AGENDA

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Contents

ANALYSIS

The Bank Deposit and Wholesale Guarantees of 12 October 2008: An Appraisal

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Abstract

The Australian Government's guarantee of funds lodged with deposit-taking entities in Australia, and of security issues by Australian banks, has fostered support for smaller and less well-placed financial entities compared to the four major Australian banks. In applying in these settings there is a prospect of moral hazard in the benefited entities. With respect to the issue guarantee, there are grounds for expecting the prudential authorities to take steps to ensure that the funding support is not dissipated in fostering more risky asset portfolios.

Introduction

On 12 October 2008, the Australian Government announced a set of arrangements for the protection of depositors in Australian deposit-taking institutions (ADIs) and a guarantee of the wholesale funding of these institutions.[2] Thus there are now two distinct guarantees — a deposit guarantee and an issue guarantee — that embrace the great bulk of liabilities of any Australian bank.

The aim of these measures was to promote stability in the Australian financial system by supporting confidence in the participating financial intermediaries, and to ensure continued access to funding at a time of much disturbance in international financial markets.

The decision to offer both deposit and wholesale funding guarantees on the scale announced on 12 October was unprecedented. Such a possibility had never been contemplated in any prior discussions. Repercussions from these measures have brought additional commitments to compensate financial entities other than deposit-taking institutions for their loss of a 'level playing field'. What, then, are we to make of this most substantial commitment?

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[2] These measures apply to all entities incorporated in Australia; equally to foreign-owned as to Australian-owned ADIs. Branches are limited in their coverage by these guarantees.

The Scheme

This deposit guarantee applies to deposits over $1 million for each customer in any one ADI, and for which a fee to secure the guarantee is charged. Participation in the scheme is voluntary. For deposits of $1 million or less, there was a separate guarantee under the Financial Claims Scheme; this guarantee is free.

The wholesale funding guarantee is designed to ensure Australian entities seeking to access international capital markets are not at a disadvantage to other internationally-operating competitors. In effect the guarantee offered by the Australian Government amounts to accepting the counterparty risk to which the foreign lender would otherwise be exposed when contributing to any bond or commercial paper issues by an Australian ADI. The effect is the same for lenders to these entities in the domestic capital market.

The wholesale funding provisions distinguish between short-term and longer-term liabilities. The former are defined as bank bills, certificates of deposit, transferable deposits, debentures as defined for tax purposes, and commercial paper with maturities up to 15 months. The longer-term wholesale liabilities are for maturities between 15n months and 60 months. They comprise bonds, notes and debentures, again as defined for tax purposes. There is a strict provision which eliminates what are referred to as 'complex instruments', which one might interpret reasonably as any item exhibiting derivative or similar characteristics. In effect, the guarantees are directed to supporting plain-vanilla instruments, a not-unreasonable condition in the current murky world.

The fee structures for the guarantees were based upon the assessments of the quality of the entities as determined by ratings agencies. Where there were discrepancies between ratings agencies, with no predominant classification, then the lowest rating would apply.[3] The fee payable is set as basis points per annum, so that for entities rated between AAA and AA– the fee is 70; for entities between A+ and A– it is 100; and for BBB+ and below, including unrated entities, the fee is 150.[4] The four major Australian banks are rated AA. However, the administrator of the guarantee scheme reserves the possibility of charging fees different from these three listed items. The rating applicable on the day of issuance of the securities is the basis for determining the fees.

There is an exception to the general rule about fees to be charged on deposit liabilities of Australian residents with Australian branches of foreign banks. Those banks, not being incorporated in Australia, do not qualify for the general deposit guarantee without fee for deposits up to and including $1 million. Moreover, the wholesale funding guarantee applies only to short-term maturities

[3] The three ratings agencies referred to in the documents are Standard & Poor's and Fitch, both reflecting the categories listed in the fee schedule, while Moody's scale would be matched for equivalence.
[4] This means an increase in the effective interest-rate cost to the issuer of 0.7, 1.0 and 1.5 per cent respectively for the three categories.

up to 15 months and there is no provision for guarantees on longer-term issuance. Additional strict conditions apply which contain the extent of the guarantee of residents' deposits with these branches. Guaranteed liabilities cannot exceed 110 per cent of the average daily value of deposits and short-term wholesale liabilities held by Australian residents in the 30 days up to 24 October. In effect, these branches cannot use the guarantee scheme to boost funding from Australian sources.

The measures apply for three years, though the maturity of guaranteed issues may be up to five years; namely, 2014.

The Background

Recent Australian discussions about the provision of guarantee schemes for deposits in financial institutions have their origin in the investigation into the collapse of Australia's then-largest general insurance company, HIH. The Royal Commission into this failure reported in April 2003. Amongst its many findings was a recommendation to the effect that '… the Commonwealth Government introduce a systematic scheme to support policy holders of insurance companies in the event of failure of any such company'.

The response of the Commonwealth Government on 12 September 2003 was to establish a technical study into the suitability of explicit guarantees of some retail financial products, including implications for financial stability and the monitoring of financial institutions.[5] This official response reflected a judgement denying scope for putting in place an explicit guarantee for one segment of the financial-services sector without regard for implications for other segments, whether it be for all deposit-taking institutions, general insurance companies, life insurances and managed funds of all descriptions including superannuation funds.

The study had as its purpose the presentation of 'a balanced framework in which the general arguments in favour of, and against, limit explicit guarantees in Australia's financial system can be considered' (Davis 2004: 60). What was provided was a comprehensive study of all issues bearing upon the applicability of such guarantees in the broad context of arrangements for the conduct, monitoring and supervision of the Australian financial system.

Apart from reviewing the recent history bearing upon issues related to guarantees, the study offered a comprehensive review of regulatory philosophy, an economic rationale for these guarantees, consequences of institutional failure, guarantee coverage, guarantee costs, funding and pricing of guarantees, and governance, accountability and regulatory impacts. Essentially the study offered

[5] The study was undertaken by Kevin Davis, University of Melbourne, supported by a secretariat drawn from the Commonwealth Treasury, the Reserve Bank of Australia and the Australian Prudential Regulation Authority (APRA). Public submissions were received.

a systematic framework for the analysis of any proposals for the offering of explicit guarantees. With this work there can be no ignoring the complexity which might arise for some limited guarantees on prudential, insolvency and consumer-protection provisions bearing upon financial services entities.

There were no specific recommendations about limited explicit guarantees.

Developments

Further work on issues related to guarantees to depositors and policyholders has continued under the aegis of the Council of Financial Regulators, a non-statutory body comprising the heads of the RBA, The Treasury, APRA and the Australian Securities and Investments Commission (ASIC).[6] The context in which the Council has advanced its understanding of the issues explored initially in the Study of Official Guarantee Schemes appears to be related to crisis-management arrangements.

There was recognition by the Council of the public perception of a government guarantee for the repayment of deposits, in full or in part, from a failed financial institution. In public surveys undertaken on behalf of the Council this perception was found to be most salient for banks but existed also to a substantial extent for other entities such as general insurers. The initial advice given to the Treasurer by the Council was for the establishment of a Financial Claims Compensation Scheme which would give depositors and policyholders timely access to funds in the event of closure of an authorised deposit-taking institution or general insurer (RBA 2006a). The maximum payment would be capped at $50,000. The response was to have the Council consult on the proposal with the finance sector.

