into force following ratification by the Australian Parliament and the US Congress, was the subject of vigorous and, at times, highly polemical debate in Australia. Of the main issues under discussion, two were familiar from previous debates over trade policy.

The first issue was concerned estimates of the net economic benefits of the Agreement. While negotatiations were underway, a report commissioned by the Department of Foreign Affairs and Trade estimated that a free trade agreement with the United States would produce net benefits of with a present value of over $A15 billion (Centre for International Economics 2001)

However, the actual terms of the Agreement were considerably less favorable than those anticipated by Centre for International Economics (2001). In particular, there was no increase in access to the US market for Australian sugar, and only modest improvements for beef. These were only the most extreme elements of a generally lopsided deal, in which the US maintained substantial barriers to Australian imports while gaining, not only the removal of nearly all traditional trade barriers but influence over a wide range of Australian domestic policy institutions.

Nevertheless, a revised study by the Centre for International Economics (2004) estimated even larger net benefits, with a present value of $A55 billion over 20 years, largely on the basis of new, and heroic, assumptions about benefits from capital market integration. Independent analysis, such as that of Dee (2004) generated much smaller estimates, of the order of $100 million each year for the goods trade component of the Agreement. Taking account of the uncertainties involved, it would be difficult to reject the hypothesis that, assessed in terms of standard neoclassical trade theory, the costs and benefits of

the Agreement to Australia will be approximately equal, and that the net benefits will be approximately equal to zero.

The second issue concerned the relative desirability of bilateral and multilateral agreements. Proponents of multilateral processes, such as Garnaut and Carmichael (2004) were strongly critical of the Agreement, and argued that it would undermine both the World Trade Organisation and prospects for improved trade relationships with Asia.

Supporters of the Agreement, such as Austa (2003) argued that the failure of the Cancun round of WTO negotiations showed that multilateral processes could not be relied upon to produce progress towards freer trade or alternatively that bilateral and multilateral agreements were complements rather than substitutes. In addition, they pointed to the dynamic benefits of closer integration with the US economy (Oxley 2002).

These issues were familiar from past debates. However, the Agreement also attracted critical attention from a wide range of actors, including writers, health policy professionals and actors in the literal rather than metaphorical sense of the term, whose concerns and interests had not previously been impinged upon by trade policy[1]. Most of these concerns were related, in one form or another to the issue of intellectual property[2].

The debate over the Agreement has produced a book, *How to Kill a Country*, primarily concerned with intellectual property and related issues (Weiss, Thurbon and Matthews 2004). The polemical title of this work reflects the heated atmosphere of the debate and also, perhaps, the marketing requirements of a popular book on a complex issue likely to remain topical for only a few months.

The authors provide a range of arguments to support the claim that, on

[1] Actors were concerned with provisions regarding cultural protection such as requirements for Australian content on television, which were the subject of an amendment to the implementing legislation. This issue is outside the scope of the present paper.

[2] This term is widely used with the assumption that intellectual property is similar in kind to, say, property in land. In economic terms, however, intellectual property is 'property' in the same sense that monopoly rents are rents.

balance, the Agreement will make Australians worse off, particularly in relation to issues such as copyright, quarantine and pharmaceuticals. Nevertheless, even a grossly lopsided trade deal scarcely amounts to national ruin. Even if the Agreement doubled the cost of the Pharmaceutical Benefits Scheme, the resulting loss to Australia would be less than 1 per cent of GDP each year. Conversely, even the overoptimistic projections of the Centre for International Economics (2004) yield benefits of less than 1 per cent of GDP each year.

Weiss, Thurbon and Matthews justify their title by the claim that the Agreement 'threatens the core institutions of our country, and begins a process where they will be relentlessly substituted with the institutions of a foreign power'. This may sound hyperbolic, but except for the negative tone, it is not noticeably different from Oxley's (2002) description of the objective of the Agreement as securing for Australia the objective of 'comprehensive economic integration' with the United States. Clearly, comprehensive economic integration is not consistent with the maintenance of radically different economic institutions, and no-one is suggesting that the Agreement will lead the United States to adopt Australian institutions.

In assessing the argument pur forward by Weiss, Thurbon and Matthews, it is, therefore, necessary to consider two questions: First, to what extent does the Agreement compel Australia to adopt institutions modelled on those of the United States; and second, would a shift towards US institutions make us better or worse off ?

