Australia and Indonesia’s Military Mafia

Graeme Dobell

There is now an urgent need for careful scrutiny of the half truths, lies and wishful thinking involved in calls to restore ties with Indonesia’s military. Consider, for example, this statement by defence minister, Robert Hill (2002:6), about why Australia should rebuild the defence relationship:

Like Indonesia’s other institutions, the role of the Indonesian military forces — TNI — is evolving in a fluid and difficult environment as they move away from the ‘dual function’ they had under the New Order [the regime of the departed long-time president, Soeharto]. But TNI will remain a fundamentally important institution in Indonesia. Its handling of difficult internal security problems across the archipelago will have a crucial bearing on stability. As a secular organisation it will remain key to the government’s efforts to promote tolerance and harmony between Indonesia’s many different faiths. This is particularly important in the context of current concerns about the potential attractiveness of radical forms of Islam in the region.

This is a view of the Indonesian National Military (TNI, Tentara Nasional Indonesia) shaped not so much by lies as by half truths that hide as much as they reveal. The key claims put for engaging closely with TNI are that it is a force for stability and a secular institution, but neither claim stands up to careful scrutiny. Let’s construct another version of the Hill statement that is equally true, and which should strongly influence any debate about a return to the military ties of the 1990s. It would read:

The TNI is the most dangerous major institution in Indonesia. It is a corrupt, unaccountable body that acts beyond the power of its own government. TNI has created and directed terrorist militias (seen in East Timor and the militant Islamic group Laskar Jihad) and profits from communal unrest. The military has a history of abusing its own people. TNI proclaims itself a secular institution, but its own economic and power concerns mean that, in the extreme, the Army would adopt Islamic colours to suppress a middle class/student/parliamentary challenge. TNI is the institution that could most quickly and directly threaten Indonesia’s democracy.

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Australia should be helping to push the TNI’s troops back into the barracks and keep them there because they are a long-term threat to stability. Australia’s fundamental interest is in the unity of Indonesia. The Canberra nightmare is a Yugoslav-style collapse. The fear was most vividly expressed in a briefing to the National Security Committee of Federal Cabinet: ‘Look at the map of the region and instead of Indonesia, imagine that geographic space occupied by three new versions of Bangladesh and two new versions of Brunei’.

Australia’s diplomatic, strategic and economic purposes are fundamentally served by Indonesia’s democratic experiment. It is an extraordinary failure of imagination, and failure to understand what is at stake, for Australia to seek ties with TNI as some form of fall-back insurance against the collapse of Indonesia’s democracy.

The alternative to Indonesia’s democracy is not some comfortable return to a Soeharto-style regime. And it does not serve Australia’s interests for our defence establishment to seek to restore the relationship it had with Indonesia’s military during the final phase of the Soeharto era — a relationship, of course, that crumbled at its first test in East Timor.

The argument against Australia’s armed forces attempting to restore close ties with the Indonesian military can be made on the purely pragmatic grounds that this strategy will not work. It will not deliver what Australia wants or needs in Indonesia. The argument does not have to be based on issues of principle or human rights; the realist or cost-benefit judgement must be that Australia will get little return from increased cooperation with the Indonesian military. Money would be much better spent on the new Indonesian police force, created in 1999 when the police were separated from the military command structure previously known as ABRI (Armed Force of the Republic of Indonesia, Angkatan Bersenjata Republik Indonesia). Australia’s security interests are in strengthening the legal system and helping reform Indonesia’s legislative process.

Australia should restrict its military contacts to discussions between senior officers and to officer education. Any money Australia wants to spend on security training in Indonesia should go to police or judges. And to underline the point we should be making, only Australian civilians should be involved in intelligence exchanges with Indonesia. The Indonesian generals would certainly understand the symbolism of that civilian message (and would dislike it almost as much as Australia’s military).

The Cracked Mirror

The Australian Defence Force’s efforts at ‘military diplomacy’ with Indonesia should have died with the experience of the lies and deceit of East Timor. Yet the Defence Department is now trying to return to the previous formula. The approach ignores both the Timor experience and the extraordinary changes in Indonesia in the last few years.

The Australian military’s dealings with Indonesia seem to be afflicted by the tendency when we look at others to see a reflection of our own characteristics.
Beyond merely seeking common ground, the mirroring effect means that in dealing with others we seek — and sometimes mistakenly see reflected back to us — our own habits, thought processes, histories and assumptions. The Australian military approach to the Indonesian military has contained a large dose of mirroring. Australian officers believe they can find common purposes with Indonesian commanders based on assumed similarities of military culture and conduct.

In the 1990s, Australia’s defence leaders liked the idea of ‘military diplomacy’. The shared practice of arms would be the common bond that helped Australia’s soldiers do things with the Soeharto regime that were beyond civilian diplomats and politicians. Soeharto is gone but the habits of mirroring and defence diplomacy seem to persist in Canberra.

Before Australian generals or bureaucrats go to Jakarta, one sentence should be typed across the front page of their briefing document: ‘Remember you are dealing with an Army that is part military, part mafia.’ On the top of the second page should be typed: ‘The historic role of the Indonesian military is to play politics and distribute the spoils.’ Bob Lowry charted the military’s role as a cohesive political force during Indonesia’s previous three political regimes (Lowry, 1996:chapter 7). During the Constitutional Democracy period (1950-57) the military played a spoiling role; in Sukarno’s Guided Democracy (1957-65) it was a major partner; and in Soeharto’s New Order (1965-98) it was a significant actor and the dominant instrument. Under Soeharto, the Army had a physical presence at almost every administrative level. Thousands of active and retired officers served in the cabinet, parliament, courts, Golkar (the government’s political party under Soeharto regime), provincial government and state enterprises.

Australia’s military now needs to look beyond the mirror image to see an Indonesian military force with a vastly different history and a radically different culture. The ‘mafia’ dimension deserves emphasis. TNI gets only about 30% of its budget from the government (ICG, 2002:4). This key fact should act as a reality check for Australian officers and bureaucrats, coming as they do from a world where 100% of the military budget comes from the national parliament, via the cabinet, as an historic expression of civilian control of the military. In Indonesia the old jest was that the military did not have merely a dual function (defence and political responsibilities), but rather a triple role — and the third function was making money.

Moreover, although some of TNI’s extra-budgetary funding comes from legitimate commercial enterprises, a great deal is derived from a wide range of illegal activity. According to Crouch (forthcoming):

Another vital source for both TNI and police is money derived from activities that are best described as ‘extortion’. Private corporations have little choice but to pay ‘protection’ money to the military, especially in the case of foreign investments in such industries as mining, petroleum refining, and plantations where military personnel are
often employed as security guards. Manufacturing and commercial enterprises in cities and towns are also ‘taxed’ by the military and police, while illegal taxes are routinely extracted at ports and from land transport enterprises. Security personnel are deeply involved in illegal logging, mining, fishing, cattle rustling and smuggling. And at the lowest level, military and police officers either control or provide ‘backing’ for illegal gambling, narcotics and prostitution.

Crouch argues that a tacit agreement with the government means there are no genuine prosecutions of military officers for human rights crimes. And officers use their relative legal immunity to keep Indonesia’s regional conflicts simmering, to serve their financial interests.

This is not to say that the military wants an all-out war in these regions, but a continuing atmosphere of tension and uncertainty makes it much easier to extract contributions. ... [W]hen military officers call for the introduction of a military emergency, they are not unaware of the economic benefits that an emergency can bring.

**Democracy Does Not Equal Chaos**

The hardhead argument is that Canberra should ignore the issue of whether elements of the Indonesian military are obnoxious abusers of human rights, and focus purely on Australia’s interests. Harries (2002) argues that Australia must set clear priorities and make hard choices to deal with Islamic extremism, based on an overriding national interest in Indonesia achieving ‘stability and order as soon as possible’. In Harries’ view, the only instrument capable of doing this is the Indonesian military, even though he concedes it is ‘a brutal and deeply tarnished institution’.

The problem with this line is that the Indonesian military is most unlikely to deliver stability, however it is defined. The choice is a false one: democracy and chaos on one side, the military and stability on the other. TNI’s past means it would have little legitimacy if it grabbed for power in the future. The instability we see at present in Indonesia would seem mild compared to the resistance that would meet an attempted return to military rule.

Even the Australian leader who became close enough to Soeharto to create the 1995 Security Treaty, Paul Keating, understands there is no simple turning back to that previous military-based regime. Keating (2002:5) argues that it is a mistake to imagine that TNI offers an easy alternative to Indonesian democracy:

I think the likelihood is the TNI is as much part of the problem as the solution; and therefore the moderate Muslim political parties and the moderate Muslim political personalities have got to be backed. And we shouldn’t fall back into some simplistic notion that secularism in
Indonesia is just like opening a can and it pops out. We just open the can, the TNI put it together, and out it pops.

Equating the military with secular stability is wishful thinking, not analysis. A proper analysis of the TNI’s role as a force for instability would include these observations on the military, drawn from the International Crisis Group (ICG, 2002:4):

- TNI is a highly politicised organisation that ‘leaks information ... like a sieve’.
- Rebel movements still get the bulk of their arms from corrupt soldiers and police.
- Some 70 percent of TNI’s operational funding comes from non-budgetary sources, many illegal.
- It is a major understatement to say that TNI ‘discipline is weak’. A recent attack by soldiers on a police post in North Sumatra, in which 1.5 tons of marijuana went missing, is merely one example.
- Trials of army officers for crimes against humanity in East Timor have been a ‘farce’ that undermine, not strengthen, accountability.
- Looking to the Army ‘as the lead institution to combat terrorism would be a mistake that could as easily compromise security as strengthen it’.

Neither Secular nor Stable

In post-Soeharto Indonesia, the military and other conservative elements exploit religion to keep their opponents at bay. But this is a tactic, not a core principle. O’Rourke’s analysis of the new struggle for power in Jakarta concludes that TNI will happily abandon its so-called secular principles and exploit religion as a political vehicle to preserve or enhance its power (O’Rourke, 2002:403):

If the military’s leaders grow dissatisfied with a Megawati administration, they would willingly back a government led by Islamic parties. An alliance with Islamic parties would help the military stave off resistance from its most formidable foe: student demonstrators. Indonesia’s student movement is only effective when it is galvanised, but a large portion of the country’s student population is partial to Islamic politics — and might therefore be co-opted into supporting a military-Islamic alliance in the future.

The Indonesian military has given ample evidence of its willingness to exploit violence to serve its economic and political ends. The creation and direction of militia groups in East Timor in 1999 had echoes of the tactics the Army used to massacre communists after the failed coup in 1965 (Cribb, 1990). The Army’s creation of the Islamic militia Laskar Jihad is a rerun of its tactics in East Timor.
The TNI in a democratising Indonesia is not the same beast as the ABRI of the Soeharto era. In particular, TNI is not the secular institution it once was. It is not as rigid as before in screening out more devout Muslims when recruiting troops. The turn towards Islam began in the 1990s as Soeharto embraced elements of religion to reinforce his power. He stripped away the disproportionately Christian leadership of ABRI so as to reduce the influence of the Christian general, Benny Murdani, who had confronted Soeharto about the burgeoning business activities of Soeharto’s children, and had also discussed the need for some presidential succession planning.

The former Labor deputy prime minister and defence minister, Kim Beazley, argues that the swing towards Islamicist sentiment began under Soeharto (Beazley, 2002:10):

The Pancasila ideology of the military and society was being actively undermined before Soeharto fell, as he sought to shore up his position. After he purged General Benny Murdani for criticism of his family, a purge began of Christian officers at senior levels of the military. Their numbers among major-generals and above stood at 25% in the late 1980s. By the time Soeharto fell, this had fallen to very few. TNI was thoroughly philosophically confused.

The Indonesia military is no longer, if it ever was, exclusively a secular-nationalist force. TNI’s role in the creation and direction of the violent Islamic militia, Laskar Jihad, is standing proof of the erosion of the secular principle. The military would have to be a key element in a turn towards Islamic government. O’Rourke’s judgement in early 2002 was that the likelihood of Islamic rule in Indonesia is stronger than ever before, precisely because of the military (O’Rourke, 2002:404):

It matters little that Islamic political parties attracted relatively weak support in the June, 1999, election: Indonesia’s power struggles take place at the elite level. Rather than a grassroots movement, an Islamic government would be a construction imposed from above, with the help of the military and, probably, Golkar.

**Australian Military Relationships as an Instrument of Influence**

The base claim of the engagement orthodoxy in the 1990s was that Australia could build some levels of influence over the professionalism and direction of Indonesia’s military. The 1994 Defence White Paper spoke of ‘shared strategic interests and perceptions’ and the way combined exercises would ‘enhance the capabilities and professional standards of each country’s forces’ (DOD, 1994:67). By 1997 Defence was boasting about how ‘close cooperation on a range of issues provides us with broad influence, including on human rights’ (DOD, 1997:22).
The example of the lies and deceit of East Timor has not, apparently, dismantled the hopes for influence.

A useful reality check on what can and can’t be achieved by defence links in Southeast Asia is to examine the history of the Five Power Defence Arrangements. FPDA, entered into in November 1971, is a promise by Australia, New Zealand and Britain to defend Malaysia and Singapore. It is a one-way defence commitment — Australia gives security guarantees that are not reciprocated. If the influence argument is to have any weight, then presumably there should be some evidence of it in Australia’s dealings with Singapore and Malaysia. And, surely, the military heritage Australia shares with Malaysia and Singapore should enhance this process. Alas for the advocates of military diplomacy, there is little evidence of any convergence of shared perceptions or of broad influence.

During the 30 year history of the FPDA, Australia has had little ability to shape the perceptions or policies of its de facto allies. Australia has poured considerable cash and resources into the Arrangements, basing Mirage aircraft in Malaysia until 1988 and providing, to this day, a RAAF officer to head the Integrated Air Defence System for Singapore and Malaysia. The Australian officer at the head of IADS is the essential trans-national ‘cover’ to enable Singapore and Malaysia to operate a shared radar system that is clearly to their mutual benefit. The key benefit Australia derives is use of the Butterworth air base in Penang, but it is a benefit it has well and truly paid for through provision of people and expertise.

In terms of influence and shared perceptions, FPDA has had almost no impact on the central reality of strategic competition and military apprehension between Singapore and Malaysia. In 1999, for instance, Australia noted how Malaysia has argued for limitations to be placed on some elements of the [FPDA] exercise program, which would reduce the benefits for the Australian Defence Force. Strained relations between Malaysia and Singapore are also impacting on the arrangements (DOD, 1999:8).

Australia’s real defence relationship with Singapore is built largely on a foundation outside FPDA — Singapore’s use of the Australian continent as a training base for its fighter and helicopter pilots, tank crews and for infantry exercises. When it comes to influence, in fact, Singapore seems to have some success in persuading Australia to share its views. Certainly, the Australian defence line on the central importance of the TNI as a stabilising and secular force is an exact echo of views long expressed by former prime minister Lee Kuan Yew.

When looking at Malaysia, FPDA cautions Australia to set severely limited aims for what a defence relationship can achieve. The lesson Malaysian prime minister Mahathir Mohamad has administered on many occasions is that Canberra gets no gratitude or diplomatic pay-off for the one-way security guarantee Australia gives Malaysia. Except for the ‘recalcitrant’ row between Mahathir and Keating in 1993, military ties have been strictly quarantined from all other parts of
the relationship. This is a recipe for preserving defence cooperation, but it does not deliver much in terms of Australia’s broader regional interests.

Australia needs to learn from its FPDA experience when ranking its hierarchy of interests in the new, democratic Indonesia. Economists are now arguing that institutions are more important than geography or policy in delivering economic growth (The Economist, 2002:74). This reinforces the view that Australia should not be adding any legitimacy to the tarnished TNI name. It should focus on the institutions that will help build a new Indonesia, not drag it back to a dark past.

The aftermath of the Bali bombings indicates the security institutions in Indonesia that merit support — and which Australian security institutions should be the lead players. The Australian Defence Force should be at the end of the queue; at the front should be the Australian Federal Police, the Australian Security and Intelligence Organisation, judges and lawyers.

By separating the Indonesian police force from military control in 1999, the Wahid government made the policy choices much easier for Australia. The security institution that should get the vast share of Australia’s attention should be Indonesia’s police. The police cooperation that worked so well in tracking down the Bali bombers should be the spark for intensive and extensive Australian engagement with the national police. An almost equal allocation of aid should go to helping Indonesia’s Parliament to define its central role in a diverse democracy. Australia can offer real expertise in modernising the legal code, which rests on the shaky foundations of Dutch colonial law and Soeharto misrule. Strengthening and modernising the police, remaking the laws and reforming the judiciary are huge, expensive tasks. The benefits of such an investment are obvious for a democracy such as Australia and, even in pure cost-benefit terms, the returns will be far more obvious than re-engaging with TNI.

The Indonesian Army has made few of the changes necessary to merit anything more than a limited relationship with the ADF. The Australian Senate report on East Timor, in December, 2000, identified markers that TNI would have to reach before Australia could, in all conscience, resume defence cooperation. One such was clear evidence that the TNI was dismantling the territorial command structure, so the military could become a professional defence force rather than an internal security force that uses its power to meddle in domestic politics all the way down to the village level. ‘As Indonesia now has a democratic system, albeit in a fragile state, it would be anathema for Australia to support the TNI or any other element in Indonesia not working to strengthen democracy’ (Senate Committee on Foreign Affairs, Defence and Trade, 2000:207).

The Australian Strategic Policy Institute struck the right balance with its 2002 annual assessment:

We must do whatever we can to support and strengthen the development of democratic government in Indonesia. A return of authoritarian, military-backed government in Indonesia would be a bad outcome for Australia. That means we need to work with institutions such as the Indonesian police and judiciary in combating terrorism rather than
primarily focussing on relations with the Indonesian armed forces (ASPI, 2002:4).

It is well to recall the words of one of the most articulate advocates of the military engagement policy of the Hawke and Keating Governments. Former foreign minister Gareth Evans’s rueful reflection on the failure of that policy was that all it delivered was ‘better trained human rights abusers.’ The idea, surely, is for policymakers to learn from history, not repeat it.

Australia’s national security interests centre on building the democratic institutions and hopes of Indonesia. The Indonesia military leadership and corrupt elites in Jakarta pose far more of a threat to this democracy than a small number of radical Muslims. Australia cannot take out ‘insurance’ with the Indonesian military against some failure of Indonesian democracy. The consequences of such a democratic failure would be disastrous for Indonesia, dire for Southeast Asia, and profoundly unsettling for Australia. And the sort of military regime that would emerge from such a disaster would look very different from Soeharto’s New Order. The main aim in dealing with TNI should be to help strengthen the other Indonesian institutions that will ensure the soldiers stay in their barracks.

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Cooperation With Kopassus? Take Care!

Allan Behm

He who sups with the devil had better have a long handled spoon. Given the nature of Special Forces, their lethal capabilities and their suitability for both disavowable and covert operations, the decision to develop cooperative relationships between such forces at the international level presents governments with a kind of ‘Hobson’s choice’. Governments must either accept any or all of the consequences of such cooperation, or resist the demands for such cooperation totally. The choice turns around one fundamental issue: are the controls on Special Forces and their capabilities by their own government and its military commanders sufficiently strong to ensure that there could be no para-legal or illegal use of such forces, either domestically or internationally?

In considering operational relationships between Australia’s Special Air Service Regiment (SASR) and Indonesia’s Special Forces (Kopassus), the effectiveness of Indonesia’s command and control arrangements is a cardinal issue. For any Australian government, cooperation with Indonesia’s special forces (Kopassus) raises three additional questions:

- What are the benefits of such cooperation to Australia?
- What are the benefits of such cooperation to Indonesia?
- Does such cooperation in any way prejudice the longer-term bilateral relationship?

The answer to each of these questions demands the exercise of fine judgment on the part of ministers and their advisers.

Some Historical Background

For Indonesia, the Special Forces, under their various historical guises, have carved out for themselves a leadership position in the Armed Forces. Indonesia began to acquire the rudiments of Special Force skills in the late 50s and early 60s when, in their ‘zero sum game’ competition for global strategic influence, the Soviet Union and the USA sought to balance each other in the so-called third world. While the Soviet Union provided Indonesia with defence aid in

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the form of warships and combat fighters, the USA focused more on military training and officer education. Under the guidance of the US Defence Attaché in Jakarta, Colonel George Benson, the USA embarked on an officer education program that eventually saw hundreds trained in the USA, many at Fort Leavenworth, the US Army’s Combined Arms Center in Kansas, where they acquired the taste for ‘ranger’ capabilities. While the USA provided relatively little direct Special Forces training, the Indonesian army established its elite Kopassus units, and developed training programs modelled on those of the USA. By the mid-1960s Indonesia was able to mount covert operations using its embryonic special forces.

The SASR and Kopassus have enjoyed (if that is the word!) an on-again-off-again relationship for over 40 years. Their first substantive contact occurred during konfrontasi (1963-65). Indonesian Special Forces and Indonesian irregulars conducted raids in Borneo, Singapore and Peninsular Malaysia in an attempt to destabilize the federation and to undermine what President Sukarno saw as the continuation of British colonial influence in the region. Australian and British SAS patrols were more than a match for their Indonesian counterparts, and registered a number of tactical successes against them.