The consultations were extensive, involving the various associations linked to deposit-taking institutions and insurance activities. There was opposition to the original proposal, reflecting a variety of arguments invoking moral hazard arising from the diminution of market discipline. The insurance representatives had other concerns involving broader issues of a regulatory nature outside the reach of the Council (RBA 2006b). Following these discussions, the Council reported to the Treasurer with revisions to the original scheme, including reducing the cap to $20,000.

In June 2008, the then Commonwealth Government announced a decision to implement a financial-claims scheme along the lines of the proposals from the Council. The upper limit would be $20,000. APRA would administer the scheme and have first claim over the assets of the failed institution to meet the cost of

[6] While this council once provided reports on its activities, these were abandoned in 2003, with subsequent reporting on activities of the Council being offered in the reports coming from the four constituent members. The main reference for the purposes of this contribution is the Financial Stability Review issued at six-monthly intervals by the Reserve Bank of Australia.

the claims funded. Only if APRA could not recover the total costs associated with the funding of the claims under the scheme would there be a levy on the surviving entities in the activity associated with the failed institution (RBA 2008).

The Deposit Guarantees: Some Consequences

This appraisal, over the past five years or thereabouts, of possibilities for deposit guarantees reveals very little relationship between what was announced early in October 2008 and the assessments made on guarantees and their costs made prior to that announcement. The Council of Financial Regulators had developed a proposal offering access to funds held in failed institutions but limited to about $20,000 per account or policy, be they in a deposit-taking entity or an insurance company.

The guarantee announcement of October 2008 placed all the deposit-taking entities — banks, building societies and credit unions — in a privileged cocoon within the financial services sector. In effect, the measures were designed to protect the great bulk of liabilities of these entities thus ensuring their priority in funding their asset portfolios. This segmentation of the financial-services sector brought repercussions for all other participants, these being managed funds of many varieties including superannuation funds, and property trusts. This segmentation was the very feature the Council of Financial Regulators was trying to avoid with its proposal to provide liquidity to those with funds locked up in failed institutions, whether deposit-taking or insurance.

The Australian Government was well aware at the time of the announcement how this segmentation might bring troubles to entities outside the cocoon. Thus the Australian Office of Financial Management (AOFM) was instructed to buy $4 billion of residential mortgage-backed securities to inject some liquidity into portfolios of entities holding such claims. This action was seen as a benefit to the mortgage market '… by levelling the playing field for non-ADI institutions and ensuring that this sector of the lending market has access to funding' (Rudd 2008).

This action foreshadowed likely further efforts to 'compensate' activities such as property trusts for their loss of this 'level playing field' for access to funds. The Australian Treasurer reflected concerns for the non-prudentially regulated investment sector and an interest in ways the vitality of these activities might be fostered (Swan 2008).

The Issuance Guarantees: Some Data on the Consequences

Within the scheme, the fee structure does not impress as reflecting the full range of variations associated with the categories determined by ratings agencies. From top to bottom the range is only 80 basis points. This is much less than the spreads

often witnessed in international capital markets between the highly-rated and the lesser-rated ones when funding is sought: hence the need for examination of available evidence on the pricing of issues prior to and then subsequent to the provision of the guarantees.

The evidence presented in Table 1 is based upon the costs of raising funds in international capital markets. Effectively, this means the London market, where the pricing is determined by the London Inter Bank Offered Rate (LIBOR). LIBOR covers rates in different currencies and for different maturities. That pricing permeates pricing in other money and financial markets around the world.

The spread shown in Table 1 is the margin based upon the overnight cash rate, the three-month bank bill rate and the maturity structures related to those two series. Australian interbank lending is by means of the Bank Bill swap rate (BBSW), most commonly with a maturity of three months. An interest-rate swap comes about when one party is willing to pay a fixed rate to the other party — the counterparty in the transaction — while agreeing to receive the average cash rate over the life of the swap, usually three months.

The spread is the difference between the interest rate a party is willing to pay and the bank bill rate applicable to the maturity of the swap. This is approximately equivalent to a risk-free rate. Note the important feature here: the spread measures the difference between borrowings with a specified maturity and the cash rate overnight. The spread is independent of the level of the cash rate. Hence, the spread tells all about risk perceptions about the issuer entity, thus reflecting features guiding pricing in these money markets.

The spreads shown in Table 1 reflect the differences in value between bank securities, being three-year securities, notes and bonds, and the swap rate at the time of issuance. Thus the estimates shown in Table 1 are based upon three-year fixed rates.

Table 1: Issuance Costs and the Spread (basis points)

	AA	A+&A	BBB+
(a) March 07	+15/20	+20/25	+30/35
(b) March 08	+90/100	+125/150	+180/250
(c) March 09	+50/60	+75/85	+85/95
(d) Cost to ADI of Government Guarantee	70	100	150
(e) Effective margin = (c) + (d)	125	180	240

Source: ANZ Bank: Economics & Markets Research

The three periods chosen reflect market conditions in and around March 2007, this being a time prior to the turbulence which beset money markets later that year. March 2008 marks the time of great instability and turmoil following the collapse of important financial entities in the United States with grave

consequences for pricing risks. March 2009 reflects a time of much greater involvement of governments and central banks in market activities and many months after the decision of the Australian Government to offer guarantees to Australian-based issuers in international capital markets.

The range of the spreads increased substantially in the March 08 period when markets were strained severely by liquidity and other problems, mainly about risks. This was most severe for the lowest-rated securities shown in the BBB+ column in Table 1.

The impact of the guarantee is depicted in the final row in the table. This measure is taken from the mid point of the range for the three rated categories in the third row of the table and added to the cost of the guarantee associated with each of those three categories revealed in the fourth row.

The effects of the guarantee may best be glimpsed from a comparison of the differences in the spreads between the three categories, especially in the tumultuous March 2009 period, with the effective margin linked to the implementation of the guarantees. At that time, the spread of the lowest-rated category (BBB+) was twice or more greater than the spread for the AA category (180/250 vs 90/100). The effect of the guarantee, and the costs charged for it, is shown by the compression of that margin between the AA and the BBB+ to less than twice the difference between the spreads for the two series (240 vs 125). The same compression applied to the middle series of the three rated categories (A+&A).

This information on spreads across different rated categories of issuers is revealing of the effects of market intervention and the pricing of guarantees. That pricing has favoured the lesser-rated entities issuing in international capital markets. In effect, the cost of the guarantee has not reflected the relative risks associated with the issuers.

The effect of the wholesale funding guarantee offered by the Australian Government with its AAA rating, then, is to compress the variation in the cost of funds between differently-rated banks. The effect amounts to a form of subsidisation of the lesser entities by the highly-rated ones — in this setting, the four major Australian banks.

Banks have seized the opportunities afforded by the government guarantee to extend the maturities of their wholesale funding to bring stability into their funding arrangements and not be prone to market instability when relying on shorter-term funding from capital markets.

Nine banks have used guaranteed funding, drawing two-thirds of the sums involved from foreign sources, apparently predominantly through placements in the United States and, more recently, offerings in the Japanese samurai market.

The great bulk of the short-term wholesale funding has been in the domestic market.

The General Consequences: Some Evidence

The guarantees have been used comprehensively, according to the most recent information as shown in Table 2. The schemes became effective on 28 November 2008 so, at the time of writing, there has been just four months' experience. There has been a rapid adaptation of funding arrangements, with a shift from short-term wholesale funding to longer-term wholesale funding within in this brief period. The December series includes the last three days of November at the start of the scheme. The March data applies up to 24 March 2009.

