

2009 Annual Hawke Lecture

Climate Change: The Public Interest and Private Interests in Australian Policy



Delivered by Professor Ross Garnaut AO

Vice-Chancellor's Fellow and Professorial Fellow in Economics, The University of Melbourne

Wednesday 5 November 2009

Adelaide Town Hall

About the Hawke Centre

Website: www.hawkecentre.unisa.edu.au

The **Bob Hawke Prime Ministerial Centre** is a dynamic University of South Australia initiative to establish an internationally recognised public learning/visitor and research facility serving young people, national and international scholars and local and global audiences.

Named after Bob Hawke, a third generation South Australian, one of the 20th century's most notable Prime Ministers (1983-1991) and a great conciliator nationally and abroad, the Hawke Centre was established by Memorandum of Understanding in 1997. UniSA has developed the Centre believing that that Bob Hawke's contribution should be properly recognised through a national facility, not as a memorial, but in a way that helps young Australians and furthers his legacy of valuing a cohesive, sustainable and fair Australia.

The Hawke Building housing the Centre's public facilities, including the Kerry Packer Civic Gallery, Bradley Forum, and Hawke Library was formally opened on 11 October 2007.

Broadly, the Hawke Centre aims to challenge Australians to consider ideas and develop solutions for Australia and the world, leading towards more sustainable societies, within a democratic framework. It is supported by a fine

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The Annual Hawke Lecture is the premier national event on the public calendar of the University of South Australia, delivered under the auspices of the Bob Hawke Prime Ministerial Centre. There are relatively few moments when we have the time to consider the larger issues of life, including the future of our nation and our world and how we can shape it. The University of South Australia offers the Annual Hawke Lecture in this spirit, as an opportunity to listen to the views of someone whose experience of human affairs is notable, and whose concerns about our world are truly worthy of consideration.

*While the views presented by speakers within the Hawke Centre public program are their own and are not necessarily those of either the University of South Australia or The Hawke Centre, they are presented in the interest of open debate and discussion in the community and reflect our themes of: **strengthening our democracy – valuing our cultural diversity – and building our future.***

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In The March of the Patriots, Paul Kelly declares that the Labor Party has produced two great Prime Ministers, John Curtin and Bob Hawke, *"the founders of two historic eras"*. (Kelly, 2009, p. 2). Today it is my privilege to honour Bob Hawke's contribution to Australia on the eve of celebrations to mark his forthcoming 80th birthday.

Hawke, like Curtin, became Prime Minister in a national crisis. Hawke's challenge was to end eight decades of inward-looking development that had been associated with low productivity growth and declining living standards relative to other developed countries, culminating in a decade of high unemployment, high inflation and persistent budget deficits. Hawke and Curtin led Australia out of crises into periods of greatly expanded opportunity and, under other leaders, achievement.

The circumstances of Hawke's elevation to office contrasted starkly with those of Prime Minister Kevin Rudd, for whom economic crisis fell out of what most Australians saw as a clear blue sky. Rudd came to office already with one awesome responsibility and commitment: to secure Australia's interest in effective mitigation of human-induced climate change. To meet his responsibility, he would have to turn around half a dozen years of complacency and worse, and a culture of acceptance that the businesses that were most responsible for Australia's contribution to the global problem would have central roles in decision on mitigation policy. This was difficult enough before the Great Crash of 2008. It is now a challenge alongside the aftermath of the Crash.

A DIABOLICAL POLICY PROBLEM

I have described the mitigation of human-induced climate change as a diabolical policy problem. It has many demanding dimensions, any one of which might seem to make it unlikely that the human species will be up to the challenge. We are facing moments of truth now, between the G20 meeting in Pittsburgh and the United Nations conference at Copenhagen. It has been clear for some time and obvious since Pittsburgh that we will not get to a satisfactory global treaty in one shot at Copenhagen. That is not necessarily a large problem, so long as expectations have not been set so high that failure to meet unrealistic expectations creates unwarranted pessimism about what will ultimately be possible. What we have to work towards is a broad framework at Copenhagen that allows officials working to Heads of Government, possibly G20 Heads of Government, to fill in crucial numbers in the year or so after that.

As I discussed in the Introduction to the Garnaut Climate Change Review (2008), the diabolical nature of the problem has many dimensions. One is uncertainty about the impacts of climate change under various emissions scenarios. Uncertainty does not mean that we know nothing. The mainstream science tells us that some outcomes are much more likely than others, and there is a range of possibilities around the most likely outcomes. The mean expectations from the mainstream science associated with allowing greenhouse gas emissions to grow under business as usual are deeply problematic for patterns of human life as we have built them in modern times. They are more problematic for Australia than for other developed countries. Outcomes may turn out to be better or worse than current expectations from the science about what is most likely; there is no reason to think that they are more likely to be better than to be worse. If better, they are likely still to be difficult. If worse, they may be catastrophic. I tried to introduce a rational framework for decision-making under uncertainty in Chapter 1 of the Review. Within such a framework, uncertainty about outcomes strengthens rather than weakens the case for effective early action.