In arguing that Australia will be worse off, Weiss, Thurbon and Matthews examine four areas of policy: pharmaceuticals, quarantine, copyright and government procurement. The implications of the Agreement in these policy areas forms the remainder of this paper. Of the four issues, pharmaceuticals were the most controversial in the debate over the Agreement and raised the most difficult economic issues, and will therefore be the primary focus of attention.

Pharmaceuticals

The implementing legislation for the Agreement was passed by the Australian Parliament in August 2004. The legislation incorporated an amendment, proposed by the Labor party, that was designed to prevent a possible abuse of patent law through 'evergreening', a devuce by which patent-holders may extend the effective life of patents through trivial modifications to existing drugs. It was feared that evergreening, in combination with the increased protection for US patent-holders provided under the Agreement, might reduce the availability of cheaper generic drugs and thereby increase the operation costs of the Pharmaceutical Benefits Scheme (PBS).

The evergreening amendment was criticised vigorously, but was accepted when it attracted strong public support. The government's resistance to amendments concerned with the PBS reflected the importance placed by US negotiators on this issue, as did by the reaction of US officials to the amended legislation.

Although previously enthusiastic about the Agreement, representatives of the US government were strongly critical of the amended legislation, and delayed certification of the Australian legislation as implementing the Agreement, a step required for the Agreement to come into force. This resistance is indicative of the importance placed by the US Administration on the protection of intellectual property in pharmaceuticals and the perceived threat to intellectual property posed by interventions such as the PBS. US and other pharmaceutical companies have long been critical of the PBS, claiming that it does not provide an adequate return for the investment in research and development required to develop new drugs. Conversely, the debate over the Agreement in Australia highlighted the importance placed by political actors and the public on the preservation of the PBS in its current form.

It is unclear, however, that the amended Agreement is a sustainable basis for maintenance of the PBS. Pearson (2004), in criticising the evergreening amendment, observes that it may be contrary to the Agreement in a number of

respects. First, he says, the amendment may conflict with terms in the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement that preclude discriminatory treatment of a specific sector such as pharmaceuticals. Second, there are general clauses in the Agreement that require 'standstill' in measures that would affect the relative positions of the parties. Third, US pharmaceutical companies might claim that they are being denied the 'reasonable benefits' available to them under the Agreement. Pearson argues that the effectiveness of the amendment could be annulled by an exchange of letters between the United States and Australia, binding the Australian government not to act against the interests of US pharmaceutical companies.

It is important to observe that these points have nothing to do with the specific content of Labor's amendment. They apply to any legislation concerning the PBS that an Australian government might seek to introduce in the future and, arguably, to any administrative decisions made by the government. That is, on Pearson's analysis, the Agreement gives the United States an effective veto power over any changes made by an Australian government to improve the functioning of the PBS, at least if these can be argued to harm the position of US pharmaceutical suppliers.

Weiss, Thurbon and Matthews (2004) develop these concerns with detailed reference to the review and transparency procedures set out in the Agreement. Their conclusion, which appears plausible, is that the PBS will not be sustainable in the long term, in view of the pressure that can be applied by US pharmaceutical companies under the terms of the Agreement.

In these circumstances, it is important to consider whether the PBS is an appropriate method of financing research and innovation in the pharmaceutical sector. Although it has been an important element of Australian health policy since its establishment, more than fifty years ago under the *National Health Act 1953 (Cwlth)*, the PBS has rarely been critically examined or rigorously defended.Hence, before examining the Agreement it is necessary to consider the general question - how should we pay for pharmaceutical research ?

How should we pay for pharmaceutical research ?

There is no dispute about the proposition that the producers of pharmaceuticals should receive payments sufficient to cover the marginal cost of production. Hence, the main issue is that of determining how society should pay for the medical research that is required to produce new pharmaceuticals.

In an economy based primarily on market production, it is natural to start by looking at the free-market solution. In the absence of government intervention, firms innovate in the hope of securing above-normal profits by offering a superior product. They discourage imitators using a variety of methods such as branding and trade secrecy.

Such methods will not protect a valuable innovation forever, but in some cases they deliver enough profits to finance a satisfactory rate of innovation. Examples include industries where innovation is focused on keeping up with rapidly changing consumer tastes, such as the fashion industry.

There are, however, good reasons to suppose that free markets will not deliver adequate levels of innovation in pharmaceuticals. The cumulative nature of scientific knowledge means that reliance on trade secrecy is neither feasible nor socially desirable. Branding has some effects, but the success of generic substitutes for branded products indicates that only modest price margins can be maintained through branding. Moreover, there is no guarantee that innovators will be more successful than imitators in building up brand identity.