Table 2: Guaranteed Sums ($bn) (daily average value)

	Dec08	Jan09	Feb09	Mar09*
Deposits**	18.9	19.0	19.3	–
Short-term WF**	15.4	19.4	22.4	18.9
Long-term WF**	8.6	35.9	60.4	81.2
Total	42.1	74.5	102.2	–
Memorandum item Fees ($m)	32.7	51.3	63.2	–

*data up to 24 March 2009
**daily average values
Source: RBA 2009: 28
The final row records the fees paid during the first three months.

This dominance of the longer maturities — three to five years — reflects the advantages conferred by the guarantee, allowing stability in funding asset portfolios and curtailing exposure to short-term variability in market conditions. There is no doubt about this positive impact for bank portfolio management because the banks issued a mere $3.5 billion in term debt in the three months September to November 2008.[7] This shift has compensated also for the very sharp falls in issues of asset-backed securities and residential mortgage-backed securities between 2005–07 and now.

The effects of the guarantees have been pervasive, being felt in the deposit market as well as the wholesale funding aspects mentioned above. Major banks gained share during the economic and financial turbulence prior to the announcement of the guarantees. Smaller institutions regained some of their lost share after the announcement of the deposit guarantee.[8]

The fees paid, as depicted in the memorandum item in Table 1, reflect the very stable values for insured deposits over $1 million in value; the deposit holders opt in for the guarantee rather than banks having blanket coverage for

[7] This was the period of greatest market turmoil associated with the failure of Lehman Brothers and distress amongst any number of banks in the United States and Europe, especially the United Kingdom.
[8] Substantial commentaries on market conditions and influences are offered in the moist recent Financial Stability review (RBA 2009: 26–32).

all these large deposits. The very rapid growth in the values of fees paid reflects the increases in the values of the wholesale funding issuances guaranteed by the Australian Government.

There has been a proliferation of various funding-support devices subsequent to the announcement of the guarantees. A specialised support vehicle was devised to provide funds for financing purchases of motor vehicles with the exit of GE Finance from such lending in Australia as well as the diminution of activities in the same sphere from General Motors Acceptance Corporation. This combination of government and bank funding is likely to be repeated in other specialised excursions into sectoral funding.

More revealing is the role of the Australian Office of Financial Management (AOFM). This government funding office has been committed to support the property market through the funding of residential-mortgage-backed securities, as indicated by the Australian Treasurer (Swan 2008). The AOFM acts as the 'cornerstone investor' in issues of residential-mortgage-backed securities, most of which are on behalf of property trusts and the like, though the Bank of Queensland is the issuer of a proposal in the second round of offerings.[9]

Appraisal

The strength of the four major Australian banks on the international scene is acknowledged and proclaimed. This feature was expressed firmly by the Deputy Prime Minister in her speech to the World Economic Forum when she stated: 'Australia has strong financial institutions. Of the 11 banks around the world that are rated AA and above, four of them are Australian. Australia has a AAA foreign currency rating' (Gillard 2009). This statement raises questions as to why the major intervention incurred by the guarantees was deemed necessary. With few banks as strong as the four Australian majors, the claim about their need for support in raising international funds is not convincing, despite the harsh experiences during October and November 2008. Even less reason would there be to impose the market segmentation brought about by the domestic guarantees on deposits. Deposits were shifting to the four majors compared with lesser deposit-taking entities (RBA 2009: 29).

The decision on the guarantees supporting funding in international capital markets reflected the gross turbulence following the failure of Lehman Brothers in September 2008. Counterparty and settlement risks were at the heart of the gross dislocation. Hence, the decision to provide guarantees was aimed at settling international capital markets with respect to completion of transactions, though the capacity to fund remained a test of market liquidity. Insofar as the borrowings of the major banks are the means of funding shortfalls in the balance of payments

[9] This funding may be seen as a measure of liquidity support for a BBB+ rated bank not willing to explore a market placement of its paper even with the guarantee from the Australian Government.

on current account, there is a national interest to be served in bringing a strong measure of stability to these funding mechanisms.

Some further sense may be made of this drastic policy intervention if one allows the possibility that the Council of Financial Regulators had worries about the less well-placed financial institutions other than the four majors, and advised government accordingly. For deposit guarantees the evidence points to the superior position held by the four majors compared to other deposit-taking entities, including the building societies and credit unions. With the funding guarantees that nine banks took advantage of, the offering may be interpreted as some support for thinking the lesser-rated banks gained access to funds which would otherwise have been denied them. All the banks seized the distinct advantage in turbulent times of locking in funding for some years. Yet the policy initiative was an obvious gain for the less well-placed in the banking fraternity compared to the four majors, all of whom have been well to the fore with issuance.

Domestically, the placement of funds with the deposit-taking entities, whether as formal deposits or short-term wholesale funding, is relatively attractive when compared to other outlets because of the guarantee. We should bear in mind the impact of these measures on the relative standing of state governments in capital markets, where they stood less-well ranked than building societies and credit unions nourished by Australian Government credibility! Holders of state government securities were immediately handicapped because the values of these securities declined relative to those securities issued by guaranteed entities. This impact led to the later commitment to support from the Australian Government to ensure new issues being taken up by financial intermediaries and managed funds. The purpose of this step was to support the maintenance of capital spending by state governments.

But the priority achieved comes at the cost of the guarantee thus adding to the cost of funds. Hence, the scope for adjusting interest rates to match official cash-rate adjustments may be restricted, quite apart from any influences arising in international capital markets on the pricing of longer term wholesale funds.

Some Macroeconomic Questions

Macroeconomic implications arise with the proliferation of measures following on the deposit and funding guarantees. Some flow from the extension of support to the property market, with further prospect for domestic funding of property vehicles to substitute for foreign borrowings. Should foreign lenders face liquidity strains in their home markets, the likelihood of negotiating effective re-financing with them when they are aware of alternative sources to meet borrowers' needs looks to be remote. Capital account impacts cannot be ignored.

These macroeconomic prospects are challenged further should there be a rapid increase in Australian Government issues of bonds to fund total requirements involving budget commitments and those of entities created to meet extra-budgetary needs (with the AOFM being an example). This expansion is likely to stimulate some lift in the term structure of interest rates as well as their overall level. In this setting, the offering of Australian Government guarantees of debt issuances by banks and other deposit-taking institutions adds to the supply of this official paper, especially on foreign markets. This expansion will be further extended should the Australian Government establish additional special-funding vehicles to support efforts to compensate with level playing fields to offset the effects of market segmentation.

Consequences may flow from this setting for relative value of the Australian dollar. Some funding is attracted to AUD-denominated borrowings because of the relatively high yield. But foreigners' willingness to participate in these issues may be hampered by exchange-rate volatility. Hence, the maintenance of a relatively high interest-rate regime within Australia could be important to the fostering of a sustained foreign interest in funding Australian debt issuances. The domestic interest-rate structure works as a signal influencing the stability of expectations about relative exchange rates. Hence one might advance a cautionary note about interest rate easing in the contemporary policy setting when there is much reliance on foreign funding of Australian Government-linked issuances.

An Exit Strategy?