One of the sources of uncertainty about climate outcomes is that there is natural variability of climate, some of which is well understood, and some hardly understood at all. Without any human-induced climate change, some years and sometimes sequences of years would be hotter than others in particular places and in the world as a whole. Natural variability interacts with human-induced climate change to produce actual climate. I discussed this at length in the Review, especially in Chapter 2. Some arguments against action on climate change suggest that the presence of climate variability makes human-induced climate change less important. At an extreme, some have argued that the fact that some recent years have been cooler than the peak years of 1998 or 2005 (depending on which temperature time series are used) suggests that the warming trend that has been evident over the past half century has ended or gone into reverse.

We can go beyond ignorant assertion of one view or its opposite on this matter by using the best available mathematical analysis of time series. This happens to be an area of statistical analysis that is used much and well developed technically in the branch of economics called econometrics. It is common for many influences to affect employment or output or prices or trade acting in different ways at the same time, and it is sometimes important to understand the individual contribution of one or other factor. For the Review, I asked Trevor Breusch and Fashid Vahid, leading exponents of the statistical analysis of time series data at The Australian National University, to examine whether there was a warming trend over the past century and whether there had been a break in the trend in the late 1990s or at any other point. Their conclusions are set out in Box 4.1 in Chapter 4 (p79) of the Review: the temperatures of recent times cannot be explained in the absence of a warming trend and there has been no statistically significant break in trend. It is too much to hope that this would have set new standards in drawing conclusions from such statistical data: in the political process and for some people sound and naive statements have similar weight.

Climate change mitigation is also difficult because effective action in the national interest affects adversely some business interests. These interests know who they are. There will also be direct business beneficiaries of climate change mitigation, in all the low emissions processes and

industries that will emerge when sound mitigation policies are in place. But most of the people who will be beneficiaries of the success of these businesses do not know now who they are; many of the firms do not yet exist in any form. So businesses that have interests in avoiding effective action, or having themselves shielded from the effects of action are likely to be active players in the political process, while interests that are beneficiaries of action mostly will not. This biases policy discussion towards action being held below levels that on broad criteria would be recognised as being in the national interest. The policy outcomes can therefore be seen as the resultant of the influence of different and in some important ways opposing national interest and private interest forces. Good policy therefore requires processes that can secure the national interest in the face of pressure from private interests. In this, there are similarities with conflicts over protection policy, where there is also intense conflict between the national interest and private interests. Later in this lecture I will draw on the Australian experience with protection policy for insights into climate change policy.

None of this is to say that it is illegitimate for private vested interests to seek to influence policy outcomes in a democracy. It is just that in the absence of an independent centre of the policy process, well equipped to examine and educate the community on the national interest, the outcome will be poor policy from a national interest perspective.

Here we can also draw on a more recent example of conflict between national and vested interests in the policy process. In my recent book with David Llewellyn-Smith on *The Great Crash of 2008* (2009), we discuss how pressures and influence from Wall Street financial institutions overcame efforts from central officials to introduce the type of regulation of United States financial markets that would have reduced the chances of financial crisis. We conclude:

“In financial policy, the future of democratic capitalism will hinge on the capacity of governments to act independently of vested interests. With climate change, the future of human civilisation is probably at stake”. (Garnaut with Llewellyn-Smith, 2009, p. 201).

There is also a difficulty arising from the fact that the main costs of mitigation are incurred in the early years and decades of action, and the benefits of avoided climate change come later—the largest of the benefits in later generations. The costs are borne by people who are active participants in the contemporary policy-making process; most of the benefits will accrue to people who are not now represented in the decision-making process. The Review sought to find the right balance between costs and benefits over time by applying an appropriate social discount rate in assessment of the national interest. The resulting view on the national interest must compete with the bias towards the present in the political process.

The most difficult of the many challenging dimensions of climate change policy is that there can be no effective mitigation without all countries of substantial size making major contributions to the solution. And yet each country has an interest from a narrow national perspective in doing as little as possible, so long as its own free riding does not undermine the efforts of others. Any lagging by some undermines domestic support in others, partly because of resentment at inequitable sharing

of the burden, but also because associated distortion of the terms of competition in emissions-intensive, trade-exposed industries generates visceral political economy reactions.

There is a common tendency for people in each country to fail to recognise the extent of action in other countries and therefore to fail to recognise their own free riding.

The apparent national benefits from free riding make climate change mitigation a more difficult subject of international negotiations than trade. With trade, unilateral reduction of protection makes a country richer whatever other countries do. And yet it is hard enough to achieve international agreement on mutual reduction of protection.

The international dimension also makes climate change policy more difficult than other environmental problems, such as removing pollution from the air of large cities, or cleaning up degraded rivers. These can be resolved through the action of a city or national government, or by cooperation between neighbouring countries. When the people of the city or country or set of neighbouring countries become richer, they are prepared to sacrifice more income for a cleaner environment. Local action emerges, and is effective. The air in the big cities of developed countries is cleaner than it was a generation ago, although the levels of economic activity in the cities are now incomparably larger.

The climate change problem requires cooperation of many countries including all countries of substantial size. It is not amenable to a local solution. Therefore a solution cannot be expected to emerge country by country as each becomes rich or as the polity of each country focuses on the issue and decides to give it priority over other concerns.