The downfall of President Sukarno, and the emergence of Lt Gen Soeharto (one of the few among his peers who had not been educated in the USA) in the aftermath of the coup attempt of 30 September 1965, put an end to konfrontasi, saw Indonesia recognize the Federation of Malaysia in 1966, and set up the preconditions for the first tentative moves towards establishing defence-defence relations between Australia and Indonesia. By the mid-70s, Australia and Indonesia had established a substantial and diverse defence cooperation program. During the subsequent decade, the defence cooperation program funded the transfer of some 23 ex-RAAF Sabre fighters and seven Attack-class patrol boats to Indonesia, and some tentative links between the Special Forces of the two countries that were largely confined to unit-level visit exchanges, long range patrol training, and some special training in counter-terrorist and counter-hijack skills.

The publication of a detailed exposé of the Soeharto family’s financial empire, President Soeharto’s cronyism and the parallels between Soeharto and Philippines President Marcos in The Sydney Morning Herald in April 1986 brought the defence cooperation program to a grinding halt. During the early 90s, however, the defence relationship resumed, tentatively at first, then accelerating after 1993 to the point where Australia and Indonesia were able to conduct a major bilateral military conference at the senior command level in March 1999. Cooperation between the SASR and Kopassus was reinstated in 1993, though it was restricted to senior officer visits (President Soeharto’s son-in-law, Prabowo Sugianto, who enjoyed near iconic status in Kopassus, visited Australia several times), the participation by Kopassus elements in two bilateral exercises in northern Australia, and Australian-provided training in counter-hijack techniques.

Both the Keating and Howard governments sanctioned this cooperation for three main reasons:
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- to assess the ability of Kopassus to manage and resolve any terrorist incident directed against Australians in Indonesia, Australian diplomatic personnel, the Australian Embassy, and Qantas aircraft and assets in Jakarta and Denpasar;
- to ensure that Kopassus had the necessary military skills to manage counter hijack operations; and,
- given the status of Kopassus within the Indonesian military, to improve links and contacts at the senior command level — indeed, at that time it was impossible to deal with the Indonesian Armed Forces without dealing with Kopassus officers.

Of course, ministers such as Robert Ray, Ian MacLachlan and John Moore were well aware of the appalling record of Kopassus elements in Indonesia and in East Timor. They seriously questioned the value of links with Kopassus, but came to the view that the safety of Australians was the higher consideration, and that cooperation should be limited to those activities that bore directly on that objective. But it was no easy decision for government to establish and maintain Special Forces links with an organization, elements of which operated outside the boundaries of both Indonesian and international law.

This pragmatic position reflected the fact, well understood by Australian ministers, that Kopassus was under the direct control of the chief of the Indonesian defence force and, for that matter, of President Soeharto. Australian Governments were sensitive to the abuse of power characteristic of the Soeharto regime and its instrumentalities, but maintained links with Kopassus for the practical reason of managing the bilateral relationship as effectively as possible and ensuring the safety of Australian diplomats, business people and travellers, and to enable the preservation of some measure of effective dealing with a key national institution, the Armed Forces.

What is Different Now?

During the early months of 1999, as it became progressively clearer that East Timor was to become the focal point of a law and order crisis, there was growing circumstantial evidence that Kopassus elements were both arming and training the militias that were soon to turn Dili into an inferno. Although the Australian intelligence agencies could not find the ‘smoking gun’ that would decisively incriminate Kopassus or the Indonesian High Command, in early June 1999 the Australian government directed the then vice chief of the defence force, Air Marshal Doug Riding, accompanied by this writer, to visit the headquarters of the Indonesian Armed Forces in Jakarta to discuss the issue, and to warn the senior leadership of the consequences of Kopassus dealings with the militias.¹

¹ The author prepared the Aide Memoire on which Air Marshal Riding based his discussions with General Wiranto in June 1999, and was present at the meeting.
Air Marshal Riding was received politely, and Generals Susilo Bambang Yudhoyono (chief of territorial affairs) and Sugiono (the vice chief of the Indonesian defence force, also a Fort Leavenworth graduate) and their aides listened attentively to Riding’s careful, detailed and coolly delivered account of the growing ferocity of the militias, the apparent inability of the Indonesian armed forces in East Timor to control them, and the need for the Indonesian headquarters to rein in the Special Forces assisting the militias. Nothing happened. For the fact seemed to have been that the Indonesian chief of the defence force was not able, or did not wish, to exercise his command over the ‘independent’ (or ‘rogue’) elements within Kopassus. Those elements had their own agenda, which was both to destabilize East Timor and, more dangerously, undermine the authority of President Habibie. The alleged involvement of Kopassus elements in fomenting racial and religious strife in Kalimantan, Sulawesi, Aceh and Ambon, and their likely involvement in the killing of two American nationals near the Freeport mine in West Papua in August 2002, suggest that Kopassus is no more under the effective control of General Sutarto now than it was under the control of General Wiranto.

Terrorism has become an endemic feature of Indonesian politics — assassinations in West Papua, bombings in Aceh, arson in Sulawesi, aggravated assault and rape in Kalimantan. Abuses of human rights are nothing more than forms of terrorism. And it is not coordinated terrorism conducted by a single group, but the random and temporary coalescence of competing groups united only in the use of violence — Muslims against Muslims in Aceh, Muslims against Christians in Sulawesi, and indigenous people against Javanese in West Papua. In other words, terror is the tool of anarchic elements that can find no other means of expressing their opposition than through violence. Terror is, after all, the power of the impotent. There is widespread concern both in Indonesia and internationally that Kopassus elements provide material and moral support to some of the more violent of these groups, especially those who seek to misuse the concept of jihad to justify the use of violence against Christians and ethnic Chinese citizens, as well as the various Islamic groups that are more pluralist and tolerant than those identified with the Madrasah fundamentalist schools, such as the school headed by Abu Bakar Bashir, who is currently suspected of master-minding the violence that culminated in the Bali bombnings.

As a core part of the larger Indonesian Armed Forces, Kopassus supports the general approach of the Armed Forces leadership to issues of national security, including their opposition to both the balkanization of Indonesia or the formation of an Islamic state. But the problem is that some elements of Kopassus, whether through association with elements of the Soeharto family or for their own private motives, are evidently not under the control of Indonesia’s military leadership. These Kopassus elements appear to have a confused mix of motives for supporting the various Islamic groups that favour the use of violence. Those motives vary from place to place, but would appear to include:
• a wish to support anarchical behaviour for a range of narrow and short-term reasons, including personal advantage;
• a belief that non-Islamic groups profiteer at the expense of Muslims, requiring a more effective and immediate redistribution of wealth than is currently in place;
• a wish to reinforce local identity between Kopassus ‘heroes’ and local youths;
• a wish to destabilize the government of President Megawati Sukarnoputri; and
• a wish to reposition Kopassus as the main winner should the Indonesian military take on a larger role in the government of Indonesia.

None of these motives offers any confidence that Kopassus is effectively led and managed by the current senior leadership in the Indonesian military headquarters.

But more disturbing than the apparent meddling by Kopassus in the violence that now characterizes so much of Indonesia’s political climate is the ability of Kopassus to interfere directly in the workings of the government of Indonesia itself. Kopassus is, in some respects, a law unto itself, able to use its relatively advanced capabilities in the use of armed force as and when it sees fit. Dominating the Indonesian command chain as it does, Kopassus is well able to employ the very specific skills it might learn or reinforce from Australia against its own government. And therein lies the greatest danger to Australia from the provision of Special Forces training.

Where to now?

The Bali bombings of 12 October 2002 have brought into even sharper focus the desperate situation in which Indonesia currently finds itself. At this point in its political evolution, Indonesia appears to be facing a double jeopardy: fragmentation into a number of economically weak and unstable mini-states (balkanisation), or the re-imposition of Jakarta’s authority by the Indonesian military (martial law). Neither is good for Australia.

Australia has real interests at stake in the stability and security of Indonesia. But Australia appears to be oblivious to the consequences of collapse in Indonesia, and to the consequences of its own inaction. The balkanisation of Indonesia would present Australia with the terrible prospect of a procession of East Timor-type operations, quite possibly simultaneously. And the imposition of military rule would reverse progress towards democracy and representative government that is the bedrock of stability, security and prosperity.

Either way, the economic costs would be high. Peacekeeping operations such as East Timor cost about $1.5 billion in total additional costs, and that does not include the follow-up aid programs on which local security depends. The imposition of martial law or some form of military dictatorship brings with it a retreat from the normal means of conducting international relations, and would impose on Australia additional (and substantial) defence costs. Both outcomes
effectively constrain the options available to future Australian governments to invest budget funds on our own social and infrastructural development. The more significant impact, however, is on the region’s long-term strategic stability and Australia’s security. If that really matters, then Australia cannot continue to stand by and watch.

In the management of strategic relationships, action does not guarantee success. But inaction certainly courts failure. So, what can Australia do? Given that Australia spent around $1 billion to secure itself against illegal immigrants in flimsy boats, investing less than one hundredth of that would provide significant avenues for assisting Indonesia to control and reverse its current descent into chaos.

While they are beyond the scope of this paper, there are many things that Australia could do other than to rely on renewed relations with Kopassus to define the future. They include:

- working to strengthen Indonesia’s political institutions by building public, high-level and frequent links between our respective Parliaments;
- helping Indonesia reconstruct its legal and judicial system;
- helping Indonesia to eradicate corruption in its public administration through the introduction of legislation and codes of practice based on ethics rather than venality;
- working with Indonesia to improve the effectiveness of its law enforcement services through enhanced training and professional development, especially at the senior leadership level;
- cooperating with Indonesia to develop its free-enterprise institutions by supporting links between the respective business councils, chambers of commerce, chambers of manufacturers, banking associations and insurance councils, since a sound economy is the best defence against the popular disaffection that breeds terrorism;
- developing our own understanding of Indonesia and its culture and accept that Islam is not an ideology that advocates and maintains terrorism and violence, but rather a religion that encourages individual Muslims to live in harmony; and
- re-engaging with the Indonesian Armed Forces but at this time, only in the areas of high-level dialogue to build confidence and an acceptance of the rightful place of the military in a civil society, and professional development to reinforce that acceptance.

Dealings with Special Forces should await much clearer indications that they are under the full and effective control of the Indonesian military leadership and, more importantly, the elected Indonesian government.

The writer acknowledges the constructive comments provided by a number of senior ADF officers, both serving and retired, including Air Marshal Riding.
The Kopassus Dilemma: Should Australia Re-engage?

Alan Dupont

Australian governments of both political persuasions have been embroiled in controversies over military cooperation with Indonesia since bilateral defence relations first began to gather steam under the Keating Labor government in the early 1990s. Prime Minister Paul Keating and Foreign Minister Gareth Evans were enthusiastic proponents of building strong ties with Indonesia, a policy which was extended to the military sphere with the establishment of two high level committees to coordinate and develop defence cooperation in 1994 (Ball and Kerr, 1996:70). These committees were later incorporated into an expanded defence agreement by the newly elected Howard Government in 1996, leading to the establishment of five working groups covering logistics, science and technology, communications, interoperability, education, training and exchanges (Walters, 1996:3).

But engagement with the Indonesian Special Forces (Komando Pasukan Khusus — Kopassus) has been especially contentious because of the well documented involvement of this elite Army unit in human rights abuses and some of the more egregious excesses of the Soeharto regime. It was a special forces unit under the command of Captain Yunus Yosfiah (later a minister in the Habibie government) that murdered five Western journalists at Balibo, East Timor in November 1975 (Ball and McDonald, 2000:100-13), while dozens of Islamic activists were killed in an ostensible government crack down on criminals at Tanjung Priok, a decade later (Schwarz, 1994:181; Vatikiotis, 1993:128; and Pathoni, 2002:13). Special forces ‘black ninja’ have also regularly terrorised rural communities throughout the archipelago for political and pecuniary reasons in a perversion of their national security role.

Concerns about the utility and morality of developing links with Kopassus were temporarily put to rest when bilateral defence cooperation was suspended in the wake of Indonesia’s ignominious withdrawal from East Timor in 1999. But the Bali bombing in October, 2002 and the heightened security focus on terrorism in Australia have stimulated calls for a resumption of ties with Kopassus as the principal agency in Indonesia vested with responsibility for counter terrorism. For example, Defence Minister Robert Hill cautiously endorsed renewed ties, subject to the significant qualification that Australia would only deal with Kopassus’s counter terrorist unit (Martin, 2002:5). Opponents have rejected the idea, however, primarily on human rights grounds, but also because Kopassus is believed to have given aid and succour to the very terrorist groups it is supposed to be fighting. In December 2002, for example, Shadow Minister for Foreign

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Affairs, Kevin Rudd, claimed that there were ‘clear links between Kopassus and the Islamic terrorist organisation, Laskar Jihad’ (Office of the Shadow Minister for Foreign Affairs, 2002).

What is Kopassus?

Given the extent to which terrorist groups have entrenched themselves in the archipelago, cooperation with Kopassus clearly has the potential to become a vexatious issue for the Howard government, with important ramifications for national security policy, counter-terrorism and relations with Indonesia. For these reasons it warrants a more considered assessment than the cursory and emotionally charged exchanges that have characterised much of the public debate so far.

An essential first step is to dispel several misperceptions about the role and modus operandi of the elite 5,000 strong Special Forces, and to understand where the organisation fits in the overall structure of Indonesia’s Armed Forces (TNI). Kopassus is typically cast as a shadowy force that often operates outside the military chain of command and specialises in dirty tricks, covert intelligence gathering, and activities that could be loosely described as regime maintenance. Since President Soeharto’s demise, Kopassus has also been accused of banditry, warlordism and a multitude of nefarious criminal practices ranging from illicit timber felling to sabotage, contract killings and drug running (see, for example, Kingsbury, 2002:71). Some of these accusations are undoubtedly true, but it would be a mistake to think of Kopassus only, or even primarily, in these terms.

The Special Forces is also the best trained, resourced and disciplined unit in the armed forces, and its officers have traditionally been among the most able, as evidenced by the disproportionately high number who have risen to senior command. Two notable examples are Generals Edi Sudradjat and Feisal Tanjung, both of whom later became armed forces commanders and, in Sudradjat’s case, Minister for Defence. The current Army Chief, General Ryamizard Ryacudu, is a former Kopassus commander, as are two current cabinet ministers: head of the National Intelligence Agency (Badan Intelijen Negara, BIN), Lieutenant General (ret) A. M. Hendropriyono, and Transport Minister, Lieutenant General (ret) Agum Gumelar. In recent years, however, the ratio has fallen, largely because the unit’s image has been tarnished within TNI itself.

At one time Kopassus was the unit of choice for aspiring young officers, and its esprit de corps is still second to none within TNI (Haseman, 2002:34). Like Australia’s Special Air Service (SAS) regiment, Kopassus is responsible for intelligence collection, small unit operations and training other elements of the armed forces in specialised military and intelligence skills. The Special Forces are configured for rapid deployment to trouble spots anywhere within the archipelago, as well as overseas. Kopassus also has a counter insurgency and counter terrorist role that is typical of special forces throughout the region (see Lowry, 1996:86-89 on the structure and role of Kopassus). Counter Terror Unit 81 (Satuan Gulangan 81 – SG 81), named in part after a successful 1981 operation against the hijackers of a Garuda Airlines flight in Bangkok, is organic to Kopassus. Headquartered in
Jakarta, SG 81 has played a significant role in locating and apprehending the terrorists responsible for the Bali bombing (Haseman, 2002:35).

Unfortunately, these legitimate functions have been distorted and corrupted by venal politicians and ambitious career officers who have manipulated the unit for personal gain by exploiting the intense personal loyalties that bond the Special Forces brotherhood. The politicisation of Kopassus reached its nadir in the mid-1990s under Lieutenant General Prabowo Subianto, former president Soeharto’s son in law, who used the organisation as a de facto praetorian guard. In this respect, Kopassus is a microcosm of TNI. Unsurprisingly, there is a strong view among Indonesia’s ruling elite and growing middle class that Kopassus ought to be depoliticised and made more accountable to civilian control. But it is difficult to see how this worthy objective can be achieved as long as TNI obtains more than half its budget from running private businesses, a bifurcation which encourages a culture of guns for hire. While not atypical for a developing country, the business interests of the Indonesian military are extensive and embedded (for an analysis of TNI funding and structural weaknesses see Dupont, 1996:284-86). Some of the money comes from military foundations and holding companies in which TNI has a stake, such as banks, hotels and real estate (McBeth, 2002:201). More worrying is the increasing involvement of Kopassus personnel in brigandry, extortion, illegal logging and protection rackets.

After a brave but ill-directed attempt by former president Abdurrachman Wahid to remove TNI from politics and make the armed forces more transparent and accountable, military reform seems to be off the government’s agenda. In recent years, TNI has begun to reassert itself as traditional patronage and money politics has reemerged with a vengeance. The weak and factionalised government of Megawati Sukarnoputri has become heavily reliant on TNI support, and is likely to remain so as the 2004 elections approach. Decentralisation of political and economic power has reduced Jakarta’s control over the activities of the military in general, and Kopassus in particular, so that it is becoming increasingly difficult to determine whether Kopassus transgressions are the result of local initiatives or national policy. Furthermore, it is not always clear to what extent senior TNI commanders are in the command loop. The armed forces’ sullied reputation makes it an easy and obvious scapegoat for virtually any unexplained incident that smacks of clandestine or organised illegal activity. But the reality is more complex and ambiguous than critics of the military sometimes allow.

The assassination of Papuan independence leader, Theys Eluay, in November 2001 is a case in point. Although there is strong circumstantial evidence that Eluay was killed by special forces personnel, the motive for his killing and the culpability of senior TNI and Kopassus officers is unclear. So is the extent of military support for terrorist groups. Much has been made of Kopassus links with the notorious Laskar Jihad, which fomented and aggravated the inter-communal violence that devastated Maluku and parts of Sulawesi. Most of the military training and support, however, seems to have been provided by a small group of TNI officers, with pro-Islamic leanings, not all of whom have Kopassus backgrounds or associations. The senior officer most often associated with Laskar
Jihad is Lieutenant General Djadja Suparman, a former commander of the Army Strategic Reserve (Kostrad). Sceptics may argue that this is moral hair-splitting. But there is an important difference between institutional support for a nationally agreed policy and freelance operations conducted by former and serving military personnel for ideological and political reasons or personal gain.

Australia will find it difficult to pick and choose its Indonesian partners according to some arbitrarily determined moral standard. Moral foreign policies are fine in principle, but fraught with practical difficulties. Aside from the obvious and unanswerable question of whose moral standards should apply, Jakarta is unlikely to accept a sectoral approach to defence relations whereby Kopassus is quarantined or kept at arm’s length (Munro, 2002). Any attempt by Canberra to pursue such a policy would inevitably raise questions about the sustainability of the bilateral relationship, and reinforce perceptions in some quarters of the region that the Howard government is arrogant, patronising and lacking in understanding of political realities in Indonesia. Moreover, while bilateral police cooperation post-Bali has exceeded expectations, Kopassus is still Indonesia’s pre-eminent counter-terrorist organisation, and will naturally expect to be involved in any collaborative arrangements to deal with future terrorist incidents. Those who argue that Australia’s counter-terrorist cooperation should be confined to the Indonesian police ignore this reality and evince a well meaning, but ill conceived, moral relativism. The police are hardly paragons of virtue, just as Kopassus is not the personification of all evil. Both are products of the same security establishment, and mirror the strengths and weaknesses of the Indonesian state.

Obstacles to Cooperation

Nevertheless, the critics of engagement have a case. No Australian government, whatever its complexion, can ignore Kopassus’s past abuses or its poor professional image — as both the Coalition and Labor have found to their cost. Indonesian liberals are also distrustful of Kopassus and see it as the epitome of all that is wrong with the armed forces. The problem for the Howard government is that most of the Australian media and public will oppose comprehensive engagement with Kopassus unless there is convincing evidence that the organisation is seriously committed to reform.

Laskar Jihad’s purported disbandment, announced with great fanfare in October, and progress on bringing to an end long-running strife in Aceh, Sulawesi and Maluku, will reduce the opportunities for mischief making by Kopassus for the time being at least. But the hiatus may be short-lived, for there are no guarantees that any of the recently signed peace agreements will hold. And there are worrying signs that the special forces leadership has switched its attention to the province of Papua, where pro-Indonesian militia activity is on the increase. Unlike East Timor, Indonesian conservatives and liberals are united in their view that Papua is an integral part of the nation and cannot be allowed to secede. Kopassus may therefore be given a free hand to repress internal dissent, along
with a licence to ‘protect’ Muslim settlers against perceived Christian provocations and to root out supporters of the independence movement. An outbreak of sectarian violence in Papua in which Kopassus is complicit would seriously complicate the Howard government’s attempt to establish close working ties with the red berets.

Although the spectre of future terrorist outrages provides opportunities for enhanced Australia-Indonesia security cooperation, there is a risk that TNI could manipulate the situation for political advantage and inadvertently inflame, rather than douse, the smouldering fires of Islamic fascism. It is clear that the generals are awake to the possibilities that the war against terrorism provides for advancement of their own personal agendas as well as TNI’s institutional interests. The head of Indonesia’s National Intelligence Agency, Lieutenant General (ret) A. M. Hendropriyono, a former Kopassus officer, has succeeded in having himself appointed as Indonesia’s counter-terrorist intelligence czar. Another retired general, Susilo Bambang Yudhoyono, the Coordinating Minister for Politics and Security, maintains responsible for policy.