The minimum period for the maintenance of these guarantees would appear to be to the end of 2011. This horizon allows for the securing of a significant improvement in the stability of economic and financial markets, with some prospects for the restoration of real growth in some major international economies. In light of past experiences during the late nineteen-eighties and early nineteen-nineties, the prospect for a similar achievement in property and real-estate markets would appear less certain.

The Group of Financial Regulators should be soon engaged in reviewing the basis for conveying into the public arena the conviction about the certainty of bank deposits and the other features related to insurers which lay at the centre of the initial work by the group. If this is not done comprehensively and communicated widely then the willingness of the political leadership, government and opposition, to grasp the challenge for abandoning guarantees domestically may be hard to secure. The perpetuation of the ramifications of the guarantees, as witnessed in the funding support for the property aspects of wealth management, brings in its train rewards for those who speculated in asset price inflation. This endorsement would be a remarkable turn of events, illuminating moral hazard.

The solution to the removal of the government guarantee of issuers in international capital markets lies with the four major banks. The costs of the guarantee arrangements are best seen in terms of the relative benefits accruing to less-well-rated rivals and the addition to costs of funds because of the guarantee fee. Thus any one or all of the four majors might refrain from seeking the guarantee when coming to bring new offerings to markets in coming months. Timing would depend on their appraisal of progress towards the restoration of market liquidity and financial strength of participants.

Closing Comments

The introduction of measures by the Australian Government to guarantee funds lodged with deposit-taking entities in Australia and guarantee issues of securities by Australian banks in both Australian and international capital markets has brought differentiation between different types of activity in the financial-services sector in Australia. One effect has been to engender support for smaller and less-well-placed financial entities when compared to the four major Australian banks. Another has been to distinguish between deposit-taking entities such as banks, building societies and credit unions, and other activities relying upon drawing funds trusts, managed funds and like activities. Thus there has been market segmentation between the guaranteed and these other entities. This feature was recognised fully by the Australian Government at the time the measures were inaugurated, as was noted earlier in this commentary. This recognition was witnessed in the steps taken by the Australian Government to foster financial support for other types of entity reliant upon managed funds and similar instruments.

With the comprehensive effects of the guarantees as revealed in earlier segments, there is some risk of those entities gaining from the policy measures put in place pursuing activities which would not be possible in other circumstances. In short, there is some prospect of moral hazard applying in these settings. With the issuer guarantee more than the deposit guarantee, there is a basis for expecting the prudential authorities to take steps to ensure that the funding support is not dissipated in fostering riskier asset portfolios. Prudential appraisals would safeguard the strength of the rating associated with the Australian Government's guarantees as well as its own standing in international capital markets at a time when its reliance on these markets to support its official funding requirements is so compelling.

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ARGUMENT

Providing Aged Care: The Case for Reform

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Abstract

In the years ahead, the demand for aged care will polarise between community-based care and high-care facilities. The deregulation of current restrictions on the number of residential aged-care places, accompanied by the use of competitively neutral and fully portable vouchers for users of aged care, would help the sector adjust to these changes. Price regulation should be gradually reduced, contingent on the development of increased competition in the sector.

Introduction

Australia faces many challenges associated with the provision and financing of aged care in the coming years. This article examines a number of these challenges and proposes reforms to the current regulatory and policy framework underlying the aged-care sector. Two theses are advanced:

- First, due to recent demographic developments, the demand for aged care will polarise towards community-based care on the one hand and high-care facilities on the other.
- Second, that the best means of dealing with the challenges posed by this change in demand is by reducing current regulatory constraints on supply; that is, through deregulating the number of aged-care places, combined with the use of a portable and competitively neutral funding mechanism for users of aged care. Contingent on the development of increased competition in the sector, current price regulation could and should then be gradually wound back.

The analysis begins with an overview of the regulatory and other policy constraints imposed on the aged-care sector in Australia. It then details emerging demographic trends and the pressures these will place on supply of places in the aged-care sector, before setting out a proposed means of addressing these pressures through a phased program of deregulation.

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The Present Regulation of aged care

The provision of aged-care services has the following important characteristics (Productivity Commission 2008):

- The production of 'bundles' of services tailored to a wide variety of individual needs, ranging from personal-care services to accommodation and palliative care;
- A high degree of direct contact between providers and clients, as opposed to arm's-length market transactions;
- A significant variation in the cost of service provision, with some services being much higher cost than others; and
- High, and increasing, community expectations about the provision of these services.

Reflecting these characteristics, governments typically play a significant role in the aged-care services industry. That said, compared with governments abroad, Australian governments have a particularly high degree of direct involvement in controlling the financing and supply of aged-care services.

Thus, Australian governments — and the Commonwealth Government in particular — bear the primary burden of funding residential aged care.[2] The Commonwealth also funds community care, which provides care in the home, but currently shares that responsibility with the States.

Additionally, the Commonwealth extensively regulates care provision. That regulation extends not only to ensuring service quality, but also to controlling the number, composition and location of the places made available. More specifically, the Commonwealth uses 'planning ratios' that specify the number of aged-care places that are to be made available as a function of the population aged 70 and over.[3] Access to these places is controlled through a process of needs assessment, based on medical evaluations of disability that grade potential

[2] It currently costs about $65,000 per person per year to provide high-level residential aged care. The Commonwealth Government meets almost three-quarters (72 per cent) of this cost. Annual costs in low-level residential aged care are lower (at just under $40,000 per person per year), with just under 50 per cent of that cost being covered by the Commonwealth (unpublished data for 2007–08 provided by the Australian Department of Health and Ageing).

[3] The planning arrangements, which specify the number and location of places, have been in operation since 1985. The number of subsidised residential aged-care places is currently capped at 88 operational places for every 1000 people aged at least 70. The supply of service type within this overall cap is also controlled, so that 44 of every 88 places are primarily for care recipients who require residential high care on entry to care and 44 are primarily for care recipients who require residential low care on entry to care. Actual service provision ratios differ from these planning targets, largely because of the policy of 'ageing in place', which allows a resident who enters a low-care place for low care to remain in that place if and when he or she comes to need and receive high care. Reflecting that policy, around 61 of every 88 places are used for high care, with the remaining 27 places used for low care. See Australian Department of Health and Ageing 2009a.

beneficiaries in terms of the degree of care that they require.[4] Through these controls over numbers, the Commonwealth rations the use of the service, thus controlling its fiscal exposure.

The Commonwealth also regulates the prices that aged-care providers can levy on their residents. While the costs incurred by around a third of residents are borne entirely by the Commonwealth (other than the basic daily fee of 85 per cent of the age pension, which is arguably a transfer payment by the Commonwealth), the vast majority of residents pay some part of the charges associated with these regulated prices, with the extent of this co-payment depending on highly complicated and somewhat opaque income and assets tests.

Historically, Commonwealth involvement in the funding of aged care arose at the intersection of the pension (and, more generally, income support) and health-care systems. From the former, it inherited an emphasis on means-testing, which is complex and extensive for residential care. From the latter came an emphasis on universality of access, tempered by quantity rationing (enforced through the restrictions on the number of places) and by reliance on significant co-payments (Cullen 2003).

At the moment, long-term aged-care services are provided in three forms which broadly correspond to differing levels of acuity:

- domiciliary care (also known as 'community care'), which mainly responds to situations where the need for care is relatively limited, though domiciliary care is increasingly being provided for relatively care-intensive situations, notably dementia;
- 'low care' residential care, also referred to as 'care in a hostel'; and
- 'high care' or nursing-home residential care, which addresses cases where a high level of ongoing nursing or intensive personal care is required.