The problem is made even more difficult by one feature of the history of international discussion of climate change. The international community agreed at the beginning of the United Nation Framework Convention on Climate Change in the early 1990s that the developed countries would make commitments to and implement major actions to reduce their emissions before developing countries would be expected to take these steps. Further, developed countries would be expected to meet the incremental costs of mitigation in developing countries.

There was justice in this approach, since the countries that are now developed had been responsible for the increase in concentrations of greenhouse gases in the atmosphere that had taken the world to the threshold of dangerous climate change.

It also seemed at that time, the nineties, that such an approach was consistent with effective climate change mitigation. In the early nineties, developing countries accounted for only about a quarter of global emissions, and there was still thought to be some headroom in concentrations before the thresholds of danger had been crossed.

In 2009, the constraints are much tighter. In the early twenty first century, emissions have been growing much more rapidly than before and than previously anticipated. This is above all the result of growth being heavily concentrated and rapid in the large developing countries, first of all

China, India and Indonesia, which are at a stage of development at which the energy intensity of economic growth is particularly high, and in which increased energy is particularly emissions intensive because of the local availability of coal. Developing countries now account for over 40 percent of emissions. The calculations presented in the Review indicate that, in the absence of mitigation, developing countries would be likely to account for around 90 percent of the growth in emissions over the crucial two decades ahead.

The Great Crash of 2008 and the Great Recession have led for a while to some reduction in global emissions. But the restoration of strong growth in the large Asian developing countries through 2009 and the likelihood that it will continue for some time has made that a brief interlude in the growth of global emissions. In any case, in late 2008 and early 2009, in the depths of by far the worst economic downturn since the 1930s, current emissions remained at a level at which concentrations of greenhouse gases in the atmosphere were still growing strongly.

We have squandered the time and the headroom that we had in the early 1990s. We need to change the trajectory of global emissions urgently if high risks of dangerous climate change are to be avoided.

THE FRAMEWORK OF INTERNATIONAL AGREEMENT

It seems unfair that developing countries have to accept major commitments to mitigation when the countries that grew rich before them were not so constrained. Unfair or not, there will be no effective global mitigation without all large economies reducing emissions significantly below business usual from a time not far from now. Obligations to reduce emissions can, however, be defined in different ways for developing and developed countries.

There is no chance at all of any country, least of all a developing country, committing itself to mitigation at the cost of seriously damaging prospects for continued growth in output and living standards. The world's challenge is to break the nexus between growth in living standards and the growth in greenhouse gas emissions. Fortunately, the economics says that it is possible to reconcile reduction in emissions with continued economic growth in the world as a whole and in each of its parts. There is a cost to economic growth, but with good policy it can be small compared with on-going increases in labour productivity and living standards. The Review estimates the costs of Australia playing its full proportionate part as a developed country in an ambitious global agreement to bring emissions back to 450 parts per million (ppm), at less than 0.2 percentage points of incomes growth per annum to the middle of this century. That cost to annual income is clawed back over the rest of the century, even if only those benefits of mitigation that are amenable to standard economic modelling are taken into account. Other considerations magnify the gains, more powerfully further into the future.

There will be no effective global agreement that reduces to acceptable levels the risks of dangerous climate change unless all substantial countries think that it is fair. To develop principles that are widely understood to be fair requires leaders and representatives of all countries to listen

to what others are saying. It requires leaders and representatives of all countries to help their communities to listen to what others are saying.

It then requires hard work in formulating an international agreement that meets the requirements of fairness and adds up to the objective.

The resolution of this problem would be impossible as well as diabolical if it were not for one saving grace. The saving grace is the exceptional public interest and concern in many countries over this issue.

An international agreement would need to have the following five interlocking elements:

1. Agreement on the level of greenhouse gas concentrations that would strike the best balance between economic costs of emissions reduction and risk of climate change. There would be risks and costs of dangerous climate change even if we were to hold concentrations of gases in the atmosphere at present levels. To hold concentrations in the atmosphere at current levels would require drastic and almost immediate reductions from current rates of emissions. There is increasing international focus—an emerging agreement—on the objective of holding concentrations at or below 450ppm, or to a rough equivalent, holding the probable increase in temperature to about 2 degrees Celsius above pre-industrial levels. Parts of the scientific and environmental communities advocate tighter goals for stabilising concentrations. Realistically, the path to any more ambitious mitigation outcome is through an initial agreement to 450ppm, which can be extended as confidence grows in the feasibility of reconciling emissions reductions with rising material standards of living.
2. The global emissions concentrations objective defines a global budget for emissions over a specified period. There needs to be an agreement on allocation of that budget amongst countries. Agreement has to be based on principles that are widely seen as being fair. They need to be seen to be fair in rich and poor countries. They need to be seen to be fair in rich countries which start with extremely high emissions per person, like Australia Canada and the United States, and in rich countries in which each person on average has far lower levels of emissions, like Europe, Japan and New Zealand. They need to be seen to be fair in developing countries with rapidly growing economies like China, India and Indonesia, and in poor countries with stagnant or slowly growing economies as in many parts of Africa and the South Pacific. No agreement will seem fair through most of the developing world, and in my judgement in the world as a whole, unless it is based on the idea that each country's entitlements to emit will converge towards eventual equal per capita levels at some time in the future. There will be widely different views of the time over which convergence should occur.