Of course it would be perverse to deny the military a prominent role in counter-terrorism, as it is one of only two organisations in Indonesia specifically equipped and resourced for the task. (The other is the police, which is poorly resourced by comparison, and has only a limited capacity for strategic intelligence collection, forensic investigation and consequence management.) However, the game is not just to kill terrorists. They must be denied the political space to recruit new acolytes and spread their message of hate. An over-reliance on military instruments to prosecute the war against terrorism could prove quite counterproductive, especially if Kopassus were left to its own devices. As Paul Monk observes, far from stamping out radical Islamic thought in the late 1970s, the Shah of Iran’s secret police actually facilitated the anti-regime activities of the Ayatollah Khomeini by its ruthless repression of dissent. SAVAK’s behaviour only served to reinforce the view among ordinary Iranians that the real enemy was not the Ayatollah but the security forces and their Western backers (Monk, 2002).

Tailored Engagement

This brief analysis provides some sense of the dilemma Canberra faces in its stated desire to work more closely with Indonesia at a time when Australia is demonstrably threatened by the spread of Islamic terrorism in Southeast Asia. Australia is not alone in having to weigh its security concerns against its commitment to human rights. Other democracies confront a similar quandary in deciding whether or not to engage Kopassus, given the organisation’s questionable human rights record and involvement in acts of terrorism and extra-judicial killings. Nonetheless, engagement can be justified on three grounds. First, in the new, more threatening strategic environment that Australia faces it is imperative that the opportunities for effective security cooperation with our regional neighbours are maximised. Second, Kopassus is a highly capable, well-trained force that is an integral part of Indonesia’s counter-terrorist machinery, and it
would be counterproductive to exclude the special forces from bilateral initiatives to combat terrorism in Indonesia.

Third, strong personal ties between the Australian Defence Forces and their TNI and Kopassus counterparts are not only crucial to an effective regional counter-terrorist strategy, but are also essential to the long term health of the Australia-Indonesia relationship. The outstanding and unprecedented joint operation between the Indonesian National Police (POLRI) and the Australian Federal Police (AFP) in successfully pursuing the perpetrators of the Bali bombing was due, in large part, to the personal rapport established over a number of years between senior AFP and POLRI officers (AFP Commissioner, Mick Keelty, and the head of the Indonesian police investigating team, I. Made Pastika, were both students together at the AFP’s 1993 Management of Serious Crime Course in Canberra). That said, Australian engagement should not be unqualified. We need to use what influence we have to encourage TNI to resume the stalled reform agenda and work towards the goal of a more accountable, professional and apolitical military force. This should be done in conjunction with like-minded countries, but in a way that does not offend Indonesian sensibilities and recognises that the pace of reform is likely to be slow and uneven. If Australia eschews security cooperation with TNI, our ability to shape its responses and resist the spread of Islamic fascism in Indonesia and the immediate neighbourhood will be greatly diminished.

Of course the war against terrorism must be fought on a broad front. Military action is not a substitute for an imaginative and broadly conceived strategy that addresses the poverty and social alienation that are root causes of terrorism. Nonetheless, preventive measures and consequence management (that is, handling terrorist acts once committed) are an intrinsic part of any effective counter terrorist strategy, both nationally and regionally. By definition, the military must be involved as one of the key institutions vested with responsibility for counter-terrorism. This is especially so in developing states like Indonesia, where the armed forces dominate the security sector and are political actors as well. Quarantining or marginalising Kopassus is unachievable in practice, and would be ultimately self-defeating. Such a policy would alienate not just Kopassus but the whole of TNI, and would have negative consequences for Australia-Indonesia relations — certainly while Megawati remains president.

Police cooperation is a quintessential part of the security mosaic, and there is much more that Australia could do to assist the Indonesian police to build capacity in the crucial areas of forensic investigation, technical intelligence collection, and victim and bomb identification. Indeed, police cooperation post-Bali has been exemplary, and is a model for other forms of collaborative activity with the Indonesian security establishment, including Kopassus. But those who contend that our bilateral counter-terrorist cooperation should be confined to the police miss the point. The police do not have the authority, expertise or resources to control all aspects of counter terrorism in Indonesia, nor should they. Robbing Amirul to pay Dai would drive a wedge between TNI and the police, and would impede the development of trust and collegiality.
A more productive approach would be to pursue a policy of tailored engagement — entailing a multi-dimensional approach to security cooperation with Indonesia that includes, rather than isolates, Kopassus, and focuses on joint operations and intelligence gathering against Jemaah Islamiah and other fundamentalist groups. Australia’s SAS could be authorised to resume training assistance to the counter terrorist arm of Kopassus, SG 81. But a better option might be to encourage Indonesia to pursue the idea of creating a new joint counter-terrorist task force. Ideally, this would bring together the police, SG 81 and other elite military units such as the Air Force Special Forces Unit (Paskas) and special elements of the Marine Corps (Haseman, 2002:35).

The virtue of this approach is that it would provide a more politically palatable, but still workable, framework for cooperation with Kopassus, which could be extended to other areas of the defence relationship over time. In this way Australia could advance two important strategic objectives that until now have been seen as mutually incompatible — collaborating with Kopassus in support of our defence and national security interests, while continuing to encourage political and military reform as part of a broader agenda to entrench democracy and the rule of law in Indonesia. Excluding Kopassus because of its human rights record provides no incentives for good behaviour. A policy of tailored engagement, on the other hand, will create opportunities for leverage and influence that can only come through personal contact and sustained habits of dialogue. The ball is in Australia’s court.

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New Directions in Australian Air Transport

Henry Ergas and Christopher Findlay

The events of September 11 2001 and the Ansett collapse a few days later have had a major impact on the Australian air transport markets. In this paper, we examine the immediate and longer-term competitive outcomes associated with these developments, and review the policy issues that arise.

We focus on the markets in which air services are provided domestically within Australia (‘domestic market’) and on any significant detrimental effects of recent events on the process of competition in the domestic market that may provide justification for increased regulation. This may take several forms, including imposition of airline specific regulation, and/or adjustments to general legislation guarding against anti-competitive activity — for instance, section 46 of the Trade Practices Act, which relates to the taking advantage of substantial market power.

We also comment on the lack of desirability of industry-specific regulation. Our view of the case for adjustment to section 46 differs from that of the Australian Competition and Consumer Commission (ACCC). Developments in airport pricing and slot allocation, while also important, are beyond the scope of this paper. For a review of recent developments see Fels (2001) and for a discussion of policy options see Productivity Commission (2001a) as well as some discussion within Productivity Commission (1998).

Events of September 2001

Two key events in September 2001 were the attack of September 11 and the collapse of Ansett on September 14. The worldwide impact of the events of September 11 was substantial. On the demand side, there was an immediate slump in bookings (Amadeus 2001). On the supply side, while September 11 may have contributed to the high profile financial problems of several airlines, including Sabena and SwissAir, in all likelihood it merely pushed these airlines ‘over the edge’, as opposed to being the major cause of their problems.

It is clear that Australian demand for international air services dipped in the immediate weeks following September 11. This is evident in the most recent publicly available AVSTATS data from the Department of Transport and Regional Services (DOTRS) website, which show a year-on-year decline of traffic between September 2000 and September 2001 of 1.2 per cent (Figure 1). Traffic
then broke from its pattern of the year before and continued to fall in October and November 2001. But it resumed its normal seasonal pattern in December, and in the first quarter of 2002 came closer to traffic levels of a year earlier. Data reported by Qantas suggest that the immediate impact of September 11 was a downturn in demand for international air services. Qantas revealed that September 11 had affected traffic not only to the United States, but also to Europe and Asia (Qantas 2001a): however, it believed that recovery of the international air services market was ‘inevitable’. In summary, it is likely that, while the events of September 11 may have had a substantial short term impact on air service markets worldwide, it is not apparent that it will have a longer lasting impact on the demand for and supply of air services.

**Figure 1: Total International Passengers by Month**

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The collapse of Ansett has had longer term effects. Its withdrawal reduced the number of competing airlines along major domestic trunk routes from three to two: Qantas, a full service airline (FSA), and Virgin Blue, a value-based airline (VBA). Following the collapse of Ansett, both Qantas and Virgin added capacity to absorb excess demand. However, it is apparent that Qantas captured most of this excess, reflecting its greater ability to expand capacity in the short term (albeit at relatively high cost) and its de facto role as ‘carrier of last resort’. Qantas’s traffic data show the rise in volume after September 2001 following the Ansett closure (Figure 2). They also show the steady decline in traffic in 2001, which continued to November but appear to resume a normal pattern by February and March 2002.
Figure 2: Qantas Traffic Data

Likely Effects on Competition in the Domestic Market

Even in the period immediately prior to the collapse of Ansett, Qantas most likely had a position of some strength in the domestic market. This strength was associated with its greater efficiency relative to Ansett (though not necessarily relative to Virgin Blue). The collapse of Ansett — a competitor with a strong brand reputation, though with relatively high costs — may have increased the strength of Qantas’s position. Qantas’s increase in capacity may have also enabled it to derive cost reductions because of the benefits of operating a larger and denser network.

The question is then whether new entry can be expected. There are substantial barriers to entry into these markets, though the precise height of these barriers is open to debate. Examples include the sunk costs associated with establishing a brand and a reputation for reliability — not only in terms of safety but also scheduling and on-time performance. Entrants will also have to establish a network that is sufficiently large and has the right architecture to generate the same economies of density that favour incumbents, although any cost asymmetries between entrants and incumbents arising from the network and density economies are likely to be particularly relevant for potential FSAs and less of an issue for VBAs. Facilities will have to be established at each point in these networks, and little of that investment is likely to be recoverable on exit.

Another sunk cost that entrants will have to incur is that of matching the price response of incumbents. Pricing is very flexible in air transport markets, with the use of complex price structures that discriminate between passengers so as to maximise revenue on each flight (referred to as ‘yield management’) and internet marketing, allowing incumbents to respond rapidly to initiatives by entrants.

Responses by incumbents are not restricted to pricing, however. There are many other competitive strategies that incumbents can adopt, and in responding to these strategies entrants may incur sunk costs, the prospect of which impedes entry. These strategies include: operating (or increasing) capacity on a route or routes at fares that do not cover the avoidable cost of providing the service, or using a low-cost second-brand carrier in a similar manner; pre-empting airport facilities or services that are required by another air carrier for the operation of its business, with the object of withholding airport facilities or services from a market; using commissions, incentives or other inducements to sell or purchase seats on its flights; using a loyalty marketing program; or altering schedules, networks, or infrastructure for the purpose of disciplining or eliminating a competitor, or impeding or preventing a competitor’s entry into, or expansion in, a market.

This list of possible origins of barriers to entry is impressive. There is, however, compelling US and European evidence that value-based airlines, such as Virgin Blue, have been able to surmount these entry barriers to become an especially effective source of competitive discipline. As a result, it may well be that competition between Virgin Blue and Qantas will be far more vigorous than it
was with the former duopoly. We discuss the scope for additional competition from value-based airlines below.

There might also be scope for competition from international carriers serving Australia, and in a later section we review the regulatory impediments to entry in various forms by those airlines.

**Long-term viability of full service provider**

In considering likely future outcomes in the domestic market, an important consideration is the ability of Virgin Blue to competitively constrain a carrier such as Qantas. Such a consideration is related to the current debate surrounding the extent to which value-based airlines constrain full service providers, and the long term viability of the full service provider model.

There has been considerable growth in value-based airlines over recent years. Virgin Blue is one such example. Air New Zealand has recently converted to a form of value-based airline for domestic services. International success stories include easyJet and RyanAir in Europe and Southwest Airlines in the United States. RyanAir, in particular, has taken the low fare/high volume business model to new extremes. It claims that within three months of its website launch, it was taking over 50,000 bookings per week. It did this by offering airfares from as low as £1 and £9 return (plus taxes) on the Glasgow-London and Dublin-London routes, respectively. Following the events of September 11, RyanAir introduced a range of international fares for £15 (*USA Today*, 2001). Currently, RyanAir has a host of cheap international fares, including a Frankfurt-Bologna fare for £9.99.

Whether such value-based airlines spell the end of the full service operator as we know it depends on the extent to which, for full service providers, competing at the low fare end of the market results in cannibalisation of high yield customers. Perhaps this concern has constrained the response by the full service operators, since there is evidence to suggest that they have been unable to contain effectively-managed value-based airlines. An example is the United Kingdom. Since moving to the Southwest value-based airline model at the start of the 1990s, RyanAir has become the second largest carrier in that country.

British Airways (BA) has been indecisive in responding to value-based airlines. It had operated its own value-based airline, Go, but sold this in mid-2001. BA’s Chief Executive said at the time of the sale that Go did not fit with BA’s full service strategy (BA, 2001). However, in a recent turnaround, it has chosen to compete head to head with its low fare rivals RyanAir, easyJet and its formerly owned Go, as noted in an April 2002 press release (BA, 2002a):

> British Airways today launched a change to its fare structure on key routes within the UK to give business travellers and holiday makers lower fares, greater flexibility and more choice …

> The fare structure will be less complicated, with simple trade up steps based on choice of flight, flexibility and availability, enabling customers to trade off their needs versus price.
This is the airline’s first competitive response to the no frills carriers following last month’s announcement of a major package of measures designed to return the airline to profitability.

The strategy is part of BA’s ‘Future Size and Shape’ rationalisation and cost cutting strategy (BA, 2002b). However, in announcing the intention to compete directly with its low cost rivals, the CEO stated that BA had no intention of becoming a value-based airline or launching its own no frills airline (BA, 2002b). Instead, BA intended to use its competitive advantages, such as its extensive network, flight frequencies, convenient airports, and customer service, and to combine these with the key elements associated with successful value-based airlines, such as online bookings, high aircraft utilisation, and pricing simplicity. Investments would continue to be made to maintain the numbers of premium and frequent customers.

What has been the impact of the entry of Virgin Blue into the Australian market? A full assessment requires more data and more experience than is currently available. However a review of recent changes in fares provides evidence of impacts worthy of further attention.

**Figure 3: Fares and Passenger Numbers in the Australian Domestic Market**

Figure 3 shows the changes in index values of economy and discount fares (left axis) and passenger numbers (seasonally adjusted, right axis). A complex set of factors explain the combinations of prices and quantities in the figure, but the features of interest are:

- the rapid growth in traffic in the first half of the 1990s, during which period economy fares were roughly constant in real terms, while discount fares were falling;
- a shift to a new level in the average economy fare from December 1996 onwards, as well as a significant shift in the relationship between discount and economy fares at the same time as traffic growth stalled; and
- from 1999, a sustained acceleration of traffic growth was followed a little later by Virgin’s entry in August 2000, and then by a sharp decline in discount fares while the average economy fare moved to an even higher level.

The value-based operator, it appears, drives a wider wedge between the economy and discount fares and, as a result of the discounting its entry induces, is associated with substantial growth in traffic. The nature and significance of these effects are interesting topics for further quantitative work. That work would also need to allow for the effect of the downturn in traffic in the last quarter of 2001 associated with the events of September that year. Isolating the impact of Ansett’s demise on pricing in the domestic market is also difficult because of the impact of the other events.

Like British Airways, Qantas’s response to the situation from August 2000 onwards appears to be to keep all the competitive options open. For instance, while it has announced its intention to operate a low fare airline in the form of Australian Airlines, the fact that Australian Airlines is only beginning with flights from Cairns to various Asian cities suggests that Qantas is still at the stage of testing whether this strategy is workable (Qantas, 2002). Qantas says that it intends to extend services to domestic routes, but this will only occur if initial services prove not to cannibalise Qantas’s high yield fares.

Value-based airlines can therefore penetrate markets of established incumbents. However their main advantage may be their greenfield nature, in which case they can operate with lower labour costs than incumbents, and they can design their networks to maximise their aircraft utilisation rates. A VBA, operating with a substantial cost advantage, is not likely to be threatened by even severe price-cutting by a high cost FSA, even if the FSA is able to reap the advantages of a sophisticated yield management system. On the other hand, if incumbents can match the costs of the entrant, then their more expansive networks and wider range of passenger types, and their consequent greater discretion in yield management systems (as long as they can also avoid the problems of cannibalisation), give them important advantages.

However it is worth noting that to date there are few signs in markets overseas of the competitive challenge VBAs pose to FSAs abating, even when VBAs have become mature, well-established operators. On the contrary, the
persistent difficulties of the US FSAs, even in their ‘fortress hubs’, suggests that the challenge from VBAs will persist for many years.

There are also other sources of potential competitive pressure in the Australian market, however. One is entry by airlines with already-established networks that might be extended into the domestic market — that is, the international carriers — which also have access to inputs at different prices.

**Cabotage and other forms of domestic market entry**

The rules of the international regulatory system protect Australian-based airlines from ‘import’ competition by foreign airlines. There are two types of cabotage, ‘consecutive’ and ‘pure’:

- Consecutive cabotage, also known as the ‘eighth freedom’, refers to the right of foreign-owned airlines to fly a domestic flight stage within the host country as a continuation of an international service; and
- Stand-alone (or pure) cabotage, also known as the ‘ninth freedom’, refers to the unrestricted right of foreign-owned airlines to provide domestic air services in the host country.

In its final report on international air services (PC, 1998:229), the Productivity Commission recommended that ‘Australia should also be prepared to negotiate, on a case by case basis, removal of restrictions on cabotage …’. The Commission (p. 114) believed that cabotage restrictions granted advantages to Australian airlines:

Restricting access by foreign carriers to the Australian domestic market gives the Australian carriers a solid base from which to extend into international aviation. The same applies to most other countries, with the exception of city economies such as Singapore and Hong Kong. Integrating domestic and international services allows airlines to achieve:

- operational synergies and efficiencies by being able to switch capacity and aircraft between the domestic and international sectors; and
- network advantages such as economies of scope and traffic density as well as the marketing advantages of operating a combined domestic and international network.

In noting the potential benefits of cabotage, the Productivity Commission distinguished the merits of consecutive cabotage from stand-alone cabotage, suggesting that while consecutive cabotage was unlikely to lead to significant gains, stand-alone cabotage was more likely to bring benefits to consumers (PC, 1998:227). Qantas has already indicated that it does not perceive cabotage to be a serious threat to its domestic market position. A Qantas briefing immediately
following the events of September 11 conceded that cabotage was fairly likely to be introduced in the domestic market. But it argued that this was not an issue in either the short or long term, since other carriers could not offer enough capacity to constitute a viable threat (Qantas, 2001b). The entry of foreign airlines through removal of cabotage restrictions has some potential to stimulate competition, but as a matter of likely outcomes in the current regulatory environment, the Qantas view that cabotage would be unlikely to pose any real threat to domestic carriers in Australia is plausible.

The inability to configure a domestic network optimally is a key factor that is likely to hinder international airlines from competing with existing domestic carriers, particularly when considering the impacts on competition that are likely to flow from only granting consecutive cabotage rights. Optimal network configuration is a function of a number of factors, including flight frequency; number of domestic routes served; aircraft types used; and the impact of the structure of the bilateral agreements already in place. In addition to network configuration issues, international airlines would still face the other barriers to entry noted above, such as establishing brand presence, as well as other sunk costs associated with entry into the domestic market.

An alternative is not to operate on the basis of pure cabotage (with operations managed from an offshore base, using aircraft registered in the home country of the operator), but to set up a new, stand-alone domestic network. Current Australian rules on foreign ownership of domestic carriers do not impede such an approach (as the example of Virgin Blue demonstrates), since the sectoral guidelines of the Foreign Investment Review Board have been amended to permit full foreign ownership of domestic airlines (Anderson 2000) (even though carriers using Australia’s international traffic rights cannot be foreign-controlled). Such entrants would escape some of these constraints from the network design perspective, but they would incur greater risks in terms of other barriers to entry — including the responses by incumbents discussed earlier. In addition, they would have to confront the choice between value-based or full service operations. Another key factor in their choice would be the nature of the regulatory environment they face in the domestic market.

**Options for Industry Regulation**

It could be argued that there are risks of higher prices and lower service quality in the domestic market associated with the demise of Ansett. It could equally be argued that the competitive constraints imposed by Ansett on Qantas immediately prior to its collapse were limited. Moreover, the rise of Virgin Blue means that competition is now between a VBA and a FSA. Recent history suggests that the state of competition is now stronger and may be far more sustainable than that which existed immediately prior to the collapse of Ansett.

Nonetheless, concern in some quarters over the risks associated with a lack of competition has given rise to debate over the value of, and options for, further industry regulation. While we are limited by the lack of empirical assessments of
these risks, that discussion is reviewed here. Possible forms of regulation fall into two broad categories: first, imposition of airline-specific regulation; and second, adjustments to section 46 of the Trade Practices Act, which relates to the taking advantage of substantial market power.

Airline-specific regulation

If Australia were to introduce legislation and guidelines to specifically regulate the behaviour of Qantas, this would not be the first instance of such airline-specific competition regulation. As an example, in Canada, the Competition Act, which regulates anti-competitive behaviour, was amended to constrain Air Canada following its acquisition of Canadian Airlines in December 1999. In addition, guidelines relating to abuse of a dominant position were issued to explain the operation of the amendments to the Competition Act (Competition Bureau 2001a and 2001b). The regulations adopted under these provisions came into force on August 23, 2000. The regulations imposed cover the actions by an incumbent, as quoted earlier in the discussion of barriers to entry. It is possible that the ACCC could seek to impose similar restrictions on Qantas in Australia, although it has already stated that industry-specific regulation should be used only as a last resort.