It is residential care ('high care' and 'low care' aggregated) which has accounted for the bulk of (public and private) aged-care outlays (83 per cent). 'High care' in particular accounted for 65 per cent of residents and 78 per cent of public and private residential care outlays in 2004–05.

These three forms of care define a notional continuum, in which care recipients move, as their ability to cope with the activities of daily living diminishes, from limited domiciliary care, to 'low care' residential care and then on (though often for very short periods of time) to 'high care'. This progression reflects the underlying economics of care provision: domiciliary care allows care recipients to retain the comfort of their own home, but imposes transport costs on non co-resident carers and forgoes scale and scope economies in the supply of care;

[4] This assessment is currently done by Aged Care Assessment Teams (ACAT), which are funded by the Commonwealth Government but managed by State Governments.

in contrast, residential care secures economies in specialised infrastructure (including accommodation that is purpose-designed in terms of mobility and safety) and in the use of specialised resources (such as nursing staff), but at the cost of standardised accommodation arrangements and loss of close contact with the external community. As higher levels of disability require ever more use of the specialised inputs, relative to more general inputs such as conventional accommodation, it is generally cost-effective to provide the more intense levels of care in a specialised residential-care environment.

Whether movement along this continuum will remain as a general trend is, however, questionable, as the following section explains.

Recent trends and approaching challenges

On current demographic projections, the number of Australians aged 85 and over will increase from 330 000 in 2006 to 580 000 in 2021, and then to over 1.6 million in 2051.[5] Underlying this trend are changes in life expectancy at the conventional retirement age of 65. As shown in Table 1, in 1983, life expectancy at age 65 stood at 14 years for men and 18 years for women. By 2001–3, life expectancy had increased to 18 years for men and 21 years for women. It is expected to have increased further to 21 years for men and close to 24 years for women by 2021. Reflecting this increase in life expectancy after age 65, the number of the very elderly is expected to rise especially sharply, in the context of a population which, as a whole, is becoming more concentrated in the older age brackets.

Table 1: Life expectancy at age 65 (years)

	1983	2001–3	2021
Men	14	18	21
Women	18	21	24

As that process occurs, the challenge of providing long-term care[6] of and to the elderly will become of increasing importance. It is obvious that the need for some form of assistance with everyday activities increases with age. For instance, in 2003, 32 per cent of those aged 65–74 years needed some form of assistance, compared with around 86 per cent of those aged 85 or older (Productivity Commission 2008: 9).

Reflecting this, the ageing of the population will require increased spending, be it public or private, on aged-care services. As shown in Table 2, the federal government's consultative body, the National Health and Hospitals Reform Commission, has estimated that 337 500 aged-care places will be needed by 2020,

[5] These estimates are from the Australian Bureau of Statistics: see Linacre 2006.

[6] 'Long-term care' refers to care provided for the treatment of chronic conditions, where the emphasis is on care rather than cure. While long-term care is required for many disabilities, the focus here is on the management of those chronic conditions associated with ageing.

while 464 000 places will be needed by 2030, representing an increase of 108 per cent over the June 2008 level (NHHRC 2009: 165).

Table 2: Expected growth in required aged care places, for 2020 and 2030

	2020	2030
Aged care places required	337,500	464,000
Increase in places required over June 2008 levels	51%	108%

Two other developments add to these challenges. The first is 'the old' are living longer than ever before, with a rise in the numbers expected to live beyond the age of 70 and hence to be at greater risk of requiring care.[7] The second is that younger cohorts are having fewer children,[8] which among other things means they will have fewer voluntary carers to draw on when they reach old age. These trends alone — the sheer increase in the numbers of the very old, especially relative to the potential population of carers — make large and sustained increases in the demand for aged care inevitable.

The impacts on the structure of demand for care are also important, though more complex.

On the one hand, smaller differences in life expectancy between men and women[9] may reduce the demand for residential care as they translate into fewer years of widowhood — since loss of a family care-giver often precipitates a need for residential care.[10] This effect, which is partially offset by the increase in the number of persons who have never married or who are divorced or separated (Australian Bureau of Statistics 2007), may be accentuated by improved health among the 'younger elderly',[11] as well as by the likely strong aversion of the 'baby-boomers' to institutionalised living and institutional forms of care.[12]

[7] More than half (51.4 per cent) of all women aged 70 and more than one-third (34.1 per cent) of all men aged 70 will require permanent residential aged care at some time in their remaining life. By age 85 these probabilities have grown to almost two-thirds (62.5 per cent) and almost one-half (45.6 per cent) respectively. See Cullen 2007.

[8] See Productivity Commission 2008: 34 for a summary of this trend, and Australian Government 2007.

[9] The diminished gap between male and female life expectancy translates into a changing male to female ratio in the older population. For the population aged 65 and over, there were 73.4 males per 100 females in 1987; by 2007, the ratio had increased to 82.6 males per 100 female. However, the difference in life expectancy for the very old population remains significant, with the ratio for those aged 85 and over being of 49.5 males per 100 females in 2007 based on analysis of Australian Bureau of Statistics (2008a, Cat.No.3105.0.65.001, Table 4.1).

[10] The impact of differential mortality on demand for long-term care is examined in Lakdawalla and Philipson 2002; and Lakdawalla and Schoeni 2003.

[11] Today, the 'younger elderly' or 'younger old' are perhaps most commonly defined as those between 65 and 74, with the 'older elderly' being older than this (see, for example, Alexander, K. *et al*. 2001). However, viewed more broadly, 'younger old' refers to people who once were considered old, but who broadly remain, as a group, much more like non-old people of previous generations. As a result, the age group of the younger old has risen over time and likely will continue to do so.

[12] See McCallum 2003 for evidence that almost 60 per cent of people aged 70 years or over would prefer to receive formal care in their own home in the event they were unable to care for themselves, compared to 28 per cent who would prefer to receive residential care. Productivity Commission 2008: 53 cites

On the other hand, the growth in numbers in the very elderly age brackets is likely to be associated with increased numbers of sufferers from dementia, extreme fragility and other serious impairments to daily living activities, all of which usually require some form of intensive residential care.[13] More generally, while there will be a significant increase in the average number of years a person lives in the age brackets 65 and above, it will continue to be the case that ageing will bring with it associated health problems (US National Institute on Aging, National Institutes of Health 2002 and Gillick 2006: 124ff). These age-related pathologies will be accentuated by the rising population incidence of chronic conditions such as obesity, which appear more likely to give rise to increased morbidity in the older population than to increased mortality.[14] These factors will translate into a requirement for substantial, ongoing and continuous assistance, usually involving residential care, especially for the 'older old'.

The overall result seems likely to be to create a growing need for two types of care provision.

The first is care that is provided in a person's home, including in congregated living arrangements — such as life care communities — that seek to integrate home and care. This type of care, which corresponds to the various forms of community care, should suffice for the growing numbers who have a reasonable, even if incomplete, ability to carry out basic daily activities, especially in circumstances where they also have spousal or family assistance. The strong preference of the 'baby-boom' generation for independent living is likely to make this kind of domiciliary care the option of choice for large sections of the aged population.