3. The agreement needs to be based on entitlements and not on actual emissions. It greatly improves the chances of effective climate change mitigation if there is freedom to trade entitlements. Countries in which mitigation is relatively cheap and easy can then reduce emissions below their entitlements, and sell the “surplus” entitlements to countries in which reduction in emissions is expensive and difficult. For example, there are good prospects of Indonesia and Papua New Guinea accepting strong mitigation targets within a global agreement, but only if there are opportunities to sell what turn out to be surplus entitlements. The availability of trade in entitlements increases incentives for participation of developing countries with per capita emissions that are currently low, reduces the costs of global mitigation and in each country that participates in trade, and, by establishing a similar emissions price in each country which participates in trade, removes distortions in international trade in emissions-intensive products.
4. The developed countries need to agree to take the lead in public support for research, development and commercialisation of new technologies. The Review suggested that high-income countries (with per capita income above \$US11,000 per annum) should share responsibility for providing public support for innovation in the low-emissions technologies to the extent of \$US100 billion per annum (Garnaut 2008). A proportion of expenditure within an International Low Emissions Commitment would be deployed in developing countries.
5. The mainstream science tells us that we are too late to avoid costs of climate change altogether. Poor developing countries do not have the institutions, financial capacity or human skills to respond alone in an economically effective way to the problem. Developed countries will need to make major additional commitments to development assistance to support developing countries’ adaptation to climate change.

Where should and where does Australia stand on each of these issues?

On 1 and 2, the Review’s analysis suggested that it was in Australia’s national interest to seek the strongest feasible global mitigation outcome. That was judged to be concentrations of greenhouse gases in the atmosphere of 450ppm of carbon dioxide equivalent, with Australia playing its proportionate part within an international agreement. Under a distribution of the international burden that the Review thought had some prospects of being broadly acceptable, this would require Australia to reduce emissions by 25% by 2020 and 90% by 2050. The Review recommended a unilateral emissions reduction target of 5% on 2000 levels by 2020, and intermediate targets, between 5% and 25%, in the context of less ambitious global agreements. Both the Government and Opposition have accepted the general objective and the range of 5-25% depending on whether there is international agreement and on the ambition of the agreement. The Review’s definition of Australia’s “proportionate part” has transparent and defensible origins, but each country’s “proportionate part” must eventually be defined by negotiations about the appropriate principles to be applied.

On 3, this is broadly accepted within the international discussions, and Australian proposed practice is consistent with emerging international approaches.

Elements of 4 and 5 have emerged as major foci of international discussion. The European Union has proposed the creation of a fund to support mitigation and adaptation in developing countries of larger dimension than contemplated in the Review, and has expressed its willingness to contribute its proportionate part if other developed countries—the United States, Japan, Canada and Australia have been mentioned—do likewise. Australia has provided assistance within these areas to neighbouring countries, first of all Indonesia, Papua New Guinea and others in the Southwest Pacific, and while avoiding numerical offers, has not been negative about the discussion. The amounts of money are large, and there may be problems along the way to commitments in the United States. There has been no comparable discussion in relation to commitment to public expenditure on research, development and commercialisation of new technologies, although individual developed countries have increased their efforts in this area. Australia's support for commercialisation of new technologies for carbon capture and storage is recognised as a positive contribution. Similar commitments on other low-emissions technologies in which Australia has a national interest and comparative advantage in research, including a range of bio-sequestration possibilities, would be logical next steps. The desirable end point for Australia is large support for innovation with low emissions technologies, with funds being provided on a technologically neutral basis.

There is a strong global deal to be done, within what now seems politically feasible in the major countries. China, for example, has already committed itself domestically to do considerably more than the Review suggested would be required of it by 2020 within an agreement directed at concentrations of 450ppm, The Review anticipated a Chinese commitment to reduce emissions by 10 percent from business as usual by 2020. The measures announced as matters of domestic policy by China to September 2009 have been estimated by my colleagues from the Review, Stephen Howes and Frank Jotzo, to reduce Chinese emissions in 2020 to 37 percent below business as usual (pers. comm., see also Howes 2009). The superior performance in China comes partly from the commencement of strong action in 2007 and early 2008, when the Review envisaged business as usual until the commencement of post-Kyoto arrangements in 2013.

But China is yet a long way from committing internationally to deliver that outcome. That distance must be travelled soon if there is to be a satisfactory climate treaty in the aftermath of Copenhagen. It is likely to travel that distance alongside United States commitments to strong mitigation.

The Indonesian Government has also expressed willingness to bring down emissions by large proportions below business as usual within a supportive international agreement. Brazil and South Africa have taken substantial steps, including through a carbon tax in the energy sector in the latter, and have announced a willingness to go further. Even India, with much lower per capita emissions levels at present than other substantial economies, has recently announced a

willingness to hold emissions substantially below business as usual in the context of a global agreement.