To finance adequate levels of medical research, therefore, some form of government intervention is necessary. There are three main options:

- patents;
- research grants; and
- research rewards.

Patents

Of these options, patents involve the most intrusive government intervention and the largest welfare costs. A patent is a temporary grant of

monopoly rights[3], imposing civil and criminal penalties on those who produce and market goods that are inconsistent with the terms of the patent. Since a monopoly is analogous to a narrowly-based consumption tax, it has higher welfare costs than an equivalent sum raised from general taxes.

On the other hand, if the product market in question functions well in other respects (in particular, if consumers are well-informed and there are no cross-subsidies), the profit from the monopoly is a good measure of the social value of the innovation, eliminating the need for governments to make judgements on this issue.

The problem in the case of pharmaceuticals is that the conditions for an efficient product market are not met. Consumers are largely reliant on the advice of doctors, who face a range of incentives that are unrelated to the social costs and benefits of alternative options. In general, medical ethics encourage doctors to seek the most effective treatment, without regard to costs. Institutional incentives modify this position, but often in ways that promote excessive intervention. For example, the risk of malpractice litigation may lead doctors to practise 'defensive medicine', prescribing tests and antibiotics even in cases where they are unlikely to be beneficial.

More generally, patients face cross-subsidies of various kinds, for example arising from public and private insurance. Patients are likely to bear the full cost of non-prescription medicines, which are relatively cheap, to make only partial payments for prescriptions filled by pharmacies and (at least in the case of public inpatients) to pay nothing for medicine supplied in hospitals. Hence, their patterns of demand indicate little about social costs and benefits.

Research grants

Research grants of various kinds are the basis of most fundamental research. This category includes both project-based grants of the kind funded by national medical research agencies and the funding of universities and research

[3] Historically, the grant of patents on items such as salt and playing cards first emerged under the Tudor and Stuart monarchies in the late 16th century as a device for raising revenue and rewarding favourites. The award of patents as a reward for inventors came much later.

institutes to undertake research without specific directions as to the content of that research.

The most important benefit of grant-based research, is that the products of research are freely available. Since the optimal price for a pure public good is zero, a grant-based system achieves *ex post* efficiency.[4]

Since research grants are funded from general revenue, there is an associated deadweight loss, equal to the marginal social cost of tax revenue. Estimates of this deadweight cost vary widely, from near zero to 50 cents per dollar of additional revenue. Note that the marginal cost of general revenue, which is the cost associated with the most efficient available source of additional revenue, cannot be greater than the marginal cost of revenue from a narrowly-based tax or tax equivalent, such as the monopoly profit associated with a patent.

The main problem with a grant-based model is the need for governments to make judgements about which projects or researchers to support. This is normally done through processes of peer review. Such processes appear to do a fairly good job of identifying the best performers in established lines of inquiry. However, they are less satisfactory in providing support for new and innovative lines of research, particularly if these are not undertaken within established institutions such as universities and research institutes.

Research rewards

The least familiar category of support for innovation is that of rewards for successful research. A famous historical instance is that of the Longitude prize, awarded by the British government for the invention of a workable method of determining longitude at sea (Sobel 1996). Explicit prizes of this kind are rare nowadays and are mostly privately funded. A recent example is the Kremer prize for human-powered flight, won by MacCready in 1977 with the Gossamer Condor

[4] In recent times, some grant-funded researchers and institutions have sought a 'second bite at the cherry' through patents. This is an undesirable development, which, if it became the norm, would undermine the public-good character of grant-funded research. However, the amount actually raised in this way is smaller than is commonly imagined, and the public-good character of grant-funded research remains largely intact.

(National Air and Space Museum 2000).

But in practice, research grants are awarded, at least in part, as a reward for past successes. More importantly, for the purposes of the present argument, the Australian system of purchasing pharmaceuticals is, in essence, a reward-based system. Pharmaceutical companies with new and innovative products offer them to the Australian government, which accepts them if the estimated social benefit of the drug exceeds the price demanded. [5] For a bargain to be struck, the price must be somewhere between the company's marginal cost and the net benefit to Australia. Where there is a wide gap, a standard bargaining problem arises, with the buyer seeking a price near the lower bound and the seller a price near the upper bound.

Because Australia is a small market, companies can cover most of their fixed costs in other markets such as the US, so that the marginal cost may be quite low. This strengthens Australia's bargaining position. On the other hand, the fact that fixed costs have already been covered means that companies can credibly threaten to withhold drugs from the Australian market if the payment is inadequate. In a game with repeated interactions, there is no reason to suppose that prices will inevitably be driven down to marginal costs.