The second is care in residential facilities that provide for those who have little or very little ability to undertake basic daily-living activities, and who need a high level of close support — as in current 'high care'. Demand for this kind of care will rise as we experience a continued increase in the incidence of those chronic conditions — such as Alzheimer's disease, severe arthritis and serious visual and hearing impairment — that reduce, if they do not eliminate, the ability to live without continuous assistance.

Conversely, demand for residential 'low care', which is intermediate between home care and ongoing close support, may decline as a proportion of total long-term care as the 'baby-boom' generations come into old age. 'Low care' facilities will, of course, remain of importance, if nothing else because the sheer

results of a recent survey conducted by Fujitsu Australia and New Zealand of 58 to 61 year olds, which found that four out of five respondents indicated a high or very high preference for independent living.

[13] The prevalence of dementia, for example, appears to double every five years after age 65. As a result, if current age-specific dementia rates remain unchanged, the prevalence of dementia will double by 2030 (Henderson and Jorm 1998).

[14] See Reynolds, Saito and Crimmins 2005. According to the Australian Institute of Health and Welfare, the prevalence of obesity has been rising in Australia over at least the past 20 to 30 years.

scale of the increase in the older population will ensure continued substantial demand for residential facilities oriented to low, but not insignificant, levels of disability. Moreover, the demand for intermittent residential care services, again oriented to relatively low levels of disability, is also likely to increase substantially.[15] This kind of care will in many instances be provided in a 'low care' setting. But while these factors will ensure that 'low care' remains significant in absolute terms, its weight in the overall structure of care provision seems set to diminish.

In short, demand for care is likely to shift from being a continuum that moves from home, into low-level care and then (often for only a short time) into high-level care, towards a pattern concentrated at the two ends of the spectrum.

At the same time, the temporal structure of care — that is, the distribution of durations of care in the recipient population — is likely to change.

Thus, long durations are likely to become more common in high-level care, as that care becomes less of an immediate antecedent to death. Already, at all levels of frailty, residents with dementia remain in residential care for significantly longer than other residents (Lindsay *et al*. 2003). Over the last four years, the proportion of discharges from permanent residential care that were in care for at least two years after admission has risen by 1.9 percentage points (from 38.6 per cent to 40.5 per cent).

However, short stays are also common. In the last three months of 2006, for example, 10.9 per cent of discharges from high-level residential care occurred less than one month after admission, and 12.2 per cent of discharges occurred between one to three months after admission (with 70 per cent and 69.8 per cent, respectively, of these discharges being due to death). These short stays are likely to remain common, and indeed may become more so, both because of the greater prevalence of intermittent care and because many admissions continue to be as a result of acute events.

As a result, the distribution of durations of residential care, which already is bimodal,[16] may become even more so, with a bunching of durations at the relatively short and relatively long ends of the duration spectrum.

[15] Older people living in the community at times require additional assistance, including residential care, for short periods. This may be to allow carers to take holidays or otherwise temporarily reduce their load. Providing more services such as respite care (that is, temporary accommodation in a residential-care facility aimed at relieving the carer) will allow more older people to stay in, or return to, the community after a period of more intense care. As a result, provision of facilities for respite care is an important complementary element in a strategy aimed at facilitating primary reliance on community care. Another instance in which people receiving care in their own home may need to access more intensive residential services is as a substitute for a medical admission to hospital (for example, for influenza).

[16] See, for example, Xie, Chaussalet and Millard 2005.

These changes in the level, structure and duration of demand will impose a significant adjustment burden on the aged-care sector. The total supply of care will need to increase, with large absolute rises being required in the level of provision in each part of the aged-care spectrum. For example, for current ratios of places available to the aged population to be met in 2025, an absolute increase of 83 100 places would be required in low care (as compared to a total number of low-care places of 86 000 today), with the corresponding increase in high care being of 87 400 places (as compared to a total number of high-care places of 81 700 today). At the same time, the structure of supply will need to shift, with larger increases in community care on the one hand, and high-level residential care on the other.

Supply-side adjustments will also be forced by changes in the costs of the different types of aged care.

Community care often relies upon the presence of a co-resident informal carer.[17] Here somewhat offsetting factors seem likely to operate. As noted above, a diminished gap in life expectancy between men and women is likely to reduce the number of years of widowhood, effectively increasing the supply of co-resident care. On the other hand, as has also been previously noted, the increased numbers who have never married, or who are divorced or separated[18] will at least partially offset that increase in supply. Additionally, the greater scarcity of working-age people in the future population will also increase the opportunity cost of the choice to engage in informal caring, reducing the supply of informal care services. Finally, low birth rates in recent decades[19] mean that the average older person will have fewer children from whom informal care can be sought. As a result, and on balance, the supply of informal care is likely to diminish relative to the size of the older population.

Given that demand for community care is likely to increase strongly, reduced supply of informal carers could impose substantial costs on the community-care sector. Already the opportunity cost of informal care, measured as the reduction in paid employment due to caring, has been estimated as being in the order of 0.6 per cent of GDP (that is, about 9.9 per cent of the value of total formal health care). The cost of replacing the work done by informal carers were their services no longer available is, of course, much higher. It has been estimated that if all

[17] When assessed by Aged Care Assessment Teams, older people living alone are more likely to be recommended for residential care than those living with a spouse or other informal carer. There is also evidence that older people who have access to informal care can remain living in the community for longer and enter residential care at a higher level of frailty. See, for example, Lincoln Gerontology Centre 2002. Projections of the availability of informal care are presented in Australian Institute of Health and Welfare 2004, and National Centre for Social and Economic Modelling 2004.

[18] Australian Bureau of Statistics 2007, chapter on Lifetime marriage and divorce trends.

[19] Productivity Commission 2008: 34 and 35. The Commission notes that the aged dependency ratio (the proportion of people aged over 65 to people of traditional working age, 15–64) will increase from almost 20 per cent in 2007 to over 42 per cent by 2047. See also Australian Government 2007.

hours of informal care were replaced with services purchased from formal care providers and provided in the home, the replacement value would be about 3.5 per cent of GDP; that is, about 62.2 per cent of other formal health care (Access Economics 2005; Productivity Commission 2003) though there are obvious limits on the relevance of such estimates to the assessment of economic costs.

The difficulties caused by adverse trends in the availability of informal care will be made all the more acute by the fact that the supply of the formal care workforce will also face considerable pressure as the share of the population requiring care increases (Stone and Wiener 2001). In effect, population ageing seems likely to create an increased demand for hospital care, with here too the sheer weight of the numbers moving into the higher age brackets more than offsetting possible reductions in the number of annual hospital bed-days required for each person in each age class.[20] The resulting growth in total hospital bed-days will require a corresponding increase in the medical labour force, forcing the aged-care sector to compete for nurses and other specialised labour inputs in a tight labour market.

Significant innovations in the way in which services are delivered will be needed if these structural pressures are to be dealt with efficiently. These innovations will affect both the venues in which care services are provided — with forms of congregated, but not institutional, living likely to be important in reconciling the need for care with the baby-boomers' demand for independent living — and the manner of service delivery. Widespread diffusion of these innovations will need to be accompanied by shifts in the composition of supply, and most notably, by a re-weighting of supply towards care in the community and the more intensive forms of 'high care'.