Most developed countries have now announced target ranges for reductions in emissions with which the Australian Government's targets can be compared. The Climate Institute (2009) has recently published data on a comparable basis. This suggests that the equivalent to Australia's 5-25% depending on the extent of international action is 15-29% for Japan, and 12-23% for the European Union.

The Climate Institute notes that the United States Clean Energy and Security Act of 2009 refers to the equivalent of reductions of 18-29% from 2000 to 2020. The Obama Administration favours strong targets for the United States, but this is a matter of continued debate within the United States Congress. Given the priority of other domestic issues in 2009, notably health policy and the recessionary aftermath of the Great Crash, the United States may not be able finally to make such strong commitments until after other current political issues have run further. The United States' attenuated political processes may stand in the way of definitive agreement on all numbers in December 2009. Australia, as a close friend and ally of the United States, will do best for its friend and ally as well as for its national interest in strong global mitigation by making it clear that it is committed to strong action, rather than by creating uncertainty in others' minds about its own policies.

The Review put forward a framework for calculating the 2020 mitigation contributions that would be required of each major country to achieve a 450ppm concentrations objective over the longer term. The current state of international commitments, the temporary pause in emissions growth in the recession and the increased investment in low-emissions technologies that is now occurring in many countries well in advance of a post-Kyoto agreement, may generate a set of commitments for 2020 that keep ambitious mitigation possibilities alive. However, the deeper and wider cuts in emissions that are required beyond that date could only be secured through a formal framework of principle for agreement on allocations, rather than the political discourse that has prevailed to date.

There has been much international discussion of the Review's proposed basis for allocating entitlements since the Review's release on September 30 last year. Some commentators in developing countries, including China, have said that 2050 is too long to wait for convergence (Project Team of the Development Research Centre of the State Council 2009).

This is the discussion that the world has to have: discussion of alternative ways of dividing up a global emissions budget that add up to avoidance of high risks of dangerous climate change.

The Climate Institute (2009) has suggested that current pledges by other Governments point towards a requirement for 15% reduction in Australian emissions by 2020, and notes that the movement in other countries is in the direction of strengthening commitments, so that there is a "real and increasing probability" that a 25% reduction will be justified and required. It makes the constructive suggestion that confining the next round of pledges to 2012-17 and keeping open the

possibility of stronger targets after that would increase the chances of securing the 450ppm objective.

While we are unlikely that we will move all of the way to a treaty with numerical commitments by December, major progress is being taken in the lead up to Copenhagen. The appointment of three leading international figures as “friends of the Chair” in for the Copenhagen meeting—the Secretary General of the United Nations, the Prime Minister of Australia and the President of Mexico—is an indication of the serious nature of current preparatory arrangements.

INCREASED COSTS FROM PRESSURES FROM PRIVATE INTERESTS

The standard studies of the costs and benefits of climate change mitigation, either for the world as a whole (Stern 2007) or for a single country (Garnaut 2008) presume the presence of an efficient system of policy to support the transition to a low-emissions economy. Such a system would have two essential elements. It would include an appropriate price on emissions to correct the externality associated with the emissions themselves. It would also include public support for research, development and commercialisation of new, low-emissions technology to correct the externality associated with innovation. The first requirement would allow trade in emissions entitlements across countries to allow reductions in emissions to occur where they can be achieved at lowest cost to welfare.

Optimal policies cannot be taken for granted. The Review put the issue in the following terms:

“The Review did not model the transactions costs associated with various compliance arrangements for the emissions trading scheme. This could turn out to be a substantial deadweight loss for the economy, particularly in relation to the treatment of trade-exposed, emissions-intensive industries in an ad hoc policy world. If this issue is not handled well, uncertainty will affect the supply price of investment. It will lead to a diversion of management effort into rent-seeking behaviour rather than the pursuit of low-emissions production processes. It could potentially lead to a wide corrosion of good economic governance. In the worst of circumstances it could turn out to be as expensive as the costs of mitigation itself”. (Garnaut, 2008 p. 297)

Pressures for special treatment from industries and firms are most effective when they are connected to an argument that the preferential treatment is in the national interest, and if that argument contains some element of truth. An argument with an element of truth is present when there are substantial differences in emissions pricing affecting relative competitiveness of trade-exposed, emissions-intensive industries across countries. It is possible that this will lead to lower production of emissions-intensive products in countries in which emissions prices are higher, and higher production in other countries. It is possible that this will lead to loss of economic value in the country with high emissions prices and in the world as a whole, and also to perverse environmental outcomes. Such outcomes are referred to as carbon leakage.

Possible, but not certain. And never to the full extent of the cost of emissions permits in the country with the high emissions price. A careful study of the extent of “carbon leakage” of heavy industry from the European Union when that region was the only jurisdiction to apply a price to carbon concludes that there was no statistical evidence of a change (Baron, 2009). Even when there is clear evidence of industry moving (or, much more likely, the location of investment in new capacity moving) from a country with a higher carbon price, this does not establish the presence of welfare-reducing and emissions-increasing carbon leakage. For example, if Australia places a price on carbon emissions and developing countries with abundant stranded hydro-electric or geo-thermal capacity do not, the resulting pressures for movement of new investment in aluminium smelting from Australia are not necessarily associated with welfare-reducing carbon leakage. If the alternative to high-emissions, coal-based smelting in Australia is production based on hydro-electric or geo-thermal capacity in Mozambique, the Congo and Papua New Guinea or even on natural gas-based electricity in developing countries, then global emissions will fall and not rise if Australia alone places a price on carbon. Moreover, the pressures for moving investment capacity to low-emissions sources of energy would be as large (in the case of hydro-electric and geo-thermal potential) or still strong (natural gas) even if all countries imposed the same carbon price as Australia. It is economically and environmentally efficient movement of investment.