Telecommunications is the main example of an industry-specific competition regime. This experience was examined by the Productivity Commission (2001b). The Commission observed that industry-specific regulation of this type had the advantage of being able to deal more quickly with anti-competitive conduct. But its disadvantage was the risk of ‘regulatory error and overreach’ (p. 151) and its deterrence of pro-competitive conduct. These trade-offs are discussed in more detail in the next section.

The Productivity Commission supported the continued use of industry-specific regulation in this case, but noted that it should only be a transitional measure. Its argument for continuation was that the combination of characteristics of telecommunications increased the likelihood of anti-competitive conduct. Of special importance were the number of different segments of the telecommunications market, as well as the rate of technological change and service innovation in those segments. The Commission was concerned that because of these features, there was a risk that market power in some segments could be used to prevent entry into newly developing market segments (p. 172). Network Economics Consulting Group (NECG) provides further commentary on the experience of the application of the special telecommunications sector provisions of the Act (NECG, 2002). While we see significant barriers to entry into the air transport market, we do not see a parallel situation in which such special dangers would require a differential treatment.

We therefore turn now to the possible application of the Trade Practices Act to avoid the sorts of anti-competitive conduct that can arise in air transport markets.
**Strengthening the Trade Practices Act**

A company’s conduct can breach the Trade Practices Act (section 46) if the corporation has substantial degree of power in a market and takes advantage of that market power ‘for the purpose of eliminating or substantially damaging a competitor ..., preventing the entry of a person ..., or deterring or preventing a person from engaging in competitive conduct ...’ (emphasis added). In all cases these purposes refer to the effects on conduct in the market in which the corporation has a substantial degree of power, or in any other market.

These provisions are relevant to the various types of reactions by incumbents in air transport markets noted above. The question is whether the Act is sufficient for the regulator to deal with conduct that is anti-competitive. The ACCC would argue that the answer is no, and it proposes to add to section 46 an ‘effects’ test so that the text of the section would refer to taking advantage of market power ‘for the purpose of, or with the effect or likely effect of, ...’ the same purposes listed above (ACCC, 2002:94). It argues (Fels, 2001:17) that

> At present the law requires proof of anticompetitive behaviour for a breach of Section 46 to be established. It is the Commission’s experience that the difficulties in obtaining sufficient evidence to prove the requisite purpose required by the Trade Practices Act diminish the possibility of successful proceedings, require additional resources and cause delay before both interim and final orders can be sought. An effects test will include conduct with significant detriment to the competitive process where powerful firms take advantage of market power but where proscribed purpose is either absent or unable to be proved.

The ACCC also proposes to amend section 46 to give it ‘cease and desist’ powers where it suspects a breach has occurred (Fels, 2001:18):

> The recipient of the orders could not engage in the conduct specified unless it could prove in court that it did not contravene the Act. This power would be particularly useful in cases involving an allegation of misuse of market power. The problem in the current circumstance is that it takes some time to bring matters to court and the firm breaching the law may actually remove the competition during the time it takes to get to court.

Again, this would not be the first instance where such legislation has been implemented. In Canada, such measures were implemented when Canada Air acquired Canadian Airlines (Competition Bureau, 2002).

There are strong arguments against adding an ‘effects’ test in the Australian competition regime. These arguments apply to air transport markets as they do to others. One concern is that an effects test will inhibit the use of strategy in the
competitive process. Competition between firms makes many contributions to economic welfare through its impact on costs, prices, technological progress, product variety and the matching of quality to consumer demand. Even in markets with few sellers firms may compete vigorously with these consequences. At the same time, even strategies used by firms in such markets aimed at getting rid of competitors, or at preventing new ones from being established, may also benefit the customer, at least for a time. It is often difficult to distinguish ‘healthy’ from ‘unhealthy’ competition. The main problem with the effects test is that it runs the risk of classifying too many competitive strategies as ‘unhealthy’.

It is argued by the ACCC that this problem is not significant. The wording of section 46 includes ‘to take advantage of’, which on some views demands a higher level test than simply ‘to use’. The ACCC asserts that this requirement protects a firm engaged in normal competitive behaviour, and that the language is sufficient once provision for an effects test is added to the existing text of the section (ACCC, 2002:section 3.4).

There are two types of errors in the application of competition policy. One is the risk just referred to — that of incorrectly diagnosing some action as anti-competitive and detrimental to consumer interests when it is not (Type I error). Another is permitting some undesirable behaviour to persist (Type II error). There is a trade-off between these types of risks since a regime that reduces the risk of Type II errors also raises the risk of Type I. A balance is required. Type II errors in general might correct themselves in an open economy with few regulatory or other barriers to entry. The costs of Type I errors are likely to be greater — some of the costs are those associated with inhibitions on firms to compete aggressively. As a result of such inhibitions the benefits of efficient performance, including the associated gains in consumer welfare, would be foregone. In our view, the addition of an effects test to section 46 as an alternative to purpose increases the risk of Type I errors. This is because ‘competition’ and ‘efficiency’ are currently regarded as two different concepts in interpreting the TPA provisions (NECG 2002:8-13). Furthermore, as it stands, section 46 lacks the option for a defence on efficiency grounds. In this situation, adding an effects test to that section would loosen the ‘filter’ against Type I error that is supplied by the purpose test. It would lead to section 46 catching a significant amount of conduct that is desirable from an efficiency perspective and that is consistent with the competitive process. These arguments are presented in more detail in NECG (2002: 40-46) and also by Landrigan, Peters and Soon (2002). Given this assessment of the balancing of the types of errors, we would argue that great caution is required before making the change.

A change in the Act as a result of putting greater weight on reducing Type II errors has another implication. It provides an incentive for entrants to put greater weight than might otherwise be the case on ‘the regulatory game’ of seeking to have incumbent responses to their entry denounced as anti-competitive. Resources would then be diverted to this process rather than to the application of strategy in the market. Competition for rents not in markets but in regulatory
forums is far less likely to deliver the sorts of consumer benefits we identified above.

We prefer other approaches for managing the trade-off between these types of risks. These involve the application of a different methodology, which can be characterised as ‘purpose plus’. Smith and Round (1998) and Round and Smith (2001) argue for a strategic behavioural approach to the application of a test of competitive conduct. In their framework, ‘purpose’ is inferred from an analysis of the characteristics of the conduct undertaken in the context of the firm’s whole package of strategies. The objective in this approach is to reduce the risk of both types of errors. There may be net benefits from this approach, although the methodology requires further specification and will be more demanding in terms of research effort and the collection of evidence.

Conclusion

We have explained how recent events have affected competition in Australian domestic air service markets, perhaps increasing the concern in some quarters that Qantas is in a position to take advantage of its market power at the expense of air travellers. Value-based carriers are currently competitors for incumbents like Qantas, but their contribution in all the market segments that Qantas serves remains uncertain. This has led to consideration of whether the current regulatory system has the capacity to correctly assess the conduct that might be observed in a market with these characteristics, whether industry-specific regulation is required, or whether other changes in rules are appropriate. The ACCC’s assessment is that industry-specific regulation is a last resort. The major Australian precedent for this type of regulation (the telecommunications specific regime set out in Part XIB of the Trade Practices Act) highlights the great risks such an approach entails, however, and we would not support its application.

That leaves the question of other changes to rules of competition policy. We noted some options — in particular, the addition of an effects test to Section 46 of the Trade Practices Act. Our concern is that this change as currently formulated would increase the risk that conduct is incorrectly diagnosed as anti-competitive, and that conduct that promotes efficiency would be found (or more readily risk being found) unlawful.

There is, however, a further option. An important category of potential entrants is excluded from the market by policy applying to trade in air transport services. We might be more tolerant of suspicious unilateral conduct when regulatory barriers to entry, including by foreign suppliers, are low, and where there is a history of vigorous competition in other markets from which entrants might be attracted. But in the case of air transport there are regulatory impediments to competition from suppliers in the international market. Foreign operators can establish in Australia, but other modes of entry through consecutive cabotage remain restricted. The likelihood of entry via these routes might be small at present, as a consequence of the international regulatory structure. The priority, therefore, is to work on the international regulatory system — rather than
to create a higher level of domestic regulatory intervention that runs the risk of serious errors in the diagnosis of competitive strategy. Otherwise we face the risk of creating a new regulatory problem while trying to respond to another that already exists.

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Structural Separation in Telecommunications: A Review of Some Issues

Steven Dounoukos and Angus Henderson

In recent years, competition authorities and telecommunications regulators have indicated an increasing willingness to consider structural separation and divestiture of the local loop as a means of countering what is viewed as serious anti-competitive activity by incumbent operators. The issue of structural separation has gained some prominence in the aftermath of the competition reforms that followed the National Competition Policy Report by the Independent Committee of Inquiry (1993) chaired by Professor Fred Hilmer. The report questioned the exemption of public monopolies from competition laws and favoured structural separation of incumbents as a way of introducing competition in monopoly markets of state-owned utilities.

A major plank of the implementation of liberalisation policies in major markets such as energy, transport and telecommunications, has been the tendency to favour the provision of access to essential infrastructure facilities owned by incumbents as a way of achieving competition in the supply of final products. This has meant that incumbent, vertically-integrated operators supply services or facilities as inputs to the production of final services by competitors with which they compete directly with the incumbent. Consequently, by their ownership of essential facilities which they supply to competitors, incumbent operators are in a powerful position in the market and have a considerable incentive to use their market power to frustrate competition. Regulation of the behaviour of incumbents, therefore, is essential for effective competition.

Reliance on access regulation alone to promote competition and prevent abuses of market power by incumbents requires extensive intervention and oversight by regulators. This arises from the fact that access regulation does not alter the incentives for uncompetitive behaviour by incumbents. Supplementation of access regulation with structural separation, on the other hand, would remove or greatly reduce the incentives for uncompetitive behaviour such as the denial of access to essential facilities and would be more likely to produce desirable outcomes without the need for extensive involvement of regulators. Because of its desirable effects, structural separation has been implemented as part of the access arrangements in several industries including electricity, gas, rail and airports. In contrast, telecommunications liberalisation has not included structural separation.

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Internationally, the Committee on Competition Law and Policy of the Organisation for Economic Co-operation and Development (OECD) has advocated structural separation to curb anti-competitive conduct of incumbent operators within regulated industries (OECD, 2001). However, a recently released draft report by the OECD’s Working Party No. 2 on Competition and Regulation concluded that there is insufficient evidence in support of structural separation (OECD, 2003).

In Australia, structural separation has received some endorsement as a regulatory solution to the perceived failures within the telecommunications market in a paper ‘Reforming Telstra’ by the Shadow Minister for Communication, Lindsay Tanner MP (2002). As a reaction to that paper, the Minister for Communications, Information Technology and the Arts, Senator Richard Alston, requested the House of Representatives Standing Committee on Communications, Information Technology and the Arts (2002) to inquire into the structural separation of Telstra’s core network from its other businesses. The Committee was to report to Parliament by 24 March 2003. However, following a more recent statement by Tanner (2003) indicating a shift in his position away from structural separation in favour of greater internal separation of Telstra’s wholesale and retail activities, the Committee’s Inquiry was abandoned.

This paper considers some issues relevant to whether structural separation of the access network activities and business of the incumbent from its non-access activities (in the form of divestiture of the local loop) is currently justified in order to promote a competitive telecommunications market at the local level. Alternative approaches — essentially forms of ‘accounting separation’ — are also considered briefly. The issues discussed in this paper are likely to attract increased attention in the emerging debate in regard to the future structure of Telstra, the telecommunications market within Australia, and the regulatory framework in which the industry operates.

**Approaches to Structural Separation**

The separation of competitive and non-competitive activities of incumbent operators can take a variety of forms involving different degrees of actual separation of assets ranging from divestiture of monopoly facilities to some form of ‘internal’ separation of the activities within the integrated operator.

Examples of actual structural separation of competitive and non-competitive activities of an incumbent include:

- **club or joint ownership** involving shared ownership of the non-competitive activity by companies that conduct business in the competitive activity. That is, competitive retail firms would jointly own the incumbent’s wholesale division. The joint ownership by major airlines of the slot allocation function at major airports in most countries of the European Union is an example of joint ownership in practice (OECD, 2001);
• **operational separation** which requires the transfer of control of the non-competitive component — and wholesale operations of the incumbent — to an independent entity, which may be made up in a number of ways. An example of this approach can be found in the US electricity industry where an independent entity operates the transmission and distribution grids, but the incumbent retains ownership of the actual assets;

• **separation into several vertically integrated companies** where each relies upon the other, to some degree, in order to compete. Separation would usually be performed on a geographic basis. The essential idea here is that where customers of the downstream competitive activity have to be connected to more than one non-competitive activity, and when competitive and non-competitive activities are vertically integrated, each vertically-integrated company that is a part of each of these activities must negotiate reciprocal access to the non-competitive activities of the other companies; and

• **separation of the non-competitive components into several smaller parts** each of which is controlled by unrelated and potentially competitive smaller companies whose performance — both in terms of service delivery and regulatory compliance — may be compared against each other.

Examples of ‘internal’ separation of the activities of an incumbent operator include:

• **accounting separation** (considered in more detail below) requiring the preparation of separate accounts for specific functions or services on a pre-defined basis;

• **functional separation** where different services or activities are performed by separately operating divisions of the same firm. This may also involve separate management for relevant divisions; and

• **corporate separation** where different services or activities are performed by different, although commonly-owned, corporate entities.

**Criteria for Evaluation**

Policy makers are seldom faced with a single option for intervention in a market and good policy making requires a consideration and evaluation of the various options to determine which is best suited to particular circumstances. Sometimes, what may be the best theoretical solution may not necessarily be best in practice. Often, the cost of implementing a solution can outweigh its benefits or produce a less beneficial outcome than alternative options. Efficient regulatory intervention, therefore, requires an evaluation of all the options and the choice of the one that leads to the best possible outcome.

The basis of any comparison between the various models for structural separation and current or future alternative forms of regulation of the incumbent must be well understood. However, comparisons of this type are made more
difficult by the apparent absence of a comprehensive (that is, detailed) nor effective (that is, practical) approach regarding structural separation within telecommunications markets. This is compounded by the specific issues that arise once a general regulatory approach is applied to a specific country, regulatory regime and incumbent carrier.

The costs and benefits of structural separation must be closely assessed and supported by evidence. Also, it is questionable whether structural separation can be any more effective than improvements to current forms of regulation, or other less disruptive alternatives. The general lack of detail and contextual analysis in current proposals for structural separation within the telecommunications industry make it difficult to offer specific comments about whether or not structural separation may or may not be effective under certain circumstances; detail and context being necessary for any model to be tested or compared against real-world experience and data.

Even if a detailed structural separation model is offered, certain doubts persist regarding the effect that structural separation may have on telecommunications markets. Relying on the experience of other industries that have applied structural separation to the activities of incumbent carriers is not sufficient. Instead, the justification for any move to structural separation should be based on an understanding of telecommunications-specific issues.

Any analysis of structural separation must therefore begin with an assessment of the merits of the structural separation model being proposed. This is essential for a meaningful comparison of structural separation with current regulatory approaches and other regulatory alternatives that may be explored as a way of tackling the perceived problems within the market. The key issues to consider in the evaluation of the relative merits of any structural separation model are:

- **Problems in the telecommunications market**: The deficiencies in the telecommunications market need to be assessed in order to establish a causal link between these deficiencies and the benefits attributed to structural separation.
- **Whether regulation is necessary**: Before changing the regulatory regime to implement structural separation of the incumbent carrier, consideration should be given to whether commercial or other incentives can operate to make the incumbent seek structural separation voluntarily. Sufficient reasons and proof must be given that shows structural separation to be the most cost-effective and practical way of addressing the perceived market failure. The evidence used to support arguments for structural separation should be scrutinised carefully.
- **Current regulatory approach and its deficiencies**: Similarly, the deficiencies in the current regulatory approach need to be assessed, not only to establish whether structural separation is likely to overcome them but also to assess whether it may be possible to secure some or all of the benefits of structural separation at a lower cost with improvements to the existing regulatory system.
- **Practical separation:** Often overlooked are the practical aspects of separation of the physical assets of the structurally-separated entity. It is important to determine the physical asset to be separated from the incumbent’s network, who will take control of this asset and how.

- **Costs and benefits:** Any argument supporting structural separation requires a cost-benefit analysis of the resultant changes to the market and to the regulatory environment. As a first step, details regarding the potential cost of structural separation, and who will bear these costs in both the short and long term, should be provided. This should be coupled with a clear statement of the perceived benefits that are anticipated as a consequence of structural separation of the incumbent carrier. Each of these assessments should be supported by adequate analysis and market data.

- **Time frame:** Any cost-benefit analysis of structural separation should include a time-line detailing the milestones, key dates and stages for these benefits to be achieved and for the costs to be borne. It should state clearly how long it will take for the process to be completed and for the benefits to be felt by the market and consumers.

- **Scope:** The scope of the structural separation model being implemented should reflect the specific needs of the market for which it is being designed. This requires considerations of whether vertical separation is necessary (that is, wholesale and retail), or horizontal separation should also occur (that is, restricting the number and type of businesses within which the incumbent may operate).

- **Incentives to innovate:** Providing incentives to innovate is an important part of the social and economic aims of market regulation. Telecommunications is a dynamic market and utilised assets require ongoing maintenance and upgrade. The separated network entity must have adequate incentives to develop its network and to innovate. It must be considered how the Government and the relevant regulatory authorities will help to promote innovation. Innovation would hopefully be achieved through the introduction of competition at the local network level (indeed, there seems to be no real alternative to this), so an understanding of how structural separation would help this process is critical to its long-term effectiveness.

- **Competition and the network entity:** Any argument calling for structural separation should detail how it would ensure the introduction of competition at the local level. The risks and obstacles to creating a competitive environment once the incumbent carrier had been structurally separated must be considered. For example, it would be necessary to ask why the establishment of a separate body holding the separated network assets would not simply create another monopoly over the local loop, but in the hands of a new company. What, for example, would the local loop network company be prevented from doing? Also, how would pricing regulation affect its ability to compete? In determining these issues, regulatory authorities would need to consider how the various responses to these issues impact on other important areas, such as promotion of competition and innovation.
• **Regulation of the remaining competitive parts of the incumbent:** What regulatory obligations, if any, would continue to apply to the incumbent once it has been structurally separated? An incumbent may ask, quite reasonably, why the use and exploitation of the local switch, if it stays with the incumbent, should have any obligations attached to it at all.

• **Pricing access:** An important issue that relates to the regulation of the local loop network entity after structural separation is the pricing of access to the local loop, whether it would be regulated, and if so, how it would be regulated.

• **Purpose and function:** Structural separation also requires a position regarding the function and purpose of the local loop network entity and how this will define the activities in which it could take part. A level of horizontal restriction on its business may be required so that it does not misuse its power as the owner and controller of the local loop to compete in other markets or affect its end-user interests.

• **Legal structure:** Beyond addressing issues that relate to the interaction of the monopoly separated company within the market, with regulators and with other companies, a structural separation model must also address the key issues relating to the internal structure and governance of the local loop network company. (For example, who would control it and how would it govern itself?)

• **Criteria for success:** Finally, criteria for success should be set so that comparisons between the promised benefits of structural separation and the actual benefits can be measured and future alternatives (to the extent they exist beyond the point of structural separation) can be considered.

**Establishing the Case for Structural Separation**

Clearly, as for any intervention in a market, structural separation would only be justified if its benefits outweigh its costs. In addition, it would need to be demonstrated that greater net benefits are not possible through the implementation of some other solution.

Several important benefits have been attributed to structural separation. As noted in OECD (2003), the main benefits of structural separation in the telecommunications industry are thought to include:

• promotion of entry and innovation into the competitive market with consumers benefiting from competition in the provision of services such as local telephone services and high speed Internet;

• creation of a ‘level playing field’ by forcing the incumbent’s wholesale arm to deal with its retail arm on the same terms that it deals with any other competitor;
allowing regulators to focus on the wholesale network to guarantee service quality, network reliability, and access to essential network facilities at cost-based prices;

relative simplicity when compared to behavioural remedies. It is effective as it targets the very reason for the incumbent’s impact on competition within the market; that is, its vertically-integrated structure. In contrast, behavioural regulation can never be fully effective in this way as it is reactive, rather than pro-active;

alignment of the incumbent’s incentives with those of non-integrated carriers;

and

reduction of the need for regulation as incumbents have fewer incentives to abuse market power.

Varying approaches have been taken to the ‘onus’ of establishing the need for structural separation. Some approaches favour separation in the absence of a compelling justification not to do so (Productivity Commission, 1997). Other approaches favour a detailed analysis of the costs and benefits of structural separation prior to its implementation (Independent Committee of Inquiry, 1993). Assuming the latter approach, the following additional issues need to be considered prior to adopting structural separation.

Cost-benefit analysis

Structural separation would require the incumbent, and indeed the Government, to incur new and potentially significant costs. Whatever results a long-term cost-benefit analysis of separation (versus conglomeration) may yield, there would be the immediate transitional costs associated with structural separation to take into account. Typically, these costs would be passed on to consumers either directly or indirectly through prices. This may require the incumbent to face further regulation, in particular with regard to pricing. Given that one of the objectives of structural separation is to increase competition and thereby lessen reliance on regulation, increased price regulation would appear to be somewhat inconsistent with that objective. In a regulated market, the competition authority is likely to aim to ensure that costs do not overly affect the ability of businesses to compete, grow or be profitable.