Whether the aged-care sector will have the flexibility required to effect these changes remains to be seen. Aged care in Australia developed initially primarily through the charitable sector and, to this day, charitable and non-profit organisations (and state and local governments) account for some 68 per cent of residential places and 95 per cent of community-care packages. While there are many respects in which supply by charitable and non-profit organisations can be a highly effective means of meeting aged-care needs,[21] there is also evidence

[20] While 2005–2050 growth in the number of annual public hospital bed-days is expected to be slightly negative for those under the age of 50, that number is expected to rise by 150 per cent for the population aged 60 and over, and by 320 per cent for the population aged 85 and over. As a result, the share of hospital bed-days accounted for by the population aged 65 and over is projected to increase from 47 per cent in 2005 to 67 per cent in 2050. See Schofield and Earnest 2006.

[21] It has been claimed, for example, that non-profit institutions may be less likely to opportunistically take advantage of vulnerable clients, so that supply of services by these institutions reduces the extent of the principal-agent problems in situations where clients are not capable of monitoring and enforcing service standards. It is also well-known that the greater the risk of such 'skimping', the more likely it is that the gains from the reduced risk of opportunism outweigh the productive efficiency loss arising from reduced incentives for cost-minimisation associated with non-profit provision: see Hansman 1996. Put slightly differently, the more vulnerable the client population, the greater the role that altruism

that those organisations find it more difficult to undertake supply adjustments (Hansmann, Kessler and McClellan 2002). Thus, their willingness to retrench in a timely way is reduced by the absence of a profit constraint, while their ability to expand is constrained by limited access to equity funding.

Some Proposals for Reform

The characteristics of aged-care services make it difficult to rely solely on market forces to meet demand. First, given community expectations about the level of care, and also the potential problems of privately insuring against the risk of requiring high-cost aged-care services in the future — which can be economically comparable to private insurance against unpredictable and catastrophic events (Productivity Commission 2008) — there is a need for an effective safety net for those with little ability to pay. Second, as consumers in this industry may be poorly placed to exercise either 'voice' or 'exit', there may be a case for a relatively high degree of service-quality regulation. However, subject to the constraints imposed by such regulation, competition between providers could ensure that the industry adjusted to changing needs, including in terms of the balance between different types and levels of care. Set within a framework of sensible quality regulation, and of provision of a safety net for low-income consumers, market forces could therefore be harnessed to provide individuals with care choices that matched their needs.

Unfortunately, existing regulations of the sector go well beyond what is necessary to achieve social equity, and undermine the ability of market forces to ensure supply effectively meets the needs of consumers. The consequences of the current approach to regulating aged-care services have been extensively discussed in Professor Hogan's *Review of Pricing Arrangements in Residential Aged Care* (Hogan 2004) and the situation has not altered materially since that time. The most recent development has been the handing down by the Commonwealth Government's consultative body, the National Health and Hospitals Reform Commission (NHHRC), of its Interim Report recommendations, some of which relate to reforms to increase choice in aged care. Nonetheless, existing regulations remain in place.[22]

More specifically, the rationing of places, while it does manage fiscal risk, creates an artificial scarcity that limits the scope for competition, blunts pressures for efficiency and innovation, and deprives consumers of choice.

Thus, since the turn of this century, occupancy levels in residential-care facilities have been in excess of 90 per cent for low care and of 95 per cent for

should play in service provision. As the very elderly, and especially those suffering from impairments such as dementia, are typically unable to monitor and enforce service standards, a significant role for non-profits in service provision may be efficient. A formal model setting this out is in Newhouse 2002.

[22] NHHRC 2009. Essentially, its recommendations for aged care mirror those contained in this paper, and are discussed in greater detail below.

high care, and though they have recently declined slightly, they are likely to stay high for so long as the current planning controls persist. This means that there are usually very few places open in any particular locality. In 2005–2006, for example, in a third of the 71 aged-care planning regions there were (on average) fewer than three vacant places each day for every 1000 people aged 70 or over.

The shortage of places has obvious implications for potential residents and their families. Consumers seeking a place, especially in high care, are often doing so as a result of either a sharp deterioration in the ability to perform essential daily activities or the death of their spouse or carer. There is therefore an element of urgency in their search for a place. Moreover, potential residents (and their families) usually have strong preferences over the location of the facility, and incur a significant element of discomfort should they need to move from one facility to another. Given the urgency of finding a place, and of doing so within a confined geography, persistently high occupancy levels mean that consumers often have very few options open to them.

This, in turn, means that suppliers face little threat of displacement and have limited incentive to be efficient. The result is an industry structure that does not make the best use of scarce resources, leading to losses of allocative, productive and dynamic efficiency.

As at 30 June 2006, some 1276 businesses/organisations ('approved providers') were engaged in the provision of subsidised residential aged care through 2929 outlets ('aged-care homes'). The residential aged-care industry continues to be highly disaggregated, with the average approved provider operating 2.3 aged-care homes and 128.1 operational places in June 2006. Some 65 per cent of providers operate only one home and 71 per cent of providers operate fewer than 100 places.

Many current providers seem too small to achieve economies of scale and scope. However, the restrictions on the number of places make it difficult for entrants to secure a sufficient number of beds in any locality to themselves achieve scale and scope economies and displace less-efficient incumbents. While it is possible that further gains in productive efficiency could be achieved by consolidation among existing providers, with some consolidation having already occurred,[23] additional efficiency gains might be more readily achieved by making it easier for entrants to grow by establishing new centres, as this would allow them to secure a higher level of standardization and hence reduce costs.

[23] For example, roughly 47 per cent of facilities offered more than 40 beds in 1998. By 2007, this had increased to around 66 per cent. The number of facilities with more than 100 beds increased by 121 per cent over the period 1998–2007. See Productivity Commission 2008: 30.

The overall consequence of these restrictions on displacement of existing providers is persistent productive inefficiency. Hogan estimated that in 2001–02, the average technical inefficiency of the residential aged-care industry, measured in terms of the difference between average practice and the technical efficiency frontier, was 17 per cent. It is questionable whether that gap has diminished significantly since then. Thus, industry returns continue to be highly variable. In 2004–05, for example, the average net profit/loss per bed-day varied from a loss of \$7.31 (or a profit margin of –4.6 per cent of revenue) in the lowest quartile of performance to a profit of \$25.42 (or a profit margin of +15.9 per cent of revenue) in the highest quartile of performance. While some of these industry returns can be affected by factors unrelated to efficiency, the large gap estimated by Hogan suggests that technical inefficiency is a factor contributing to the inability of a fairly large group of suppliers to achieve cost coverage.

As well as blunting the incentives for technical or productive efficiency, the limited choice most consumers face means that some form of price control is needed to prevent the abuse of localised market power. Reflecting this, most of the prices that can be charged by care providers are set by the Government.[24] However this in turn leads to further distortions, including allocative inefficiency, as the limited number of places may not be allocated to those who value them most highly. Dynamic efficiency is also reduced because the incentives of operators to make long-term investments in their businesses is blunted by quantity restrictions and hence by uncertainty as to the ability to expand. Additionally, because of price restrictions, there is a longer-term risk that prices will not be allowed to reach levels that cover efficient costs, further compromising the incentives to invest, at least in those locations with high costs of service. The inefficiency created by the rationing of places may then be accentuated by distortions to the pattern of investment, with places ultimately not being available when and where they are needed. The fact that the regulated prices are largely geographically uniform, despite substantial variations in costs, makes these risks of inefficiencies all the greater.[25]

[24] The Commonwealth sets the maximum fees that residents can be charged, with the important exception of accommodation bonds, which can only be charged in low care. There are no caps on the amount that can be charged for a bond (except that the resident must be left with a minimum level of assessable assets). In high care, no bonds can be charged (unless the resident is obtaining an 'extra service' room), and the maximum accommodation charge that the resident can be asked to pay is currently \$26.88 per day. Even in the small 'extra services' segment of the industry — where providers are allowed to charge residents higher prices in return for improved hotel and accommodation services — providers must first have their prices approved by the Department of Health and Ageing and can only change the prices they charge once every 12 months. These legislative requirements are set out in the Aged Care Act 1997 and in the principles made under that Act.