It might be expected that a threat to withhold supply would be more credible in the case of an innovative drug offering substantial benefits, and the evidence appears to be consistent with this prediction. The Productivity Commission (2001) found that the price differences vary across classes of pharmaceuticals. Australian prices for new and innovative pharmaceuticals are much closer to those in other countries than prices for "me-too" pharmaceuticals (patented drugs similar in function to those previously patented by competitors) and generic drugs, for which patent protection has expired.

On balance, it seems likely that the availability of monopoly profits in the US market reduces the equilibrium price in bargains between pharmaceutical

[5] The operation of the rewards-based system presupposes that companies have patent rights, since otherwise Australia could simply produce the drug independently. Under the TRIPS agreement this option is available to poor countries, but not to developed countries like Australia.

companies and the Australian PBS. But the magnitude of this effect is considerably smaller than the difference between Australian and US drug prices. US prices inflated by factors such as expenditure on advertising[6], and the incentives provided by the US system for the production of 'me-too' drugs.

It seems likely that, if the United States adopted a system similar to the PBS, there would be some increase in the equilibrium price for Australia. However, the improved incentives for the allocation of research effort would produce a significant increase in global welfare, relative to a system driven by monopoly profits on patents.

Quarantine

The provisions of the Agreement with respect to quarantine are similar in broad terms to those with respect to pharmaceuticals. That is, they provide the United States with consultation rights that have been represented by the Australian government as implying no change to Australia's existing procedures, but which were nevertheless seen by the US negotiators as being of substantial significance. In principle, the quarantine provisions of the Agreement are symmetrical, giving similar consultation rights to Australia.

Quarantine policy involves trading off gains from trade in agricultural products against the risks to human health and domestic agricultural production from the importation of exotic pests and diseases. The political economy of quarantine is complicated by the fact that the domestic producers who benefit from a lower risk of disease also benefit from the protection against competition arising from restrictions on imports.

Hence, domestic producers have an interest in lobbying for quarantine restrictions regardless of the balance of costs and benefits to the nation as a whole. Conversely, advocates of freer trade have frequently looked at quarantine restrictions with suspicion.

In principle, the problem could be addressed using the tools of risk analysis. In most cases, however, information on the probabilities associated

[6] The United States is the only major jurisdiction that permits advertising of pharmaceuticals to consumers

with various adverse outcomes is unavailable, or too fragile to form a basis for agreement on policy responses. As a result, less formal approaches have been adopted.

As Weiss, Thurbon and Matthews (2004) observe, Australia's existing quarantine procedures have been approved by the World Trade Organisation, under assessment processes that imply a presumption in favour of free trade. In the absence of a well-developed formal basis for risk analysis, the inclusion of the additional consultation mechanisms proposed in the Agreement implies that quarantine policy will give a higher weight to gains from trade than previously, and will give a correspondingly lower weight to concerns about disease and health.

Given the difficulty of assessing quarantine issues on a case-by-case basis, it seems reasonable to ask whether, in aggregate, quarantine and other phytosanitary restrictions appear to be in need of adjustment and, if so, in what direction. The most important recent failure of such restrictions has been associated with bovine spongiform encephelopathy (BSE or 'mad cow disease') and the resulting transmission to humans of Creutzfeld–Jakob disease (CJD) which is estimated to have caused more than 100 fatalities in the United Kingdom. The UK had earlier suffered from an outbreak of foot-and-mouth disease, triggering restrictions on movement that gravely affected the tourist industry. Barks-Ruggles (2001) reports that direct financial costs of the BSE epidemic are estimated to have exceeded 1.5 billion pounds, mostly associated with the slaughter of cattle at risk of infection, while the cost of the foot and mouth outbreak exceeded 5 billion pounds.

The emergence and spread of BSE has been associated with a range of innovations including the feeding of cattle on meal containing spinal and brain material from other cattle, and the development of more complex patterns of international trade in livestock. In addition, UK health authorities clearly erred on the side of protecting producing interests in the early stages of the epidemic. A similar pattern was observed in the United States where resistance to testing may have facilitated the spread of BSE and the resulting loss of export markets.

Observation of the BSE case does not support the view that quarantine and phytosanitary restrictions are, in general, excessively strict. There may, however, be individual cases where the opposite is true. For example, Anderson and James (1998) argue that, even if imported diseases were to wipe out the Australian banana industry, the gains to consumers from cheaper imports would outweigh the losses to import-competing producers. On balance, however, it seems unlikely that using trade negotiations as a basis for reforming quarantine policy is likely to achieve an optimal trade-off between the benefits of freer trade and the costs of disease risks.