It is also important to note that the recoupment of costs associated with structural separation may take longer than the technology itself will remain profitable or viable. A cost-benefit analysis must take into account the effects of technological refresh and innovation, and the time-scale over which an investment strategy for structural separation must be made.

Given that the potential short-term and long-term costs for the incumbent and consumers may be significant, the methodology for calculating the benefits associated with structural separation must be closely analysed and quantified.
Effect of convergence and timeframe for achievement of benefits

Digital convergence of technologies and the changing uses of telecommunications networks will continue to impact on the development of telecommunications regulation. Market power may be undermined in some areas, or created, maintained or increased in others. In this context, it will become increasingly difficult to define markets and the effect of structural separation may become difficult to predict. Depending on the time line for recoupment of costs, this may impact significantly on the ability of structural separation to pay for itself, which in turn will impact on the choice of approach to structural separation.

Clearly, structural separation must be shown to be a robust strategy that can work within a new, converged economic and technological environment. There are risks that convergence and technological change pose for the value of the local loop. Ultimately, in the general calls for structural separation, it remains unclear whether the resources needed to implement structural separation would not be better applied to the development of new infrastructure and technologies that avoid the ‘last mile’ bottleneck of the local loop altogether. Arguments supporting structural separation must address this issue if they are to establish structural separation as the best alternative to current regulatory approaches.

Pricing and competition

Structural separation of the incumbent carrier does not mean that new entrants providing access services would not need to compete for customers. It is highly likely that after structural separation occurs, customers seeking access would remain with the incumbent until they are competed away. It is questionable whether structural separation would have much impact given that significant commercial obstacles remain for any new entrant. The incumbent’s power due to its reputation and historic relationship with customers and the market cannot be ignored.

Pricing and drivers of competition are two of the very justifications for the use of structural separation. Any argument supporting its use should emphasise, in detail, how structural separation would deal with these issues.

Impact on investment and innovation

Structural separation is likely to have an impact on investment and innovatory incentives and raise questions about future network management. A vertically integrated operator may innovate on the network side of the business with the ability to obtain a return in any part of its integrated business.

If a local access network company is created, it may have less incentive to invest in innovation where its prospect of obtaining a return on that investment is limited to its network business (and not some other part of the fully-integrated business). Government ownership of the access network company may also
impact upon the funding made available to innovate and the risk the Government is prepared to take with such innovation.

The access network company may also be regulated in a way that provides little or no incentive to innovate through upgrading (that is, it is limited to setting access fees based on a reasonable rate of return on its existing assets without any allowance for future network expansion or upgrade). The argument being that the access network company should bear the burden of the risk of its own failure rather than passing that risk on to downstream competitors.

To be able to finance innovation and development, the access network company will need to achieve an increase in its rate of return, either through increased profits or decreased costs. Unless it can do so, it would have little, if any, reason to innovate. Hence, how this rate of return is regulated to allow for innovation but prevent gold-plating and inefficiency is a key question for the regulation of any structurally-separated entity.

More rules?

Given the deregulatory ambitions of structural separation, one would question whether there is likely to be more or less regulation post structural separation than at present. Will the market permit the incumbent to develop its own network? If this is permitted, for example, there would need to be rules about the areas of business that the access network company would be able to operate in. Would the access network company be able to develop value-added networks and services to maintain and enhance its business, at the risk of vertical integration emerging? Would vertically-integrated new entrants be permitted to set up new loops to compete against the access network company?

Arguments supporting structural separation should give close attention to what the market and regulation will look like after separation and how the access network company, the incumbent and their respective competitors might function after structural separation has occurred.

Unsettled criteria for measuring success

As previously argued, any analysis or assessment of a regulatory regime should clearly establish the basis upon which the regime is to be assessed. Clearly, the intent of regulation is to ensure that sustainable competition and economic welfare are maximised. However, by not referring to any specific benchmarks or methodologies that might help assess one regulatory approach against another, the principles remain too ambiguous to be of use in a comparative analysis of any sort. At what point in time, for example, should a regulatory approach be expected to have satisfied these criteria and what is the objective measure of its success or failure?

Structural separation, and any regime it seeks to overhaul or replace, should be held accountable to real industry benchmarks and targets, including a reasonable time line, that can itself be justified. Such transparency in the analysis
is necessary to compare fairly what structural separation may achieve and the benefits attributed to it and, indeed, the very reasons for the introduction of the policy.

**Problems in the Telecommunications Market**

In countries with liberalised telecommunications markets, regulation aims to produce fair and open competition within the market place to deliver increased telecommunications services, choice and value for consumers. The maximisation of competition within markets ultimately aims to satisfy various social policy objectives. Many now consider that competition at the local loop level within telecommunications markets is not operating to satisfy the needs of consumers and society, nor delivering market outcomes, such as better services, lower prices and innovation, that were envisaged during liberalisation.

There are two major observations that are made to evidence stagnating competition within telecommunications markets:

- First, the perceived lack of progress in areas such as broadband and high-speed Internet access penetration is viewed as affecting consumers and citizens.
- Second, many consider that local loop unbundling has not occurred rapidly enough and so has not brought the anticipated improvements in competition of local loop based services.

In countries in which structural separation is gaining or has some momentum, the perceived problems of the telecommunications market are viewed as the result of the anti-competitive behaviour of the incumbent operator (Beard, Kaserman, and Mayo, 2001). In Australia, as in many telecommunications markets, the incumbent remains vertically integrated and operates in both the retail and wholesale markets.

The pervasiveness of incumbent telecommunications companies generally means that new entrants cannot avoid dealing with, or competing against, the incumbent in at least some capacity (usually in downstream services markets). This applies to companies creating or employing their own networks (as interconnection will become necessary between the networks at some point), as well as to companies that must access the incumbent’s network to operate their business in order to supply services to end-users. At the same time, these companies find themselves competing against the incumbent for market share in either the wholesale or retail market.

The incumbent is thus in an extremely advantageous position, as all companies must access its infrastructure and larger network. Not only does it have a far more powerful bargaining position than its competitors, but also a substantial incentive to pursue obstructionist tactics in the supply of wholesale services to companies it competes with in the retail market. Like any company, it
will seek to protect its profits and market share from competitors and new entrants.

When combined with high barriers to entry (for example, sunk costs), the need for any-to-any connectivity and features such as information asymmetries, market power in telecommunication markets is said to create the conditions for regulatory solutions such as structural separation. Consequently, there are now calls for a regulatory approach to restrain the effects of the power of the incumbent, and the incentive to act in an anti-competitive way. The key issue to be addressed is how, under these circumstances, to achieve non-discriminatory access to underlying network resources.

Before an approach to structural separation is adopted, it can be reasonably asked whether behavioural regulation of access is actually ineffective or whether it is more accurate to say that some forms of access regulation have been ineffective.

In Australia, access to essential facilities or bottlenecks, declared as such by the ACCC, is mandated under Part XIC of the Trade Practices Act 1974. While a bottleneck test is not used, the components of the overall regulatory objective to promote the long term interests of end users have the effect of regulating access to bottleneck services. These components provide for regulation of services if, to do so, would promote competition, enable any-to-any connectivity and promote the efficient use of and investment in infrastructure. Many of the declared services in Australia are those which run over or utilise the local loop (for example, PSTN access, unbundled local loop, local call resale, local transmission, digital data loops).

The access obligation applicable to mandated, or declared services under Part XIC is principally an obligation to supply on non-discriminatory terms. Non-discrimination purports to place new entrants in the same position as the incumbent in relation to the provision of the declared service and, hence, in applicable cases to access to the local loop. This non-discrimination obligation, together with accounting separation, is said to ‘mimic’ vertical separation, however with the disadvantages described above.

The implementation of access to declared services in Australia relies on a negotiate-arbitrate cycle (an ex post approach, although recent amendments have introduced some half-way measures allowing for the ACCC to set benchmark terms and conditions, including prices, prior to a dispute arising (Telecommunications Competition Act 2002). This ex post approach means that access to services is only regulated and disputes determined once, and usually well after, a market failure has occurred.

The negotiate-arbitrate model used in Australia for access regulation has led to many disputes, long delays and a raft of legislative changes which attempt to patch-up this model. The arguments for structural separation in Australia have arisen in the context of a degree of frustration with this model of access.
Practical Implementation of Structural Separation

A critical issue in applying structural separation to the telecommunications market is deciding which element of the wholesale activities of the incumbent would need to be separated for this to be achieved. Separation of the non-competitive elements of the incumbent operators from the competitive parts requires identification of the non-competitive element that must be separated in order to create the pro-competitive effects sought by regulators. With regard to the form that the implementation of this approach would take, the model that is gaining the most support is the creation and use of a separate legal entity (the access network company) to own and control the local loop.

The access network company model

Under the access network company model, ownership and control of the incumbent’s access assets and business — primarily the local loop — would be separated from its services-based activities, and transferred to a new company. This new company would provide wholesale access services to other companies at a regulated price. The incumbent would then compete for all services through access to the local loop, and would contract with the access network company for its wholesale services as any other company would.

The key questions that must be considered under this approach are:

- First, what assets exactly (that is, what will be viewed as the local loop) must be separated from the incumbent?
- And then, who will take control of this asset and how will this occur?

What would be separated from the incumbent?

Structural separation in the telecommunications industry requires a definition of the scope (or ‘border’) of the local loop and related access elements of the incumbent’s network that are to be separated.

With regard to the local loop, separation might only involve the copper wires, not just the local switch. Including the switch as part of what would be separated from the incumbent would see some services vested in the separated access network company. Therefore, it could be less complex to separate the copper wires only. If, however, the border were within the switch itself, where exactly would the defining line for the local loop fall?

Issues of key practical significance give rise to two main options depending on the extent to which the access network company would be exercising control within the switch in addition to control of the copper wires, namely:

1. control of the main distribution frame only; or
2. control of the entire switch.
As OECD (2003) also notes, the first of these options is preferred, if it is accepted that structural separation aims to separate the non-competitive assets from the incumbent. Its primary advantage lies in the fact that it separates only the incumbent’s non-competitive or bottleneck assets that lead to anticompetitive market outcomes.

The main disadvantage of the first option is that no single party would be assigned the responsibility for the operation and maintenance of the switch, which could result in complicated and difficult dealings between parties. Consequently, there would be a need to clarify how associated services relating to access to the local loop would be developed, and which parties would be allowed to provide such services.

By including the entire switch, the second option would simplify the operation and maintenance of the switch by allocating responsibility for them to the access network company. However, it creates a series of new issues as control and use of the switch would involve the provision of many value-adding services that could in themselves constitute a bottleneck. Consequently, there would be a need to address the question of whether the services that attach to the control and ownership of the local loop should be subject to competition in order to curtail the power that exclusive control of the local loop and provision of related wholesale access services would confer on the access network company. Such a situation would raise issues similar to those associated with vertical integration of the incumbent. Adoption of the second option would require the development of specific regulation for the pricing and delivery of the services, and the extent to which the access network company would be allowed to provide access services related to its ownership and control of the local loop.

The technical choice between these two options is an example of a telecommunications-specific issue that must be adequately addressed by any argument supporting structural separation within the telecommunications market. Determining the scope of the assets to be separated cannot be side-stepped and is a fundamental issue that must be addressed before structural separation can be viewed as a practical option. It is highly important, therefore, that any discussion of the potential use of structural separation be based on and reflect a practical and ‘hands on’ understanding of the telecommunications market.

The legal structure for the structurally separated entity

There are essentially three types of company models to consider and each of these involves a new company that would own and control the local loop (however that is defined) after divestiture from the incumbent. Beyond this common function, key variables delineate one model from the other, including issues such as ownership and control, the type of corporate governance, market regulation and a variety of other factors.

The three main approaches can be summarised as follows (Cave, 2002):
1. A privately owned and competitive company. In this model, other companies would be free to establish their own local loop infrastructure, provided they were not dominant within the market when in vertically integrated form. Non-dominant, vertically integrated new entrants would be permitted.

2. A regulated company with a monopoly over the local loop. This model would be appropriate in situations where the telecommunications market is being privatised, but government ownership of the local loop is to be maintained even after privatisation.

3. A consortium (owned by all the telecommunications service providers in the market) with a monopoly over the local loop. Under this model, any necessary upgrade to the local loop would require the agreement of all the members of the consortium.

The three models are not necessarily mutually exclusive. It is possible, for example, for a particular market to work its way through all three approaches over the course of privatisation and deregulation. However, in markets where liberalisation relies heavily on the application of competition laws the first approach might be preferred because it involves a fully-privatised and independent company, and relies on a fair and competitive market to drive innovation, service development and price reduction.

Which of the three models is likely to be the most appropriate in a particular market depends on the market structure, government objectives and the prevailing regulatory system. Consequently, when choosing a model, careful consideration should be given to material factors that may impinge on efficient operation within the specific market or regulatory environment in which the model is to be implemented. Depending on the chosen approach, evaluation of the access network company should consider and take account of the following factors:

- the company’s business model;
- its vulnerability to competition;
- its obligation to innovate;
- its size and its overheads, ongoing and maintenance costs;
- its cash flow;
- the services and value adding that it will be permitted to provide; and
- who may compete against it.

Accounting separation as an alternative

Accounting separation by itself is not considered sufficient for the removal of incentives for misuse of control over access to an essential facility (OECD, 2001). The keeping of detailed separate accounts of competitive and non-competitive activities however, is essential to the effective operation of an access regime. In such a situation, accounting separation will reduce the incentives for uncompetitive behaviour because it increases the risk that such behaviour will be discovered by regulators. Accounting separation, however, has little, if any,
influence on the ability of incumbents to engage in strategic behaviour, such as delaying the provision of access to competitors, which is often used to frustrate or delay competition.

As noted by the Productivity Commission (2001), accounting separation, together with a requirement for non-discrimination when dealing with competitors, has the potential to mimic vertical structural separation. The supply of access to competitors on terms and conditions not less favourable than those applied to an incumbent’s own activities is a key obligation imposed by the Australian telecommunications regulatory regime. Consequently, accounting separation for Telstra combined with an effective access regime should be able to produce many of the benefits that would accrue from actual structural separation.

Accounting separation, however, raises some important issues of implementation. The need to couple accounting separation and non-discrimination raises concerns about whether the information collected and reported in the accounts of an accounting-separated business unit cover or, if covered, have the potential to identify discriminatory activity (see also Productivity Commission, 2001). There is a considerable information asymmetry and regulators will necessarily have to rely on the integrity of incumbents to record data accurately. While it would be virtually impossible for regulators to devote the resources necessary to ensure accurate recording of all data, the likelihood that the accuracy of the records will be checked by the regulator in the event of a dispute will act as an incentive for correct record keeping.

Some form of accounting separation has been a feature of the Australian regulatory regime in telecommunications since 1991. Since 1991, no cases of discrimination have been identified, reported or found by a regulator under this regime, notwithstanding the significant benefits associated with undetected discriminatory behaviour.

Recent amendments to the telecommunications regulatory regime in Australia require the Minister to give a direction to the Australian Competition and Consumer Commission (ACCC) about Telstra’s wholesale and retail operations (section 151BUAAA, Telecommunications Competition Act 2002). Under this section, the Minister must take all reasonable steps to issue a direction to the ACCC within six months, relating to Telstra’s wholesale and retail operations and requiring the ACCC to issue specific rules for Telstra’s accounts. A special Telstra direction will also be subject to public consultation in a draft form and the Minister must consider any submissions received. The term ‘wholesale operations’ is an inclusive one relating to services Telstra supplies to itself and to others (to enable them to provide carriage or content services).

**Conclusion**

Supporters of structural separation within the telecommunications market advocate a significant and costly change from current approaches to regulation of the incumbent. They view an application of structural separation as justifiable on a cost-benefit analysis. However, limited evidence has been used to support this
view. It remains unclear whether structural separation can achieve its aims in the telecommunications industry.

Specific questions that will impact on the decision to choose structural separation are:

- Do the costs outweigh the benefits?
- Will it achieve its aims?
- What factors will determine the answer to these questions, if the utility of structural separation in the telecommunications industry depends on certain variables?
- And, how should it be used and when? (For example, as a last resort only or in conjunction with other approaches.)

The issues explored in this paper cast doubt over whether there is an adequately detailed model for the structural separation of incumbent carriers that can, or ought to, be supported. In this situation, the improvement and development of alternative regulatory approaches should be investigated further. At the same time, more thought should be given to what structural separation should or could possibly involve within a specific telecommunications market.

Structural separation in the telecommunications industry raises issues particular to that industry. An analysis of the implementation issues in telecommunications illustrates that models of structural separation are not easily transferred from other industries. For example, the separation of the local loop from other competitive network elements raises technical and competition issues specific to the telecommunications industry which must be considered prior to structural separation being recommended.

Unlike other utility industries, the telecommunications industry is also a highly dynamic industry that is significantly affected by technological change. There is a constant need to upgrade the network and utilise the existing network for supply of new services. Structural separation and the subsequent regulation of the access network company may dampen the incentive for innovation in the local loop. Furthermore, given the nature of the local loop and the reasons for separating off this part of the network (that is, because of its natural monopoly characteristics), there is little or no prospect of a new entrant ubiquitously duplicating a local loop even if the existing network, over time, becomes technologically redundant.

A cost-benefit analysis is also critical. Access and interconnection regulation has costs associated with it, including the cost of regulation. However, given that access and interconnection regulation is universally seen to be essential to the success of competition, its benefits have been proven to be significant. The short-term costs of structural separation are likely to be far more significant than the costs of access and interconnection, with the benefits largely untested.

Telecommunications regulation in Australia is currently based on an ex post model — the tools used to regulate both anti-competitive conduct and access are only effective after the offending conduct has occurred and usually after a
considerable delay has occurred. For the reasons outlined in this paper, regulatory authorities and industry participants should view structural separation as one of several options for overcoming the difficulties and frustration associated with the existing regulatory system. Rather than considering structural separation as the only available course of action, they should also explore alternatives (for example, ex ante regulation) that are more closely related to, and build upon, existing regulatory structures that are likely to be easier to assess and implement.

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separation and earlier versions of some of the discussion in this paper have been incorporated in OECD (2003), ‘The Benefits and Costs of Structural Separation’.

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Impact of Genetic Testing on Life Insurance

Richard Heaney and David Pitt

The Human Genome project generates immense interest in the scientific community though there are also important issues for the business community, particularly insurance companies. The dramatic advances in our understanding of the human genetic code, or human genome, affect our understanding of the determinants of human longevity and this is critical to the profitability of life insurance contracts.

Insurance plays an important role in our economy. For example, there were 42 life insurance companies managing approximately AUD $188 billion as at 30 June 2002 and these same companies received AUD $38.1 billion in premium income over for the year ended 30 June 2002. Life insurance contracts are increasingly being sold in combination with superannuation where the contract forms part of the superannuation package. For example, up to 85 per cent of all life office assets and 90 per cent of the premiums were classified as superannuation business in 2001 (APRA, 2002). Regardless of whether an individual submits an application form directly to a life insurance company as part of a stand alone policy, or indirectly via superannuation, the insurance company faces the question of deciding whether they wish to sell insurance to this individual.

While life insurance policies can take a number of forms, an essential feature of these contracts is that they promise the payment of a given amount to certain beneficiaries when the insured dies. The time of death is critical to the pricing and profitability of these contracts. For insurance contracts to be profitable they must be priced so that invested premiums generate sufficient reserves to meet the payment of death benefits when they fall due.

Failure to adequately model the impact of our increased understanding of the human genome could have a dramatic impact on the profitability of insurance contracts. The mapping of the human genome and the rapid development of genetic testing means that people have access to greater knowledge about their health and longevity yet this information may not be freely available, particularly to insurers and annuity providers (Hoy and Polborn, 2000). If individuals have more information about their health than insurance companies, this can complicate the pricing of life insurance contracts and annuities. This one-sided access to information is often referred to as information asymmetry and at its worst information asymmetry can lead to market failure (Akerlof, 1970). Further, where the insurer is unable to accurately assess the risk of an applicant it is possible that prices will be set too high. The ultimate result could be that only those applicants

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most likely to require a payout will purchase the product resulting in low profitability or losses. This is a critical problem in the pricing of life insurance products. Life insurers generally attempt to protect themselves through pricing for average risks though this may become more difficult where information about health and longevity is restricted in an asymmetric manner. An objective of this paper is to show that failure to adequately model the impact of our increased understanding of the human genome — on choices made by consumers, and on the pricing policies of insurance companies — could have a dramatic impact on the profitability of insurance contracts.

While Doherty and Thistle (1996) and Hoy and Polborn (2000) provide economic analysis of the impact of information about the human genome, the work of actuaries such as Macdonald (1997) provides insight into the problems that actuaries face in the day-to-day pricing of life insurance contracts. We apply the Macdonald (1997) model to gain further understanding of the impact of genetic research on Australian life insurance contracts — in particular, the effects on profitability of adverse selection by consumers who discover themselves to be high risk, and who subsequently purchase more insurance than would otherwise have been the case. The following section provides a brief review of the literature. It is followed by two sections that respectively describe the model used in the simulation of the insurance problem faced by Australian insurance companies, and the results of the simulation. Conclusions are drawn in the final section of the article.