Whether and the extent to which higher carbon pricing in one country warrants countervailing payments through the issue of free permits or other means to trade-exposed, emissions-intensive industries in that country is an empirical matter, to be tested on a case by case basis. The outcomes are unlikely to be economically or environmentally efficient unless the testing is done by an independent expert authority working through transparent processes. The relevant test to apply is whether the world price for the emissions-intensive product is lower in the world of partial carbon pricing than it would be in a world of comprehensive and uniform carbon pricing. If it would not be lower, there is no case for free permits, whatever others are doing, and whatever the pressures for moving investment in emissions-intensive industry to countries applying lower carbon prices. Moreover, the extent of countervailing payments that is justified on grounds of economic and environmental efficiency is limited to the extent by which the world price for the product is lower than it would be if all countries applied a similar price to Australia. These matters are explored in detail in Section 14.5 and Box 14.5 of the Review.

The “carbon leakage” argument for issue of free permits to trade-exposed industries is used much more widely, and to argue for much higher countervailing payments, than is warranted by the economic realities. Over-compensation for carbon leakage in one country invariably stimulates claims for over-compensation in others, in ways that are familiar from the political economy of protection. New Zealand’s decisions to raise assistance to trade-exposed industries in response to perceptions that Australia was offering more than New Zealand, announced in the last week of September 2009, is simply one in a long line of such developments.

The arbitrary extension of tax exemptions, free permits and subsidies to trade-exposed, emissions-intensive industries is potentially a major source of distortion in international trade, with the capacity to corrode the liberal multilateral trading system. We can envisage differences in

Governments' approaches to assistance to trade-exposed industries being more important to a firm's competitiveness in the international market for an emissions-intensive product than typical inter-firm differences in the efficiency with which resources are used.

There are long term and transitional solutions to the dreadful international trade problems deriving from apparently differential treatment of trade-exposed industries.

The long term and general solution is to move towards all substantial (including developing) economies having caps on emissions, alongside trade in emissions entitlements. Remember that these caps can be set in different ways for economies at different levels of development: the important thing is that there are hard caps. Hard caps on emissions plus trade in entitlements will move the world towards similar emissions pricing across countries.

The inclusion of all developed and the world's major developing countries—say, the developing country members of the G20—would remove all material and legitimate concerns for carbon leakage.

But it is not likely that the international community will have reached this point in time for the post Kyoto world from 2013. There is high risk of great economic damage during the period before moving towards broadly comparable emissions pricing across major countries, and transitional arrangements are required to reduce that risk.

It is no solution for countries with ambitious emissions reduction schemes to adopt punitive trade measures. The risks of capture of countervailing tariffs by protectionist interests are high to the point of certainty.

Nor is there a solution through the established processes of the WTO. It is probably illegal under the WTO subsidies code to provide free permits in the form favoured in many countries' established or emerging emissions trading schemes. Action through the established WTO processes requires the crystallisation of a dispute, with dangers of descent into endless litigation, surrounded by rising international tensions over trade measures. Most developed countries in any case would prefer to let sleeping dogs lie in relation to others' arrangements: criticism of others' arrangements would invite interest in one's own.

The optimal transitional arrangement is defined and explained in Chapter 14 section 5 of the Review (Garnaut 2008).

The optimal assistance regime would be best administered internationally. The WTO is the best placed of the international organisations to take the lead. Some members would need to request the WTO organisation to work towards establishing modalities for assistance to trade-exposed, emissions-intensive industries. The objective would be to establish modalities for voluntary action rather than mandatory arrangements in the first instance.

It is an advantage of the proposed arrangements that they would be effective if applied by a single country or several countries, in the absence of universal application.

For the door to be left open for optimal transitional arrangements and for early application of a general solution to the trade distortion problem, it is essential that each country leaves open the possibility of early abandonment of current distorting arrangements immediately upon the establishment of the long term or the optimal transitional arrangements described in this paper.

Sub-optimal approaches to the carbon leakage problem are set to inhibit strong mitigation and also to distort the international trading system. The costs do not end there. There is potential for sub-optimal mitigation policies to stand in the way of correction of the fiscal imbalances that have emerged in most economies since the global financial crisis.

A carbon tax or ETS uses part of a country's revenue-raising capacity, whether the rent value of the emissions pricing is collected for the public revenues, or dissipated as free permits and tax exemptions. The dissipation of this potential support for fiscal consolidation—justified in each country by the distorted approach to supporting trade-exposed industries adopted by others—is a threat to sustained fiscal recovery from the Great Crash of 2008. One country alone—Australia—could limit the unnecessary drain on fiscal capacity without risk of carbon leakage by adopting the Review's optimal approaches to transitional assistance for trade-exposed industries.