Copyright

Prior to the signing of the Agreement, Australia had one of the world's most liberal copyright regimes, with copyright extending a 'mere' fifty years beyond the author's death compared to seventy years in the European Union, and ninety-nine years in the United States. All of these terms are substantially longer than those prevailing when the first systematic copyright laws were introduced in Britain and the United States during the 18th century.

As part of the Agreement, Australia agreed to adopt a minimum copyright term of seventy years. And, as is par for the course with the Agreement, there was no corresponding concession on the US side, not even a standstill provision. There is nothing to stop the United States from extending the term of copyright indefinitely, and every reason to suppose, based on the current balance of lobbying power, that it will do so, and that it will pressure Australia and others to follow.

It is hard to see any economic justification for a copyright term extending even fifty years beyond the author's death. For the vast majority of authors, the residual value of copyright is exhausted within a few years of publication. But even for the remaining minority, the incentive effect of a low-probability financial payoff to be received by their heirs more than fifty years after their deaths must be trivially small in nearly every case.

Of course, for the corporate owners of properties like Winnie the Pooh and

Mickey Mouse, both of whom are at or near the relevant expiry dates, the rent associated with an extension of the copyright term is huge. It is unclear, however, why trade mark protection could not be an adequate substitute for copyright, at least as far as merchandise is concerned.

Obviously the extension of copyright terms has a static monopoly cost, similar to that of patents. A more fundamental concern, however, is the disincentive to the free dissemination of ideas. Large numbers of works are out of print, with copyright owners who are untraceable. Attempts to provide systematic access to large bodies of knowledge are regularly obstructed by copyright difficulties.

It was for these reasons that a diverse group of economists, including Kenneth Arrow, James Buchanan, Ronald Coase and Milton Friedman submitted an *amicus curiae* (friends of the court) brief to the US Supreme Court (Arrow et al. 2002) in the case of *Eldred v Ashcroft* in support of an (unsuccessful) challenge to the constitutionality of the *Sonny Bono Copyright Term Extension Act*, which added 20 years to existing and future copyrights. The issues have been discussed most extensively by Lessig (1999, 2001).

Like Lessig, Weiss, Thurbon and Matthews (2004) place the debate over copyright in the broader context of attempts, pursued most vigorously in the United States, to give the monopoly rights commonly referred to as 'intellectual property', all the civil and physical protection associated with property rights in real and financial assets, with no regard to the public good nature of information. The issues involved have been discussed above in relation to pharmaceuticals.

Government procurement

The argument made by Weiss, Thurbon and Matthews (2004) on government procurement is, in essence, a restatement of the general observation regarding trade in goods and services, that the Agreement is biased in favor of the United States. For example, the Agreement allows requirements to 'set aside' a proportion of contracts for domestic small businesses. On the US side, a small

business is defined as having less than 1500 employees; in Australia it is less than 200.

On this issue, Weiss, Thurbon and Matthews do not make a strong case that Australian rules regarding government procurement are more sensible, considered in terms of national policy, than those prevailing in the United States. On the contrary, they show some sympathy for US requirements to set aside a substantial portion of government contracts for small and medium enterprises, and for the generally entrenched 'Buy American' culture. Their position is more that, if the Americans are going to continue to tilt the procurement playing field in favor of local business, so should we.

Concluding comments

Considered purely as a trade agreement, the US–Australia Free Trade Agreement would have been beneficial to Australia if it had delivered a substantial bilateral movement towards free trade. However, because the Agreement allows the United States to retain its most damaging trade barriers, the net benefits to Australia, considered purely as a trade agreement, are near zero and quite possibly negative.

It is the economic integration aspects of the Agreement, amounting to a decision by Australia to adopt the US agenda in favour of strong Intellectual Property rights, that is of most concern. The expansion of Intellectual Property rights is damaging even to the United States, which is a net exporter of Intellectual Property and is even more so in the case of Australia. Threats to the Pharmaceutical Benefits Scheme and the danger of being pushed towards some version of the Digital Millennium Copyright Act are of particular concern.

The Agreement may not, as Weiss, Thurbon and Matthews (2004) suggest, represent a road to national ruin. But it is lopsided in its trade aspects, damaging to the general multilateral trade process and dangerous in its expansion of the monopoly rights associated with intellectual property. Australia's negotiators should not have signed this Agreement and the Australian Parliament should not have ratified it.

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