**Insurance Theory**

Transactions costs are an important part of the market for life insurance (Gravelle and Rees, 1985). One of these costs is the cost of identifying the true risk of the individual. Individuals could be classified into broad categories such as good risk, where there is little risk of a claim, and bad risk, where the probability of a claim is high. Insurers generally assess the probability of death through analysis of objective factors, such as age and occupation, and subjective factors, such as exercise, diet and habits such as smoking. Each applicant is assessed for these factors and a premium estimated and charged.

Where it is impossible to identify the risk associated with a group of individuals, adverse selection can lead to bad risks driving out good risks. This effect could arise where the insurer initially sets the insurance premium too high for the best risks. Given the high price the best risk group choose not to insure, leaving only those representing poorer risks for the insurer. The difficulty for the insurer is that the premium does not allow for exclusion of the best risk group — with the loss of the best risk group the current premium is set too low to cover the expected costs of the contract. Over time as the level of claims follows the actual longevity of the insured group, the insurer is forced to raise the level of premiums. Again, the better risks in the group choose not to insure at this higher price and so the cycle continues until the good risks are priced out of the market and the insurer faces ruin.
In effect, the insurer faces a trade off between the costs of obtaining better information about individuals and thus pricing insurance contracts properly and the reduced profitability arising from the impact of bad risks driving out good risks when insurance premiums do not properly reflect the risk of the insured group. A regulatory response to this type of problem occurring in the health insurance area has been the use of community rating in the pricing of health insurance.

There may be signalling effects arising from the decision of insurance companies to sort into risk categories. A rational response from low risk applicants is to signal quality in order to support a separating equilibrium and receive lower premiums; from high risk applicants the response is to mix signals in order to keep a pooling equilibrium, whereby the cost of their insurance is spread across a larger group (and thus lower premiums).

The impact of genetic information on the life insurance market is important though current research suggests that the net welfare effect of genetic testing is not clear. For example, Hoy and Polborn (2000), extending the model of Doherty and Thistle (1996), show that the private value of being informed is positive for the individual while the social value of the information could be either positive or negative. Their model includes the impact of genetic testing and it is assumed that there is an incentive for an individual to undertake the test to obtain further information about their health with the knowledge that the insurer does not have access to this information. Essentially there are three groups in the model, high risk, low risk and the uninformed.

Hoy and Polborn focus on the benefits to those in the uninformed group who choose to test, assuming that the current price of insurance is only attractive to high-risk individuals. If the uninformed choose the test and are found to be bad risks, then they can insure, and so they are better off. If they are good risks, then they can choose not to insure. In this partial equilibrium model the uninformed are better off with the availability of the test because they have the option to purchase a contract at the old price if they test positive. There are also spillover effects associated with those who choose not to take the test where the actual risk of this group differs from the average risk for the pool. For example, the spillover effect is positive if the initially uninformed (who are tested and subsequently buy insurance) are lower risk than the existing customers. Hoy and Polborn argue that this source of asymmetric information is not unusual as there is legislation in a number of countries specifically set up to protect the rights of the individual to genetic testing results and to deny the insurance companies control over this information. This debate continues in Australia and is surveyed in Otlowski (2002).

Thus the impact of the introduction of genetic testing is not clear. Hoy and Polborn (2000) argue that, when information is distributed symmetrically between insurers and customers, the introduction of the test is welfare reducing for consumers, assuming that markets stay open (although price may vary) that the benefits arising from the use of genetic testing, including improved medical treatment of these conditions, are ignored. With asymmetric information the net
welfare effects of the test could be positive, negative or a mixed case where those who undertake the test gain and those that choose not to undertake the test lose.

This theoretical work on insurance and asymmetric information helps to understand the implications of genetic testing and highlights the impact of asymmetric information but it tells us little about the actual pricing of life insurance where genetic testing is available to individuals but not to insurers. In the following section we focus on empirical testing. Actuaries have an important role to play in valuing these instruments through statistical modelling and we use the Markov model developed by Macdonald (1997) in analysis of the impact of genetic testing on breakeven insurance premiums. As indicated above, knowledge of the mortality of a group of individuals is critical to the accurate pricing of insurance offered to the members of this group and, given information asymmetry, genetic testing could have a dramatic effect on the pricing of life insurance.

**Actuarial Modelling**

Actuarial research into the financial impact of genetic testing has gained momentum in recent years. MacDonald (1997 and 1999) has published a number of papers advocating the use of multi-state Markov models to explore the impact of uncertainty on traditional life insurance products where an individual has access to information such as genetic testing results but the insurer does not have access to this information. This is particularly important to insurers where the tests provide highly predictive information about mortality.

A thorough assessment of the impact of genetic testing involves consideration of four major factors. The first factor reflects the level of insurance that the applicant might prefer. The level of insurance could vary with the existence of a genetic predisposition to a particular disease. It could also vary with whether the applicant has been genetically tested. A final source of variation lies with whether the applicant has been genetically tested and found not to have a higher probability than normal of contracting a particular disease (negative results). The second factor is the prevalence and predictive accuracy of genetic tests. The third factor is the proportion of those who have genetic tests and who return a positive result indicating that they have a higher probability than normal of contracting a particular disease. The final factor is the extent to which people who receive a positive genetic test for a particular disease have an increased propensity to purchase insurance.

The most significant financial impact of genetic testing is thought to occur for life insurance products such as term insurance and associated riders such as dread disease insurance. Dread disease insurance is a rider that may be added to a contract containing death insurance. This rider provides the insured with a benefit if they incur one of a selection of serious medical conditions listed in the policy.

Genetic testing is more important for term insurance than whole of life insurance because in the case of whole of life insurance the insured is guaranteed payment of the amount insured on death. The only question for whole of life insurers is the timing of the payment. Under a term insurance contract the amount
insured is paid if the insured dies before the term of the contract and so the insurer prices the contract with a view to both the timing of death and the likelihood of death before expiry of the contract. Thus where the insured has a genetic predisposition for higher mortality they are more likely to purchase a term insurance contract because the premium is lower for term insurance contracts than for whole of life contracts. This is because lower risk is ordinarily presented to the insurer for term insurance contracts.

Commonly term insurance is provided for a period of 10 or 20 years. These types of insurance contracts are often called risk-based products. In the Australian setting the majority of the term insurance business is renewed each year, or yearly renewable. These insurance products give the insured the option to renew the insurance contract each year and the insurer is obligated to renew the coverage at the request of the insured as long as there is no material change to the risk presented by the insured. This arrangement provides considerable potential for adverse selection against the insurer and so it is important to model the impact on life insurance contract premiums.

A benchmark Markov model with no genetic test

First, let us consider the case of a customer who purchases life insurance when genetic testing is ignored. This model will be used as the benchmark case for analysing the effects of adverse selection on the profitability of term insurance contracts. Consider a typical individual who purchases insurance cover at age 30 for the first time. This life insurance coverage provides payment of the sum insured, typically $100,000, on the death of the insured individual and the payment is made to the estate of the insured individual. We will assume that this individual has purchased cover for 20 years payable by annual premiums. The insured renews the policy annually by paying a level annual premium for twenty years or until earlier death.

The situation can be illustrated as in Figure 1, which shows transitions between three ‘states’. State 1 is where all people who have not purchased life insurance are situated. If an individual purchases life insurance, they move from State 1 into State 2. This move between states is called a transition and in Figure 1 this transition is labelled transition $t_1$. In this model people who have purchased life insurance, and therefore reside in State 2, can of course die. Death causes them to move to State 3 and, as shown in Figure 1, make transition $t_3$. Individuals who have not purchased life insurance, and therefore reside in State 1, can also die and move to State 3. This movement from the uninsured state (State 1) to the dead state (State 3) is labelled transition $t_2$. If the consumer makes an annual decision whether to renew the contract, the transition probabilities reflect the likelihood of the event (transition) occurring within a particular year for a person of certain age.

In this three-state model, where we ignore the impact of genetic testing, the annual premium paid by an insured individual depends only on two key factors. The first and most significant is the magnitude of transition intensity $t_3$ — the
mortality of insured individuals. In practice these mortality rates (which vary with age) are determined by considering the experience of the particular insurer and also by consulting published Australian mortality tables. The other important factor is the investment income that the insurer is assumed to be able to earn on the premiums paid by the insured to the insurer. The insurer can earn substantial amounts of investment income from the prudent investment of premium income. This is because under term insurance the premiums are paid to the insurer long before any insurance payment is made, if it is ever made, to the estate of the insured individual. The assumed rate of investment income is again determined by reference to the recent investment returns earned by the insurer on the funds that are backing the relevant insurance portfolio. In this analysis we have ignored the impact on premiums charged to consumers of commissions and other expenses that the insurer would ordinarily incur.

**Figure 1: Markov Model for Term Insurance in the Absence of Genetic Testing**

![Markov Model for Term Insurance in the Absence of Genetic Testing](image)

*A Markov model with genetic testing*

We now consider the case where the impact of genetic testing is taken into consideration in the determination of suitable insurance premiums. MacDonald (1997) models individuals as occupying a series of states and making transitions from state to state until they die. The important linkages modelled by MacDonald are identified in Figure 2.
Figure 2: Markov Model for Assessing the Impact of Genetic Testing on Insurer Profitability.

As in the previous diagram, each box in Figure 2 represents a state in which either a consumer or potential consumer of life insurance could be situated. In any interval of time the consumer is able to make a transition along any of the arrows. Each transition has a simple description. Transition t1 occurs when an individual who has not had any genetic testing purchases insurance. Transitions t2 and t3 occur after a genetic test is performed on the consumer. The consumer makes transition t2 if the test result is negative indicating that they do not suffer from the conditions identified in genetic testing. The consumer makes transition t3 if the test result is positive and the genetic tests identify the consumer as suffering from the tested ailments. Transitions t4 and t6 occur when an individual purchases life insurance after testing. While the transition t4 is reserved for those individuals who purchase insurance after returning a negative genetic test, transition t6 is made when purchasing insurance for those individuals who returned a positive...
genetic test. The remaining transitions (t5, t7, t8, t9 and t10) occur on the death of an individual from any of the five other states in the model.

It is clear that the model in Figure 2 is an extension of the model in Figure 1. States 1, 2 and 3 in the model that ignores genetic testing (Figure 1) correspond to states 1, 2 and 6 respectively in the model where genetic testing is considered (Figure 2).

An important feature of this model is that the likelihood of some of the transitions (those other than death, which obviously vary with age) depend only on the state currently occupied by the insured. The model ignores information about past movements between particular states of the model. For example, the probability that an individual who returned a positive genetic test two years ago will buy insurance in the next week is the same as the probability that an individual who has just returned a positive genetic test will purchase insurance in the next week. In Figure 2, this is the same as saying that the chance of moving from State 4 to State 5 is unrelated to the amount of time spent in State 4.

In addition to considering the probabilities of transitions between states, consideration must also be given to the payments made where applicable while residing in states and on the transition between states. In Figure 2, the premiums are paid to the insurer while the insured is in states 2 and 5. This is because when an individual is in state 2 or state 5 the individual has life insurance. On transition from state 2 or state 5 to state 6 (that is on the death of an insured whether or not that individual had returned a positive genetic test) a payment is made to the estate of the insured person. This payment is the amount of life insurance purchased by the insured.

The model aims to determine the impact on insurer profitability of varying the modelled probabilities of transition between particular states. It is of particular interest to understand the impact of adverse selection, reflected by the increased likelihood that individual will purchase insurance if the individual knows that they have a genetic predisposition to higher mortality than average. This is modelled by increasing the probability of making the transition t6 to a multiple, greater than one, of the chance of making transition t5. Another issue of concern to insurers is the level of insurance sought by those who have returned a positive genetic test result compared with those who have returned a negative test result or who have not had a genetic test at all. This can be explored in this model by allowing the insurance amount that the insured chooses to vary. The relevant insurance amount is the amount paid on transition from state 5 to the dead state, and it can be modelled to be double or four times the amount paid on transition from state 2 to the dead state.

**Pricing of Life Insurance Contracts**

To gain some idea of the impact of changes in the level of information asymmetry on the profitability of insurance policies we vary the size of the amount insured and the probability of purchasing insurance for those who have returned a positive genetic test and therefore exhibit higher mortality. We then focus on the break-
even premium for the group of individuals insured. This is the premium charged to all those insured within a particular group regardless of whether a genetic test has been conducted and irrespective of the results of the test where it is undertaken. The model has been run using Australian mortality data based on the IA95-97 Life Table. This life table is produced by the Institute of Actuaries of Australia Mortality Committee and is based on the mortality experience of the major life insurers operating in Australia during the years 1995 to 1997. The interest rate is assumed to be 5 per cent per annum compounding continuously in the model and expenses have been ignored in this analysis.

The projected increase in mortality resulting from a positive genetic test clearly needs to be estimated for inclusion in the model. This increase is represented by the difference between the probabilities of making the transitions t9 and t10 and the other transitions to the dead state, namely t5, t7 and t8. For the purposes of this analysis a 50 per cent increase in mortality has been assumed for those who are insured and who have returned a positive genetic test. An extreme value of 0.90 and a less extreme value of 0.30 have been used for the conditional probability that an individual, given that they have returned a positive genetic test, will buy insurance.

A summary table of the transition intensities is shown below in Table 1.

**Table 1: Transition Intensities used in the Term Insurance Analysis in the presence of Genetic Testing**

<table>
<thead>
<tr>
<th>Transition Description</th>
<th>Transition Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition t1</td>
<td>0.50</td>
</tr>
<tr>
<td>Transition t2</td>
<td>0.20</td>
</tr>
<tr>
<td>Transition t3</td>
<td>0.05</td>
</tr>
<tr>
<td>Transition t4</td>
<td>0.05</td>
</tr>
<tr>
<td>Transition t6</td>
<td>0.30 and 0.90</td>
</tr>
<tr>
<td>Transitions t5, t7, t8 at age 30</td>
<td>0.00113</td>
</tr>
<tr>
<td>Transitions t5, t7, t8 at age 45</td>
<td>0.00139</td>
</tr>
<tr>
<td>Transitions t5, t7, t8 at age 60</td>
<td>0.00568</td>
</tr>
<tr>
<td>Transitions t9 and t10 at age 30</td>
<td>0.00170</td>
</tr>
<tr>
<td>Transitions t9 and t10 at age 45</td>
<td>0.00209</td>
</tr>
<tr>
<td>Transitions t9 and t10 at age 60</td>
<td>0.00852</td>
</tr>
</tbody>
</table>
Once transition probabilities are assigned it is necessary to select the amount that individuals would choose to be insured for. With these inputs identified, the statistical model generates the level of premium required for the insurer to break even. This model provides considerable flexibility in helping insurers to make informed decisions about the level of premiums that should be charged. The model enables the insurer to vary transition probabilities as well as the sum insured and then consider the impact of these choices on the insurer’s break even level of premiums.

The critical factor for an insurer is the impact of genetic testing on the profitability of insurance contracts where the insured is aware of the impact of genetic test results though the insurer is not. In Table 2 we report the results of varying the age, term of the insurance policy and the amount insured given that the individual has returned a positive genetic test. The table provides the increased premium rates required for conventional term insurance policies sold to people aged 30 or 40 and who hold life insurance contracts for terms of either 10 or 20 years. For comparison the table reports the increases in required premiums for values of t6 equal to both 0.90 and, in brackets, for t6 equal to 0.30. This shows how sensitive the required premium increases are to the extent of the modelled adverse selection. From Table 2 it is clear that the most significant premium increases occur when those insured, who have returned a positive genetic test, request higher amounts of life insurance coverage. This increase in premiums is required because large insurance payments will be paid more often as the probability of death for individuals who returned a positive genetic test is higher than for other individuals on average.

Table 2: Premium Rate Increases Required in The Presence of Adverse Selection

<table>
<thead>
<tr>
<th>Sum Insured of Positive Test</th>
<th>Age 30 Term 10 yrs</th>
<th>Age 30 Term 20 yrs</th>
<th>Age 40 Term 10 yrs</th>
<th>Age 40 Term 20 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>4.5% (3.0%)</td>
<td>2.7% (2.0%)</td>
<td>4.5% (2.9%)</td>
<td>2.7% (1.6%)</td>
</tr>
<tr>
<td>2 * Normal</td>
<td>11.0% (6.8%)</td>
<td>7.2% (5.7%)</td>
<td>11.1% (6.9%)</td>
<td>7.3% (5.4%)</td>
</tr>
<tr>
<td>4 * Normal</td>
<td>22.3% (14.0%)</td>
<td>17.6% (13.1%)</td>
<td>22.5% (14.3%)</td>
<td>17.2% (13.6%)</td>
</tr>
</tbody>
</table>

Note: Values in brackets show the required increase in premium rates when t6, the transition intensity for those who have returned a positive genetic test, is 0.30. The values not in brackets show the required increase in premium rates when t6 is 0.90.
As those with a positive genetic test who choose to buy insurance increase the amount insured, the break-even premium increases markedly regardless of the age of the insured or the term of the insurance contract. For example, if those insured with a positive genetic test choose a normal level of insurance then the adjustment to the overall break even premium for the insurer with the introduction of genetic testing is fairly small, either 2.7 per cent or 4.5 per cent in Table 2. In contrast where the amount insured is quadrupled by those insured who have received a positive genetic test, the overall break even premium increases by as much as 22.5 per cent. Further, increases in the term of the life insurance contract tend to reduce the impact on the break-even premium. For example, given that the insured is aged 30, we note that the required percentage increase in break-even premium reduces from 22.3 per cent to 17.6 per cent with an increase in term from 10 years to 20 years. Thus the impact of genetic testing on the pricing of life insurance can be substantial where the insurer does not have access to the results of the genetic tests.

Conclusions on Pricing of Life Insurance Contracts

These examples show that genetic testing is capable of changing the way the financial services industry operates. In particular, risk-based insurance products are highly vulnerable to information asymmetry. The implication from the theoretical literature is that without a solution to the information problem, we can get a rational response from insurance companies to raise premiums that may accentuate adverse selection effects as more of the low risk applicants withdraw from the insurance market.

This paper has brought together some of the work by both economists and actuaries in an Australian context and includes a simple modelling exercise designed to highlight the impact of information asymmetry on break-even life insurance premiums. The main message from the paper is that while genetic testing presents a further form of information asymmetry for the insurer, it only generates significant financial implications when

- those individuals who have returned a positive genetic test not only have an increased likelihood of purchasing insurance but also
- request significantly higher amounts of insurance coverage.

A clear policy recommendation arising from this work is that insurers be allowed the right to require access to genetic testing information under certain circumstances — a particular circumstance addressed in this paper is where the applicant requests a sum insured well in excess of the level ordinarily sought by potential purchasers of life insurance. In this case it is critical to the profitability and solvency of insurance companies that they have access to genetic test results. One fear might be that potential customers, who are unable to get high amounts of life insurance coverage with one insurer, might purchase standard amounts of life
insurance coverage from a large number of different insurers and hence create serious problems for the life insurance industry. Contracts of life insurance require applicants for life insurance to disclose whether they already have life insurance with any other insurers and also whether they have been rejected for life insurance cover in the past. This means that, apart from cases of fraud, the insurance industry can stop people entering into multiple life insurance contracts.

The key message of this paper indicates that failure to address this information asymmetry could prove costly to the life insurance industry and could also threaten the viability of a comprehensive, well functioning insurance market.

References


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Adverse Selection, Genetic Testing and Life Insurance — Lessons from Health Insurance in Australia

James Butler

The use of predictive genetic tests in setting premiums for life insurance is a controversial issue. Critics argue inter alia that this is ‘discriminatory’, that it will lead to the creation of a ‘genetic underclass’, and that it can lead to individuals being coerced to obtain information that they might not otherwise wish to have. Advocates argue that it is necessary in order to avoid creating serious asymmetric information in the insurance industry with consequent adverse selection.

This paper is concerned with the adverse selection argument. Is there any empirical support for the concern that prohibiting the use of genetic test results in life insurance will lead to an adverse selection problem? The main argument of this paper is that there is indeed empirical support for that concern. The empirical support comes from a consideration of Australia’s experience with private health insurance, an insurance market where community rating regulations precluded the use of any information on health risk in setting premiums for many years. It is argued that these arrangements have given rise to a serious problem of regulation-induced adverse selection in private health insurance, resulting in a long-term downward spiral in the proportion of the population covered by private health insurance. It is concluded that prohibiting the use of genetic test results in life insurance will expose the industry to the same problem that has characterised private health insurance in Australia.

Given the theme of the paper, a good portion of it (the next three sections) is devoted to substantiating the proposition that adverse selection has been, and continues to be, a serious problem in private health insurance in Australia. The next section provides some background information on the private health insurance industry, the regulations under which it operates, and the proportion of the population covered over the last 25 years. The following section summarises the important policy changes that have taken place with respect to private health insurance over the last five years and their effect on coverage. The fourth section considers community rating and consequent adverse selection in private health insurance, arguing that this has been the fundamental cause of the long-term decline in coverage. Further, it is argued that the recent policy initiatives have failed to address this cause, and that recent evidence points to a continuing problem of declining coverage associated with adverse selection. The fifth section

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then draws out the implications of this analysis for the role (or lack thereof) of genetic testing in health insurance and life insurance. The paper closes with a summary of the main conclusions.