NATIONAL VERSUS PRIVATE INTERESTS IN POLICY: CLIMATE CHANGE MITIGATION AND TRADE LIBERALISATION

Emissions-intensive industries have invested heavily to influence climate change policy since the early days of discussion of these issues. At first the objective was to avoid, then to delay, then to minimise action. Once it became clear that the Australian polity was going to insist on effective action, the objective of emissions-intensive industries in practice became to minimise the effects of policy on their own interests. This is to be expected in a democracy. The problem is that these pressures have been applied in the absence of a strong, independent centre of the policy-making process supported by well-informed public opinion.

The balance was corrected to some extent with the commissioning and then release and public discussion of the Garnaut Climate Change Review. However, this occurred after the development of firm expectations amongst the emissions-intensive industries of privileged treatment independently of transparent analysis of the issues. Once developed, such expectations can be reinforced by investment in the political process by beneficiaries of preferred treatment.

THE REMARKABLE STORY OF AUSTRALIAN TRADE LIBERALISATION WHEN HAWKE WAS PRIME MINISTER

The Hawke Government was elected to end the economic crisis of the decade to 1983, when high unemployment coincided with persistent high inflation. This interacted with and compounded the effects of many decades of relatively low productivity growth. Trade liberalisation was the central element in productivity-raising reform, and politically the most difficult.

When I took leave from the Australian National University in March 1983 to work as Bob Hawke's economic adviser, Kym Anderson and I were working on a book on Australian Protection. It did not come out until 1986, largely due to my new responsibilities, but the main themes had been established by early 1983 (Anderson and Garnaut, 1986). In the book, we describe how Australia, with New Zealand, had become the most protectionist of the developed countries—a closing of the Australian economy and mind that had been causally related to Australia's descent from the top of the world league table of living standards at Federation, to the lower ranks of developed countries by the early 1980s. Anderson and I analysed the history of Australian protection in terms of the interaction of ideas about the national interest with pressure from vested interests.

The Anderson-Garnaut perspective from early 1983 is remarkable now for its cautious prognosis on the future of Australian protection. Vested interests were deeply entrenched in the policy process. The most highly protected industries were principal sources of political funding for all three major parties. They were well represented by organisations established in Canberra to influence the political process. There was a well-worn path between employment in Government and in the lobbying organisations. These factors were crucial in the most highly protected industries achieving increases in protection for themselves between 1974 and 1983, even as protection for some other industries was modestly reduced. Further, the most highly protected industries, motor vehicles and textiles clothing and footwear, secured commitments from the Fraser Government in its later days that purported to guarantee the levels of protection for seven years into the future. The lobby groups had been worthy of their hire.

The Hawke Government's reductions in protection began industry by industry in 1983, with the removal of quotas on steel imports and liberalisation of imports of whitegoods and some heavy engineering products. The Fraser Government's long-term commitments to protection for the motor vehicle industry were put aside in 1984 under the "Button car plan". Cross-the-board reforms announced in March 1991 completed the process through which Australia, with New Zealand, became the most open to international trade in goods of the advanced economies.

In case the remarkable character of Prime Minister Hawke's March 1991 Statement on trade and industry policy is lost in the mist of time, I will refer to the reflections of John Hyde, intellectual leader of the Liberal Party's historically important Dries:

"Despite the recession then prevailing, the Government reaffirmed its intention to open up the Australian economy...Hawke defended his decision with an impeccable statement of economic principle: the most powerful spur to greater competitiveness

is further tariff reduction. Tariffs have been one of the abiding features of the Australian economy. Since federation...the supposed virtues of this protection became deeply embedded in the psyche of the nation. But what was the result? - Inefficient industries that could not compete overseas; and higher prices for consumers and higher costs.” (Hyde, 2002, p. 233).

Hyde sees this statement as the high point of rationality in Australian economic policy (Hyde, 2002, p. 234).

How did national interest concerns prevail over vested interests?

That is a story of leadership with many parts. It is a story of building on a base of transparent economic analysis of the effects of protection, of long time perspectives on policy, of discipline in the management of government and the public policy process, of public education on the national interest, and of gradual movement towards long-term goals.

The trade policy reform was made possible by a long period of transparent independent analysis of the effects of protection on overall economic output and the distribution of income. Independent academic economists began the questioning of the old protectionist orthodoxy. The gradual development of a tradition of transparency and independence at the old Australian Tariff Board, later the Industries Assistance Commission, the Industries Commission and after the protection reform era the Productivity Commission, provided an authoritative information base on which the public discussion was able to draw. A small number of economically literate financial journalists kept the results of independent analysis before the public eye. The development of an informed independent centre of the policy-making process began to challenge a public discussion that had for many decades been dominated by vested interests. Groups developed in both major political parties that recognised the national value of trade liberalisation.