**Private Health Insurance**

Private health insurance has been an important feature of health care financing arrangements in Australia for many years, albeit of lesser importance since the introduction of the compulsory, tax-financed, publicly provided national health insurance scheme (Medicare) in 1984. In 2000-01, expenditures on health services by private health insurers accounted for 7.2 per cent of total health expenditure (Australian Institute of Health and Welfare, 2002:Tables 12 and 19).

Policies are of two broad types — hospital and ancillary. Hospital policies provide cover against the cost of hospital services and a portion of the costs of medical services associated with an inpatient admission as a private patient in a public or private hospital. Ancillary policies cover a range of other health care items such as services provided by allied health professionals, dental services and optical items. Of the total benefits paid by private health insurers, around 70 per cent are hospital benefits and the remainder are ancillary benefits. Within ancillary benefits, dental services and optical items (spectacles) together account for nearly 70 per cent of total benefits paid (Private Health Insurance Administration Council, 2002).

The private health insurance industry in Australia is heavily regulated. A detailed discussion of the regulatory environment has been provided by the Industry Commission as part of its review of private health insurance in 1997 (Industry Commission, 1997:Ch.3). Of most importance to the present paper are the community rating regulations and associated reinsurance arrangements, and the ‘common carrier’ obligation imposed on private health insurers. The key features of these regulations as they pertained until recently were summarised by the Industry Commission (1997:33) as follows:

Under the National Health Act, funds must accept all applicants, within certain membership categories. In setting premiums, or paying benefits, funds cannot discriminate (in relation to a contributor or his/her dependants) on the basis of health status, age, race, sex, sexuality, use of hospital or medical services, or general claiming history.

The community rating requirement applies at the level of the State, so interstate variation in premiums is possible. For many years, the requirement was also interpreted to mean that a uniform family premium should be charged regardless of the numbers of persons in the family unit. The practical implementation of this interpretation resulted in premiums for family policies being double those for single policies.

The interpretation of the community rating requirement was changed with effect from 1 October 1996. The two membership categories (single, married)
were replaced by four categories (single, couple, single parent family, and family). The requirement that the family premium be twice the single premium was removed, and no relativities between premiums for the four categories of membership are now specified. The requirement that all tables be offered to all categories of membership has been abolished.

The introduction of lifetime community rating in 2000 also resulted in a partial relaxation of the community rating requirements, allowing private health insurers to introduce some degree of risk discrimination in setting premiums according to the age at entry into the fund and the number of years of continuous membership of any fund. This policy change will be discussed further below.

Community rating is underpinned by reinsurance arrangements that apply to the hospital claims of people aged 65 years and over, and those with more than 35 days of hospitalisation in any one year. These arrangements redistribute funds between insurers in favour of those with above average claims for people in the specified categories. As will be argued more fully later in this paper, community rating has resulted in private health funds being left with an increasingly adverse selection of risks. The argument is that younger, healthier people have been dropping their cover relative to older persons, so that older persons are accounting for an increasing proportion of those insured. In a bizarre twist, the reinsurance arrangements in place since 1989 effectively over-compensated insurers with above average claims from the elderly and chronically ill, thus providing a financial incentive for funds to recruit from these groups even though, from an industry perspective, this exacerbated the adverse selection problem. This perverse incentive was removed on 1 January 1995 (Industry Commission 1997:Appendix D).

The percentage of the Australian population covered by private health insurance has been characterised by a declining trend over the last 25 years (see Figure 1). This trend was evident even prior to the introduction of the national health insurance scheme Medicare in 1984. Over the four year period from December 1976 to December 1980, coverage dropped from 66.0 to 55.8 per cent, a drop of 10 percentage points or an average of 2.5 percentage points per year. The trend was interrupted by the introduction of tax subsidies for private health insurance in 1981, but resumed again in 1983. Not surprisingly, the introduction of Medicare in 1984 caused an acceleration in the decline in coverage in that year but after this effect had passed through, the long-term decline resumed. A series of policy initiatives commencing in 1997 and culminating with the introduction of lifetime community rating in 2000 caused a major increase in coverage in 2000 but a declining trend has again emerged since then.

**Recent Policy Changes**

Commencing in 1997, a number of policy changes were introduced in an attempt to counter the long-term decline in private health insurance coverage. The Private Health Insurance Incentives Scheme (PHIIS) came into effect on 1 July 1997 and provided subsidies for low-income individuals and families who purchased private
health insurance. At the same time, a financial penalty in the form of a Medicare levy surcharge of one per cent of taxable income was introduced for high-income individuals and families who did not purchase private health insurance.

**Figure 1: Proportion of the Population Covered by a Hospital Insurance Table with a Private Health Fund, Australia,**

As is evident from Figure 1, the PHIIS had little effect in terms of arresting the long-term decline in the proportion of the Australian population covered by private health insurance. This led to an enhancement of the subsidy component of the scheme with effect from 1 January 1999. The original subsidies, which were available only to low income individuals and families, were replaced by a rebate equal to 30 per cent of the premium for any eligible policy available to all who purchased private health insurance. This policy does appear to have arrested the decline, with an increase in coverage occurring through 1999.

On 29 September 1999, a third policy initiative — lifetime community rating — was announced with effect from 1 July 2000. Following implementation, this policy resulted in an increase in the base premium of two per cent for each year.
that the age at first entry into private health insurance exceeded 30 years, that is, an age penalty was applied to the premium for those aged over 30 years and joining a private health fund for the first time. The age penalty was capped at 70 per cent which is the penalty applying to a person who first joins a fund at age 65 years. A more detailed discussion of the lifetime community rating policy and the other policy initiatives introduced since 1997 can be found in Butler (2002).

The prospect of paying premium increases of up to 70 per cent if not privately insured by 1 July 2000 clearly had a major effect on private health insurance coverage which grew rapidly over the first half of 2000 and subsequently peaked in the September quarter 2000 (see Figure 1). The continued growth in membership into the September quarter reflects an extension of the effect date of lifetime community rating from 1 July 2000 to 15 July 2000 consequent to the large increase in demand for coverage. As membership statistics are published quarterly, the full impact of the policy must be observed from the September quarter 2000 statistics.

The 30 per cent rebate for private health insurance premiums coupled with lifetime community rating resulted in an increase in private health insurance coverage from 30.1 per cent in the December quarter 1998 to 45.8 per cent in the September quarter 2000 — an increase of 15.7 percentage points or a 52 per cent increase in coverage. Several estimates of the quantitative impact of the 30 per cent rebate component of these two policies on coverage have appeared. Butler (2002) argues that most of the increase in coverage from the December quarter 1998 to the March 2000 quarter (1.2 percentage points, or a 7 per cent increase in coverage) — and also, perhaps, some of the increase which occurred even after March 2000 — can be attributed to the 30 per cent rebate. While lifetime community rating was announced in September 1999, the main promotional activities concerning the policy were concentrated in the March and June quarters 2000. Frech, Hopkins and MacDonald (2002) argue that the effect of the policy should be confined to 1999 but that the increase in coverage on account of the 30 per cent rebate should be calculated with respect to what coverage would have been at the end of 1999 in the absence of the policy (as opposed to what coverage actually was at the end of 1998). On this basis, they estimate that the 30 per cent rebate gave rise to an 11 per cent increase in coverage. Finally, in response to a question in Parliament regarding the estimated effect of the rebate, the Prime Minister indicated that coverage was expected to increase to 33 per cent (Commonwealth of Australia, 1998:624). This suggests a 2.9 percentage point increase, or a 9.6 per cent increase, in coverage.

Taken together, these estimates suggest that the 30 per cent rebate gave rise to an increase in coverage of between 7 per cent and 11 per cent. Given the overall increase in coverage of 52 per cent, this implies that lifetime community rating was responsible for at least a 40 per cent increase in coverage and hence accounted for the bulk of the increase in coverage between December 1998 and September 2000.

These estimates of the relative quantitative effects of the two policies are all based on the assumption that such effects are independent and additive, that is,
that there is no interaction effect between the policies. It is possible that such an interaction exists, in which case the effect of lifetime community rating may also depend upon the level of the rebate (subsidy) available. However, it is not possible to produce empirical evidence of this based upon observed buying behaviour, as a state of the world in which lifetime community rating exists in the absence of a subsidy has not been observed.

**Community Rating and Adverse Selection**

In the context of the present paper, the importance of the long-term decline in private health insurance coverage, and the policies introduced since 1997 to ameliorate that decline, lies in the extent to which adverse selection has been a cause of the decline and the extent to which subsequent policies have addressed the causes of that adverse selection. Community rating can lead to regulation-induced adverse selection because it precludes health insurers from discriminating on the basis of health risk. A uniform premium for any given policy will make that policy more attractive to high-risk individuals and less attractive to low-risk individuals. Low risk individuals therefore have an incentive not to purchase the policy (or to stop purchasing the policy if they are presently purchasing it). The converse applies to high-risk individuals. The resulting increase in the average level of risk in the insured pool leads to an increase in the community-rated premium, making the policy even more unattractive to low risk individuals. In this way, an adverse selection spiral can develop characterised by rising premiums and declining coverage.

Using age as a proxy for health risk, there is no doubt that the risk composition of the privately insured hospital pool shifted towards higher risk persons during the 1990s. In the September quarter 1989, 9.9 per cent of those covered by a hospital table were aged 65 years or over. This proportion increased steadily during the 1990s, reaching 14.9 per cent in the December quarter 1998 (PHIAC A Reports, various years). There is also no doubt that this shift in the age composition reflects more than just ‘pure ageing’ of the insured pool. Using population estimates from the Australian Bureau of Statistics (ABS), at June 1989 the proportion of the total population aged 65+ was 11.0 per cent. By June 1998 this had increased to only 12.2 per cent, indicating that the shift in the age composition of the insured pool towards persons aged 65+ years was much greater than the corresponding shift in the age distribution of the underlying population.

The argument that community rating provided strong economic incentives for this shift in risk distribution is supported by the age distribution of hospital benefits paid under private health insurance. Figure 2 shows the per capita hospital benefits paid in 2001 by five-year age group and sex, illustrating clearly the positive gradient with age for both sexes. For persons under age 50, the per capita benefits are for the most part well under $500 per year. For persons aged 70 and over, the benefits are well over $1,500 per year. Community rating, at least prior to the introduction of lifetime community rating in 2000, resulted in premiums that were uniform with respect to age. Such a premium structure
provides a powerful economic incentive for older persons to purchase private health insurance while at the same time providing an equally powerful economic disincentive for younger persons to purchase cover.

Lifetime community rating introduced an age gradient into private health insurance premiums for those first joining a fund after the implementation date in July 2000. The importance of this policy is that, to the extent that age is a proxy for health risk, it introduced a degree of risk discrimination into premiums for private health insurance. The success of this policy in stimulating uptake of private health insurance was noted above. This early success suggested that the policy may have addressed the problem of a complete absence of risk rating in premium setting and the attendant problem of adverse selection. Many of those who purchased private health insurance in the run-up to the implementation of lifetime community rating were in younger age groups, providing a much needed influx of lower risk individuals into the insured pool. Between December 1999 and September 2000, the average age of those covered by a hospital table dropped from 39.4 years to 37.2 years (PHIAC, 2002).

**Figure 2: Hospital Benefits per Person covered by Private Health Insurance, by Age and Sex, Australia 2001**

Source: PHIAC (2002)
However, while lifetime community rating did introduce some degree of risk discrimination into premiums for private health insurance, the degree of risk discrimination so introduced was much less than complete. The highest premium for any given policy under lifetime community rating is 1.7 times the lowest premium, given the two per cent per year age penalty applying between ages 30 and 65. Using benefits data for 2001 as shown in Figure 2, the per capita benefits for persons aged 65+ years in that year were $460 compared with $36 for persons up to age 30 years, that is, the average per capita benefits for those aged 65+ years were 12.8 times greater than for those aged 0-29 years. Hence, despite the introduction of lifetime community rating, there remains considerable cross-subsidisation between younger and older individuals in the privately insured pool.

Given this continued cross-subsidisation, it would not be surprising to find that adverse selection again becomes a problem for the industry in the future. Indeed, in the December quarter 2000, the first full quarter following the implementation of lifetime community rating, the total number of persons covered by private health insurance began to decline again. The decline in numbers was concentrated in persons aged less than 65 years, while the number of persons aged 65 years and over actually grew.

Table 1: Percentage Changes in Numbers Covered by a Hospital Insurance table with a Private Health Fund, by Age, Australia, December 2000 to June 2002

<table>
<thead>
<tr>
<th>Percentage change over preceding quarter</th>
<th>&lt;65</th>
<th>65+</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>December quarter 2000</td>
<td>-0.71</td>
<td>1.04</td>
<td>-0.53</td>
</tr>
<tr>
<td>March quarter 2001</td>
<td>-0.41</td>
<td>1.00</td>
<td>-0.26</td>
</tr>
<tr>
<td>June quarter 2001</td>
<td>-0.18</td>
<td>0.67</td>
<td>-0.09</td>
</tr>
<tr>
<td>September quarter 2001</td>
<td>0.13</td>
<td>1.14</td>
<td>0.24</td>
</tr>
<tr>
<td>December quarter 2001</td>
<td>0.16</td>
<td>1.39</td>
<td>0.30</td>
</tr>
<tr>
<td>March quarter 2002</td>
<td>-0.29</td>
<td>0.84</td>
<td>-0.16</td>
</tr>
<tr>
<td>June quarter 2002</td>
<td>-0.57</td>
<td>0.41</td>
<td>-0.46</td>
</tr>
</tbody>
</table>

Percentage change — June quarter 2002 over December quarter 2000

-1.86  6.68  -0.96

Source: PHIAC, *PHIAC A Reports*, September quarter 2000 to June Quarter 2002

While it was possible that at least some of this change might have been attributable to new members not making the first payments on their policies when they fell due (Butler, 2002), the overall decline in membership and the change in the age mix of the insured pool have now continued well beyond the point where new members who failed to make their first payment would account for the
observed changes. Table 1 shows the percentage changes in numbers covered by a hospital table over the period December 2000 to June 2002. The trend is clear — over this 18-month period the number of persons aged less than 65 years covered by a hospital table fell by 1.9 per cent while the number aged 65+ years grew by 6.7 per cent. An adverse selection spiral appears to be re-emerging.

The arguments developed here regarding community rating and adverse selection in private health insurance have been based on the use of age as a proxy for health status. It is certainly the case that average per capita health benefits increase with age, as shown in Figure 2 above. However, reliance on a comparison of mean per capita benefits between age groups may well be masking considerable variation in benefits per person within age groups. For example, Van de Ven and Ellis (2000:759) point out that ‘risk-adjusted premiums can easily differ by a factor of ten or more for demographic factors such as age, and factors of 100 or more once health status is also taken into account’. As such, reliance on a comparison of mean benefits per capita between age groups may well lead to an underestimate of the effects of adverse selection in private health insurance, particularly with respect to its effect on premium increases. This is because, within older age groups, it is likely that those with private health insurance are in the upper end of the distribution of health expenditures within that age group, while in younger age groups it is likely that those dropping private health cover are at the lower end of the distribution of health expenditures within that age group. If this is the case (data are not publicly available to ascertain this empirically) then the differences in benefits per capita between those who retain private health insurance and those who do not is likely to be much larger than the comparison of means suggests, and the consequent impact of the change in the composition of the insured group on insurance premiums much larger also.

Using age as a proxy for health status, the Industry Commission estimated that adverse selection explained around 14 per cent to 19 per cent of the real increase in hospital insurance benefits per person covered over a five or six year period in the 1990s (Industry Commission, 1997: Tables 7.18, 7.19). If the above argument is correct — that differences in mean benefits between age groups underestimate the true differences between those who drop cover and those who retain cover — then the Commission’s estimates of the effect of adverse selection may be a serious underestimate of its true impact on growth in premiums.

This section has argued that the available empirical evidence on the demand for private health insurance supports the hypothesis that regulation-induced adverse selection associated with community rating explains the long-term decline in coverage that has been observed. Two counter arguments will now be considered. The first, which can be more easily dismissed, is that the long-term decline in coverage is intrinsic to a system characterised by publicly provided national health insurance. According to this argument, the mere existence of Medicare in Australia makes private health insurance a less attractive option. However, while it can certainly be expected that the introduction of Medicare would reduce private health insurance coverage, this would likely be a ‘once off’ effect as individuals dropped private cover in response to the new system. Such
an effect was apparent upon the introduction of Medicare in 1984 (see Figure 1) and is akin to the ‘once off’ effect of the introduction of the GST on the prices of goods and services. It is much more difficult to sustain an argument that the introduction of Medicare has led to a continuing decline in private health insurance coverage. In any event, community rating regulations were introduced, and the long-term decline in coverage was evident, well before the introduction of Medicare, as attested to by Figure 1.

The second argument is that insurers can subvert community rating regulations by offering a variety of plans that differ according to the illnesses and/or health services covered. Plans that exclude services used predominantly by older individuals, such as hip replacements and coronary artery bypass grafts, can be offered at lower premiums. Such plans have more appeal to younger age groups at lower risk of demanding these services. In this way, insurers can induce consumers to self-select into plans that reflect their risk and effectively counter the adverse selection associated with community rating. The possibility that screening of risks through plan differentiation may lead to a separating equilibrium in insurance markets has been considered by Stiglitz (1977).

This argument has been put in the Australian context by Vaithianathan (2001). She compares the Australian and New Zealand private health insurance markets, the latter being of interest because premiums are not community rated. She finds that the largest private health fund in Australia (Medibank Private) offered 21 plans compared to 11 plans offered by the largest private health insurer in New Zealand (Southern Cross). On this basis, she concludes: ‘The diversity of plans offered by Medibank provides casual empirical evidence that screening may occur’ (Vaithianathan, 2001:11).

While this argument is clear in principle, there is a number of factors in the Australian setting that suggest risk rating through plan selection is not widespread and that it has not countered adverse selection associated with community rating to a large degree. First, the number of plans on offer by Australian private health insurers is not a reliable indicator of the extent of screening through plan selection because, under the current regulatory regime, it is very difficult for funds to close plans while those plans retain paying members. The regulations, as implemented by the Commonwealth Department of Health and Ageing and PHIAC under the National Health Act 1953, prohibit funds from coercing members out of some plans and into others. Consequently, any growth in plan diversity is, at least in part, an artifact of the regulatory regime.

A second factor relates to the regulatory regime as it applies to the approval of new plans. Funds cannot introduce new plans without the approval of the regulators, and the regulators monitor closely any proposed exclusions of benefits from a plan. In some areas, for example, psychiatric care, there is universal prohibition of plans that exclude care for particular illnesses or exclude particular services. Hence the extent to which risk rating can be achieved through a proliferation of separating plans is limited by regulation. While some liberalisation of the regulations governing plans did take place in the mid-1990s, thereby providing insurers with a (limited) increase in scope for circumventing the
community rating regulations, the regulators have maintained considerable control over the funds’ ability to create and extinguish plans.

Finally, if risk rating through plan selection has tended to curtail adverse selection, the effect appears to have been small and certainly insufficient to completely offset it. Notwithstanding the liberalisation of some regulations in 1995 and the introduction of the PHIIS in 1997, the decline in coverage continued unabated through to the end of 1998 (see Figure 1). Further, following the ‘once off’ announcement effect of the introduction of lifetime community rating, the long-term downward trend in coverage has resumed. This is consistent with the hypothesis that adverse selection is continuing to occur.

The re-emergence of an adverse selection spiral in private health insurance is particularly serious when considered alongside the sizeable direct expenditures and tax expenditures involved in subsidising private health insurance. The sequencing of policy changes with respect to private health insurance over the last five years has resulted in such expenditures now approaching $3,000 million (Butler, 2002). If an adverse selection spiral re-emerges with membership declining at the same rate as over the period 1989 to 1998 then, as several analysts have estimated, coverage will return to 1998 levels in around 10 years time (Frech, Hopkins and MacDonald, 2002; Quinn, 2002). In short, the policy changes will have failed to achieve a durable increase in private health insurance coverage. If this scenario does eventuate, as now seems increasingly likely, the cause will be the failure of those policy changes to address the underlying adverse selection dynamic associated with community rating of private health insurance premiums.

Genetic Testing and Insurance

Genetic testing is increasingly being employed in both health and non-health applications. Non-health applications include forensic genetics, paternity testing and proving family relationships between visa applicants and their sponsors for immigration purposes. Most of the public debate surrounding genetic testing, however, has revolved around health applications. These applications fall into two categories — diagnostic and predictive genetic testing. Diagnostic testing refers to the use of genetic tests to confirm or refute a diagnosis in a person who already has symptoms of disease. Predictive genetic testing, or genetic screening, involves the use of genetic tests in asymptomatic individuals to provide further information on their risk of developing genetically related disorders in the future. Predictive testing falls into four categories:

- heterozygote screening — to determine carriers of specific disorders in otherwise healthy populations (for example, Tay-Sachs disease in Ashkenazic Jews) to inform reproductive decisions (when both partners are carriers, their offspring have a higher risk of being affected);
- prenatal diagnosis — to determine the risk of a foetus or embryo developing genetically related diseases;
newborn screening — to enable therapy to be initiated early enough to prevent severe complications of genetically related disorders; and

- presymptomatic genetic screening — to determine the risk of genetically related disease in persons with a family history of the disorder (for example, breast cancer).