A Government that was seeking to reduce protection was able to build on the information base that had been established at times when the political leadership was uninterested in policy reform. Hawke’s speeches contained frequent references to the virtues of open trade from his early days as Prime Minister. This reinforced the emerging understanding of costs of protection across parts of the community. But not in the electorate at large: the opinion polls remained stubbornly loyal to the old protectionism. However, the public education allowed the community to put the trade liberalisation into context and reduced the intensity of reaction when it was later revealed as current policy.

The clear lines emanating from the Head of Government encouraged others in the community who favoured trade liberalisation to stronger voice and greater activity, and made it less respectable for businesses openly to seek higher protection in their own interests.

Institutional development within the processes of policy consultation with interest groups played a role. For example, an Economic Policy Advisory Council (EPAC) brought together business, union and community groups for discussion of these issues. It was served by a secretariat with

considerable analytical capacity, which after the 1984 election also became the secretariat of the Cabinet committee on long term economic growth, later the Structural Adjustment Committee of Cabinet.

All of these developments contributed to the emergence of an intellectual climate in which, to be credible in discussions with government or in public statements, a business or business group would have to frame its arguments in terms of effects on long-term national economic performance. For some time, this was an important constraint on rent-seeking behaviour. Later on, in the 1990s and more egregiously in the early twenty first century, this constraint was weakened by the growing commercialisation of economic opinion (Garnaut, 2009).

Business interests did not stop trying to influence Government policy through all of the familiar mechanisms. The heavily protected industries remained major donors to political parties. The Prime Minister spent considerable time with business and trade union leaders. But the clear lines of Government policy constrained the drift into rent-seeking behaviour.

Trades union leaders representing protected industries retained their interest in protection. However, through the auspices of the ACTU, they were engaged in broader discussions of national policy, and in the end were receptive to proposals for economically effective means of raising the welfare of their members and of low-income Australians.

No doubt there was some distortion of policy by vested interests. The evidence of economic policy through the Hawke years is that it was at the margins of the political process.

The reforms of the Hawke years demonstrate that a Prime Minister with strong electoral standing has considerable autonomy in executing a policy of reform in the national interest. It demonstrates the importance of independent analysis made available to the community, on the costs and benefits of various policies. It also shows that consistent messages to the community over long periods and commitment to gradual and steady progress towards long term goals can widen the scope of what is politically possible.

CONCLUSIONS FOR THE CHALLENGE AHEAD

My assessment of the state of play on international negotiations, and of Australia's place in them, suggests that Australia is in as sound a position as can reasonably be expected to secure its national interest in a strong global agreement on mitigation. With the commitment to reduce 2020 emissions by 25% from 2000 levels in the context of an effective global agreement is a commitment for Australia to play its proportionate part. Our proportionate part in a strong international agreement will also require commitments on technology and adaptation, but these seem to be on the agenda. So has Government broken free from emissions-intensive industries' early stranglehold on climate change mitigation policy?

Once targets have been set, the extent of countervailing support or “compensation” to various interests affects the national economic cost of mitigation and the distribution of the costs across the community, and not the extent of mitigation. So does it matter at all to environmental goals?

Well, yes.

First, the Australian targets in response to progress in international discussions have not yet been set within the range 5-25%. The international outcome will be affected by Australia’s stance in these discussions. The Australian Government so far has been true to its announced commitment to Australia’s national interest in a strong international agreement in recent discussions. This is important progress from earlier Australian positions. It will come under pressure from vested interests on this issue. The crunch on targets within the 5-25% range lies ahead, and it important that an independent centre of the Australian policy process is engaged and effective.

Second, economically inefficient means of assessing countervailing payments raise the costs of mitigation, and higher costs of mitigation will be associated with stronger resistance to more ambitious targets.

Third, excessive countervailing payments to trade-exposed, emissions-intensive industries will generate responses in other countries, towards increasing distortions within their own mitigation policies. This can increase the costs of global mitigation leading to reduced global effort.

In addition, excessive costs of mitigation are important in themselves independently of their environmental effects. The current Rudd government, and its successors into the foreseeable future, face great economic policy challenges in the wake of the excesses of the early twenty first century boom and the subsequent Great Crash of 2008. This will require constraint in the Australian community’s expectations of and demands for income and services. Successful mitigation will also require constraint on expectations and demands. The whole challenge is immense, and meeting the challenge will make large demands on community cohesion and leadership. The lower the cost of mitigation, the more likely it is that the larger challenge will be met successfully. Comments since the Treasurer’s release of the revised budget outlook this week highlight the link between the fiscal costs of mitigation and the budget outlook. This is only part of the story.

A strong global mitigation effort is of immense importance to future Australian prosperity and security. The Rudd Government’s commitment to Australia playing its full part in an ambitious global mitigation effort is strongly in Australia’s national interest, and the Government’s effective diplomacy has increased the chances of international outcomes that are consistent with Australia’s national interest. Costs of Australia playing its full part in an ambitious global agreement will be moderate if economically optimal policies are applied, but high if policy comes to be dominated by re-establishment of old patterns of Australian rent-seeking behaviour.

Kevin Rudd shares with John Curtin and Bob Hawke extraordinary electoral standing at a time of great challenge to Australia. This 2009 Hawke lecture shows that there are lessons for the present in twentieth century experience with trade policy reform.

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