Predictive genetic testing, and in particular presymptomatic genetic screening, has created much debate because of its potential to increase discrimination in employment and insurance. This kind of screening has the potential to provide more accurate information than is currently provided by family history on an individual’s predisposition to disease. The number of diseases known to have a genetic component is growing. Some authors now assert that ‘most diseases probably have some genetic component, the extent of which varies’ (Beers and Berkow, 1999:2470). As an illustration of this variation consider two diseases — Huntington’s disease and breast cancer. Huntington’s disease is an hereditary disease with full penetrance in those carrying the genetic mutation (that is, the probability of developing the disease conditioned on being a mutation carrier is 100 per cent). In simple terms, all Huntington’s disease is attributable to a genetic mutation and all who have that genetic mutation will develop the disease. Breast cancer has a genetic component but, on the current state of knowledge, most cases of breast cancer are not genetic in origin — mutations on the BRCA1 and BRCA2 genes explain about 1-2 per cent of all breast cancer while all inherited factors might explain 5-15 per cent of all breast cancers. However, the lifetime risk of developing breast cancer with a BRCA1 or BRCA2 mutation is 80 per cent (National Breast Cancer Centre, 1997).

While the proportion of individuals with genetic mutations actually developing disease varies across diseases, it is often less than 100 per cent. Nevertheless, such individuals usually have an elevated risk of developing the disease compared with those who do not carry the mutation. Genetic testing therefore has the potential to allow more informed sorting of individuals into risk classes for disease. Associated with this is the potential for insurers to sharpen the degree of risk discrimination in setting premiums for insurance against morbidity and mortality risks (health, life and disability insurance being the main areas affected). ‘Insurance companies therefore have every reason to wish disclosure of existing information on genetic tests that is accurate, clinically valid and relevant to the cover/product applied for’ (Organisation for Economic Cooperation and Development, 2001:52).

Preventing insurance companies from relying upon the results of genetic tests in setting premiums creates an asymmetric information problem leading to adverse selection. If individuals are allowed to conceal the results of genetic tests from insurers, then those with genetic defects will have a strong economic incentive both to purchase insurance if they did not previously do so, and to purchase larger quantities of insurance, at premiums that are underpriced relative to actuarially fair premiums. Subramanian et al (1999) have conducted simulations of the cost of adverse selection in life insurance if the results from genetic tests for breast and
ovarian cancer could not be used in setting premiums. They found that an important determinant of the cost of adverse selection is the extent to which those who test positive for a genetic defect purchase additional cover. Their results lend support to a policy of restricting the value of cover that can be purchased without having to disclose the results of genetic tests. The authors also explore the cost of adverse selection where life insurers are prohibited from using family history information as well as genetic test information. Under these circumstances, the cost of adverse selection is considerably higher.

In the Australian context, it might be argued that the issue of genetic testing will not be important for private health insurance as the industry is already subject to mandatory community rating. This is not so. Genetic testing can be expected to exacerbate the regulation-induced adverse selection that already characterises the industry by improving the ability of consumers to discern the risk classification to which they belong and make their health insurance purchase decision accordingly. This has been borne out in some recent simulations of the effect of genetic testing on private health insurance in Australia by Manners (2002).

With regard to life insurance, the experience of private health insurance in Australia indicates that adverse selection can have serious long-term implications for the viability of insurers. Community rating regulations, which precluded risk discrimination in private health insurance premiums for many years, provide a natural experiment on the effect of adverse selection on the insurance industry. Against this, it might be argued that the regulations governing private health insurance have given rise to a particularly severe form of adverse selection that would not characterise the life insurance industry if it were prohibited from using the results of genetic tests in setting life insurance premiums. There is some merit in this argument. At present, the proportion of disease that is attributable to identified genetic defects is relatively small so that adverse selection would be confined to a small subset of the population with life insurance.

Countering this is the capacity of individuals to purchase large amounts of life insurance consequent to an adverse genetic test result. In contrast to health insurance where health care costs impose a ‘natural limit’ on the value of claims that can be lodged, there is no such limit on the value of life insurance that can be purchased by an individual. Further, again in contrast to health insurance, individuals can increase the quantity of life insurance purchased by buying multiple life insurance policies thus precluding the use of price-quantity contracts (or non-linear pricing) to counter adverse selection (Hoy and Polborn, 2000). Thus even though the subset of the insured population giving rise to adverse selection in life insurance may be relatively small, if they have a propensity to purchase large quantities of life insurance then the impact of adverse selection may be considerable. This was shown in the simulations by Subramanian et al (1999) mentioned above. Recognition of this problem has led some countries to place caps on the amount of insurance that can be purchased before triggering a requirement on the part of those insured to disclose the results of genetic tests. For example, in the UK an agreement between the government and the
Association of British Insurers (ABI) has resulted in a five-year moratorium on the use of genetic test results for life insurance up to £500,000 and for critical illness, income protection and long-term care insurance up to £300,000 (information obtained from the ABI website: http://www.abi.org.uk). Even for cover in excess of these amounts, only the results of relevant genetic tests already undertaken will need to be disclosed, that is, the industry will not ask for tests to be undertaken before writing cover for these amounts. ‘Relevant’ genetic tests have been determined by the Genetics and Insurance Committee.

Another difficulty with the argument that adverse selection in life insurance is confined to a relatively small subset of the insured population is that this subset may well not continue to be small in the future. It is anticipated that the proportion of disease attributable to genetic defects will grow in the future following the complete mapping of the human genome. The burden of genetically related disease depends upon the establishment of a relationship between a genetic defect and a disease, the frequency of that genetic defect in the population, the penetrance of the defect (the probability of developing the disease given the presence of the defect) and the course of the disease itself (Macdonald, 2003). As genetic epidemiology develops and further research on each of these factors is undertaken, the proportion of the disease burden attributable to genetic defects can be expected to increase. The severity of the adverse selection problem can be expected to grow accordingly.

If life insurers were prohibited from using genetic test results in premium setting, could they not separate risks by offering different life insurance policies with different exclusions, thereby encouraging self-selection of low risks into restricted plans? For example, a life insurance policy which excludes death from a range of genetically related causes might be offered at a lower premium. This argument was considered earlier in this paper with respect to private health insurance in Australia. In the absence of regulations precluding such behaviour, life insurers could attempt to circumvent the prohibition on the use of genetic test information through plan selection. However, drawing on the lessons from private health insurance, it seems likely that the regulators would move to limit the ability of life insurers to engage in plan selection. If the regulators allowed insurers to circumvent the prohibition by plan selection thereby resulting in higher risks paying higher premiums anyway, what is the rationale for prohibition in the first place?

Allowing life insurers to use genetic test results in premium setting raises the possibility that another insurance market will develop to provide cover against the results of genetic tests, that is, one might be able to purchase insurance against the financial consequences of having a genetic mutation. There are two difficulties with the development of such insurance, however. First, the insurer would need to be certain that the individual has not already been tested and informed of the result. In practice, this could be difficult to enforce. Second, even if this were enforceable, there is a positive correlation between having a family history of disease and being a mutation carrier. Depending upon the strength of this correlation, insurers would then be charging higher premiums to those at higher
risk of being a mutation carrier. Prohibiting insurers from risk discriminating in this way would create an adverse selection problem in the market for genetic test result insurance.

In Australia at present, life insurers are not prohibited from using genetic test information in underwriting decisions. However, the Investment and Financial Services Association (IFSA) has adopted a Standard on genetic testing that specifies, *inter alia*, the following: insurers will not initiate any genetic tests on applicants for insurance (clause 10.1); insurers may request that all existing genetic test results be made available to the insurer for the purposes of classifying the risk (clause 10.2); and insurers will not use genetic tests as the basis of ‘preferred risk underwriting’ (that is, offering individuals insurance at a lower than standard premium rate) (clause 10.3) (IFSA, 2002). This Standard avoids any coercion of individuals to have genetic tests but also protects the industry from asymmetric information problems by requiring individuals who have been tested to provide the results of those tests to the insurer.

The Commonwealth government also has the right to use genetic tests to avoid adverse selection problems in immigration decisions, as the *Migration Act 1958* and processes under that Act are specifically exempt under the *Disability Discrimination Act 1992*. The health status of visa applicants is commonly assessed as part of the immigration decision. Applicants with potentially high health care costs can be rejected on these grounds.

In February 2001, the Commonwealth government requested the Australian Law Reform Commission (ALRC) and the Australian Health Ethics Committee (AHEC) to conduct a joint inquiry into genetic testing and information. The ALRC and AHEC have been asked to consider what sort of regulation may be needed, in relation to human genetic samples and information, to protect privacy, provide protection from unfair discrimination, and ensure high ethical standards of conduct. The report of this inquiry will be provided to the government in March 2003. In its submission to the inquiry, the New South Wales (NSW) Anti-Discrimination Board has not recommended prohibition of the use of genetic test information in either insurance or migration decisions. It does recommend that an independent body be established to evaluate the ‘scientific reliability and actuarial relevance’ of both genetic and non-genetic information for underwriting purposes, and also that consideration be given to whether existing review and appeal mechanisms in the *Migration Act 1958* are adequate (NSW Anti-Discrimination Board, 2002).

**Conclusion**

This paper has argued that the long-term decline in the proportion of the Australian population covered by private health insurance is due primarily to a dynamic problem of adverse selection attributable to the community rating regulations governing the industry. For many years these regulations precluded any risk discrimination in the determination of premiums for any given policy. Even the introduction of lifetime community rating in 2000, which allowed for an
age penalty to be applied to those over age 30 years taking out cover for the first time, has resulted in only a modest amount of risk discrimination with substantial cross-subsidisation continuing to occur within the insured pool.

The main lesson from this experience for genetic testing and life insurance can be stated as follows: a prohibition on the use of genetic test results in determining life insurance premiums runs the risk of setting the life insurance industry up for a similar adverse selection spiral. This is not to deny that there are important social and ethical issues associated with the use of genetic testing in life insurance (see, for example, Lowden, 1999). However, these issues are better addressed through social policies specifically designed to address those issues rather than regulating the life insurance industry by prohibiting the use of genetic test information. For example, a program of explicit government subsidies to those individuals who face dramatic increases in life insurance premiums as a result of a genetic mutation would provide targeted assistance to those affected. At the same time, this would avoid the adverse selection side-effects of regulations that attempt to avoid such premium increases by prohibiting the use of the information on which they are based. As the OECD (2001:52) has indicated in this context, ‘the issue of adverse or anti-selection is a serious one’. The Australian experience with private health insurance bears this out.

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This article was stimulated by a recent conference on Genetics and Financial Services organised by the Centre for Actuarial Research at the ANU’s School of Finance and Applied Statistics, the Institute of Actuaries and the Securities Institute. The author would like to extend his thanks to the reviewers for their helpful comments.
REVIEW

Rationalism Revisited


Reviewed by Grant Scobie

The 1990s will surely be viewed as a golden period of economic growth for Australia. Against a backdrop of macroeconomic stability, productivity soared and average real incomes reached historical highs. Her Kiwi cousins look across the Tasman with bewilderment tinged with envy. Even discounting mineral wealth, Australia seems to have been successful in creating unprecedented economic prosperity on the back of policy reforms that, while similar in large measure to those adopted in New Zealand, have apparently yielded greater dividends.

However, economic reforms do not take place in a vacuum. They both shape and are shaped by social relations in a society. Whether these reforms have had other consequences for the nature of social relations is a topic of legitimate enquiry. If the changes in the economic arena threaten social cohesion and weaken trust in social relationships, the ensuing political instability could mean that ‘the fruits of economic prosperity will be temporary’ (Saunders, 2002:7).

Edwards reopens this debate in a short pithy volume that questions the wider implications of reforms. It is her broad view of institutions, trust and social capital along with their complex interactions with economic policy that constitute the strength of this book. She attempts to ‘build a bridge between the two camps’ (p. 97): the so-called ‘economic rationalists’ (the policy makers) and the ‘Australian punters’¹ (their public). But she goes further than just attempting to expose the flaws of the economic rationalists. ‘The rationalist framework won’t be ousted until there is an alternative way forward’ (p. 97).

David Colander (1991) opens his book (by the same title) with the rhetorical question: Why aren’t economists as important as garbagemen? He suggests that in contrast to a strike by garbagemen, (creating a mess in society), most people would concede that a strike by economists would leave the world unchanged. He continues (p. 19):

Economists simply don’t play much of a direct role … their advice is used if it supports what the proponents want and totally ignored if it does

¹ A term adopted by the author to create the impression of connection to and empathy with the views of the man or woman on the street, in contrast to the implication that economists lack such a perspective.
not. Put simply, economists are not directly involved in the functioning of the economy.

In contrast, Edwards has a much less benign view. Her central thesis is that the economists of the parliamentary triangle are a faceless group of right wing, neoclassical Chicagoans obsessed with the role of markets, and who have captured their political masters. They have succeeded in exploiting this power to have their legislator puppets implement sweeping changes in almost every aspect of economic life. These changes have been to the detriment of the well being of the average Australian punter. The implicit counterfactual is that in the absence of such a supposedly influential group, the institutional structures and policies of the so-called ‘Australian settlement’ could have been preserved. Above all, the visible hand of the state might have continued to play the benevolent role Edwards ascribes uncritically to the past.

In arguing the case for the ‘capture’ model in which politicians mindlessly implement what their rationalist advisors prescribe, Edwards fails to build a model of political economy which could explain how this unholy alliance arose, and could ‘predict’ in a historical sense why the relationship apparently differed in the past. In fact there is a strange absence of any appeal to existing economic and political theories of bureaucracy.

As her subtitle states, Edwards’ slim volume attempts to ‘reopen’ political debate (although one might wonder if there is any substantive evidence that it had ever been closed). What in fact she reopens is the now long-standing and extensive debate about ‘economic rationalism’. Not having followed the finer points of this debate, I approached the book anxious to find how the author defined the term. Like me, readers seeking a clear definition will be disappointed.

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… economic rationalism is a doctrine that says that markets and prices can always, at least in principle, deliver better outcomes than states and bureaucracies (Pusey, 1993:14; italics in the original).

It is immediately apparent that if such a definition is adopted then the implication that economic rationalism and neo-classical economics are synonymous is demonstrably erroneous. One has only to reflect on the analysis of market failure, public goods or imperfect competition to avoid such a simplistic association. But the author’s case rests on a more subtle distinction. Economics writ large is seen as grand theory to which the author apparently subscribes; but the economic rationalists stand charged with adopting only a subset of economic views and becoming ideologues (p. 36). Arguably Edwards’ distaste for economic rationalism lies more in the realm of moral philosophy than economic reasoning. In fact, she (unwittingly?) provides some clear syntheses of economic reasoning,
ironically that could well be used for ‘How to argue with a non-economist!’ The stumbling block appears to come because, in her view, economic reasoning is underpinned by a libertarian social philosophy that freedom of choice, self-reliance and personal responsibility are paramount. In fairness she would probably not ascribe those views universally to all economists; but at the very least to those who advise on policy in Canberra.

Throughout the book there is an intriguing use of the first person plural pronoun ‘we’ — an unidentified consortium of ‘us’ … ‘we can transform the market at its core’ (p. 155) … ‘we can reclaim control’ (p. 155); … ‘we must set wages’ (p. 157) (italics added). Who constitutes the ‘we’ who play such a critical role in the book? Are ‘we’ Australian society at large, some vague homogenous block? It would indeed be ironic for Ms Edwards to hold such a view given her (mistaken) condemnation of economics for treating all consumers or producers as identical. Had she pursued this argument she would have confronted the fact that observed job choices, consumption bundles and life styles demonstrate enormous diversity, which would hardly be consistent with consumers having identical preferences. Still history is littered with the corpses of elegant theories slain by gangs of brutal facts.

So ‘we’ (the readers) are left with an uneasy feeling that what is really behind the repeated use of ‘we’ is some notion of a paternalistic cabal who would use the power of the state to intervene in all aspects of the lives of others to shape society in their vision — (and this a counter to her view of the ideology of economists?).

Edwards bemoans the loss of community and social relations that she argues has accompanied the process of economic reform. It is undeniable that reforms will disrupt existing social relations. Social relationships are themselves endogenously determined and so reflect the extant economic and political forces. But social relations and institutions also change in response to technology and world economic conditions. So we would hardly expect the set of relations that was optimal for some past period to serve society today. Towns that arose around staging posts a day’s bullock train travel apart could hardly be expected to play the same role under modern transport and communication systems.

Furthermore, the very policies that prevailed under the Australian settlement model, and that Edwards holds dearly were in their turn the source of disruption to prevailing social structures. One has only to consider the high tariff policies that shaped so much of the post-war Australian economy to recognise that they taxed heavily the rural sector while force-feeding an urban based industrial economy. Small towns were denuded by migration to job-rich metropolises with all the concomitant disruption to existing social norms and patterns. In short, while it is true that the reforms to correct gross economic distortions led to social change, the very policies that were being reversed had done likewise in the first instance. State intervention that proves unsustainable merely compounds, not solves, the problem of social disruption.

But let us turn to what Edwards offers as alternatives. These occupy scarcely more than a page and comprise: 1) a rejection of the market in favour of the universal community (state?) provision of services to meet basic human needs;
2) setting wages to ensure a minimum lifestyle to the least-well off; 3) pricing goods and services on a sliding scale proportional to income; 4) using environmental taxes to reflect social costs; 5) using tax incentives to encourage job-sharing; and 6) the provision of a universal education system. Perhaps a subsequent volume will fill in the missing gaps of the design of workable policies to achieve the goals that inspired these prescriptions.

In the end her counter to economic rationalism is to propose a return to greater reliance on an expanded welfare state for the collective provision of a wide range of goods and services that address basic needs. However, as Saunders argues:

… there is no going back to a bureaucratic model of standardised state provision because it is not possible to unravel the choices and market mechanisms that are now intertwined in the social fabric. Instead, we need to explore new ways of drawing positively on market forces while allowing individuals to express and achieve their choices in ways that also address traditional concerns with discrimination, poverty and inequality (2002:10).

Edwards proposes policies which she undoubtedly believes would improve the lot of the punters. But in the absence of any careful comparative institutional analysis, the reader may well be left feeling that her position is as ideologically driven as that of the economic rationalists she dismembers. What is the problem? What are the alternative policy responses? Is it government ownership, delivery or funding that is needed in her view? What targeting mechanisms would she advocate? Is the provision of food, surely the most basic of needs to be provided by ‘community mechanisms’ (presumably a euphemism for government control)? What incentive effects might be created by government sponsored programs for the ‘universal provision of basic services’? Is it not possible that some of the intended beneficiaries might be worse off? The reader can only wonder

The author is at pains to argue (p. 105) that she does not necessarily advocate a traditional big-government approach. However it is hard to imagine that in advocating that the community take collective responsibility, she does not envisage equivalent government intervention in people’s lives, albeit just in a different guise. Incidentally, exactly what is meant by the community taking collective responsibility for the universal provision of basic needs is never revealed — I thought that was how food was provided currently?

Apart from the fact that Edwards chooses not to bolster her arguments with either theory or any empirical evidence, one could question her overtly Aussie-centric view. The reader can only speculate as to whether her confidence in the state to collectively provide for the basic needs of its population might have been ever so slightly tempered by a consideration of such experiments in Albania, Myanmar, North Korea, East Germany, the USSR or Nyerere’s Tanzania.

The text is complemented by a short but useful index and an extensive bibliography, the latter lamentably, with pitifully few links to the text. While
recognising that this book is aimed at a wide audience, one feels that the author deliberately eschewed some touches of traditional scholarship. The work of Gregory receives a lengthy synthesis (pp. 144-146) but he fails to rate a citation. In like vein, one is surprised that the publisher’s editors did not require citations for direct quotes — for example, from Krugman (p. 25) and John Stuart Mill (p. 54). Such editorial solecisms, while arguably of no great import in and of themselves, do cast a shadow of sloppiness on the work of a student based at the ANU.

While I cannot claim to have a complete overview of this peculiarly Australian literature, I found the bibliography somewhat selective. I suspect that many readers might well share my surprise that, in a critique of economic rationalism, the author chose to neither analyse nor cite such works as Brennan and Walsh (1990), Saunders and Graham (1992), King and Lloyd (1993), James, Jones and Norton (1993), Coleman (1999), Buchanan and Hartley (2000), Nieuwenhuysen, Lloyd and Mead (2001), Coleman and Hagger (2001) and Saunders (2002). Those delving into the debate for the first time or seeking a refresher course would be well advised to diversify their diet by including a sample from this list.

The title of the volume suggests that it belongs to the genre of instruction manuals of ‘How to repair your car’ or ‘How to buy life insurance’… a sort of guide published by Consumer magazine. I would caution the non-economist reader who might have expected a cogent set of arguments that would win the hearts and minds of many economists. But to the extent it reminds us that economic policy is intimately related to its social context it will have served a purpose. Whether economic rationalism will be ousted by the proposed polices is left to the reader’s judgement. My guess is the punters know the odds better than to bet their future welfare on a nostalgic view of one anti-market evangelist about what Australia was like in the good old days.

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Declaration of interest: the reader should be advised that your reviewer started his career as a policy advisor in Canberra and currently carries the grandiloquent title of Principal Advisor to The Treasury, in Wellington, New Zealand. Apart from an extended cleansing period as an academic between these periods, he surely must sit squarely in the sights of the Pusey-Edwards class of those who have advised their political masters in wreaking havoc on the economy in particular and society in general.