[25] For example, cost estimates for the construction of an aged-care home in 2006 varied from between \$90 600 and \$97 700 per place in Adelaide to between \$104 900 and \$113 100 in Brisbane (see Rawlisons 2006). Similarly, nursing wages, which are the most significant drivers of care costs, vary considerably between jurisdictions. For example, as at 1 March 2007, the top pay point for a Registered Nurses Grade

Most recently, the government's own consultative body, the NHHRC (which had access to an earlier form of this article), has commented on and summarised the adverse consequences of quantity restrictions on the various forms of efficiency as follows:

> Restrictions on the number of aged care places limit choices for older people. They result in an aged care sector with high occupancy: there is little real opportunity for people to move between aged care services; and people often feel they must take the first available place, rather than wait for their preferred facility, especially if they are waiting for aged care in a hospital. There is little incentive for aged care providers to be entrepreneurial and responsive to older people and their families — essentially, they have a 'captive market' — and no matter how well they provide care, they cannot increase their market share simply by attracting a larger number of older people, as they cannot simply expand existing facilities or open new ones due to restrictions on place … (NHHRC 2009: 171)

The complex structure of the current arrangements has partially disguised these distortions. While there are price controls over all forms of Government-assisted care, the controls over prices for 'low care' residential care are not especially effective, as suppliers are allowed to charge accommodation bonds (upfront payments for admission) that are virtually uncapped. The level of bonds charged has increased substantially over the years (with the average bond increasing by a factor of five in nominal terms over the period 1996–2006), and the value of many bonds now appears to materially exceed the replacement cost of a residential place.[26] In the last three years, the total value of the accommodation bonds held by the residential-care industry has almost doubled, from $2.7 billion to $5.3 billion. At the same time, the Government's 'Ageing in Place' policy largely assures residents who enter low-level care of being able to secure a high-level care place as and when their condition deteriorates. Suppliers of low-level care residential care have therefore been pre-selling high-level care and securing what amounts to a largely uncapped pre-payment for high-level care from low-level care bonds. With some 30 per cent of current non-concessional high-level care residents having paid low-level care bonds,

1 varies from $1110.36 a week in New South Wales to $963.45 in South Australia (see Australian Nursing Federation 2007).

[26] In 2007–08, more than half of residents who paid accommodation bonds to secure entry to residential aged care paid a bond worth more than $150 000. Some 22 per cent of bonds were worth less than $100 000 and 22 per cent were worth more than $250 000 (unpublished data for 2007–08 provided by the Australian Department of Health and Ageing). By comparison, the Australian Department of Health and Ageing estimates the average replacement cost of a residential-care place to be in the order of $150 000 (Australian Department of Health and Ageing 2009a).

there has been a cross-subsidy, or at least a financial transfer, from low-level care to high-level care, mitigating the impacts of the price controls.[27]

Above and beyond the efficiency issues, it is questionable whether the current arrangements are fully sustainable. Through the mechanisms set out above, these arrangements make the financing of high-level care depend, at least in part, on the flow of admissions into (and hence bond payments for) low-level care. However, demographic trends are likely to reduce demand for low-level care relative to high-level care, compromising this source of funding just as the need for high-level care places increases.

Already, recent reforms have rebalanced the supply of subsidised services more towards the provision of community rather than residential care, and (within residential care) towards high-level rather than low-level residential care.[28] As the trend away from low-level residential care proceeds, the financing of high-level residential care will become increasingly problematic.

Some degree of market response to these pressures is already occurring. More specifically, there appears to be a strong expansion under way in the 'Extra Service' segment of high-level residential care, where prices are less regulated.[29] These Extra Service homes are allowed to charge bonds, unlike other high-care providers, so that the aggregate charge they impose on residents is less effectively capped.[30] While Extra Service places have accounted for less than 1 per cent of

[27] In 2007–08, only one-third of aged-care homes that catered predominantly for residents needing high-level care (that is, fewer than 20 per cent of residents receiving low-level care) did not hold any accommodation bonds (unpublished data provided by the Australian Department of Health and Ageing).

[28] Originally, the planning arrangements sought to provide 100 aged-care places for every 1000 people aged at least 70. In recent years, provision has been expanded in real terms and is scheduled to reach 113 aged-care places for every 1000 people aged at least 70 by 2011. Over the last two decades, the planning arrangements have placed greater emphasis on community care. Moreover, all 100 places were originally residential places whereas, under the current arrangements, 25 out of every 113 places are community-care places. The planning arrangements have also been rebalanced to place a slightly greater emphasis on high-level care. Finally, high-level care places were initially planned to account for 40 per cent of all places. Under the current arrangements they are planned to account for 42.5 per cent of all places (Australian Department of Health and Ageing 2009b).

[29] The Aged Care Act 1997 (Cth) allows the Department of Health and Ageing to approve 'Extra Service' status for a residential aged-care home, or a distinct part of a home. Extra Service involves the provision of additional 'hotel'-type services or lifestyle extras, including higher standards of accommodation and increased entertainment and food choices. However, aged-care homes are only approved to offer Extra Service if their level of provision of these extras is significantly higher than average. While extra service homes provide a higher level of amenity, the level of care they provide cannot be different from that available in any other residential aged-care home.

[30] In general, accommodation bonds are higher in extra-service homes. In 2007–08, the average accommodation bond paid by new extra-service residents was 40% higher than the average accommodation bond paid by new residents who were not receiving care on an extra-service basis. Extra-service clients also pay an additional extra-service daily fee, with maximum fees approved on a case-by-case basis. The Australian Government's residential-care subsidy to the provider is then reduced by 25 per cent of the daily extra-service fee for that place (the extra-services reduction amount). Providers can recover this reduction from residents. There is very considerable variation in the quantum of these extra-service fees. Thus, while the average fee per bed-day for available places in December 2007 was $39.28, there was a substantial cluster of places available in the $20 to $45 per bed-day bracket. Indeed,

places in residential aged care, they now account for a substantial share of the recent growth in claim-days. Thus, the number of claim-days in Extra Service increased from around 650 000 in the six months to June 2004 to close to 1 000 000 in the six months to December 2006. The vast bulk of this growth has been accounted for by for-profit providers. Nonetheless, for the six months to December 2006, these providers accounted for 85 per cent of Extra Service claims, while Extra Service claims accounted for 10 per cent of all claims by for-profit providers.

This expansion in Extra Service is all the more remarkable given the fact that the means-testing arrangements for aged-care subsidies tend to penalise residents in Extra Service homes.[31] Undoubtedly, income and wealth effects are primarily at work, as a more affluent elderly population seeks care better attuned to the amenities it is used to enjoying. As access to these amenities increases the net benefit residents obtain from care (since they value the Extra Service at more than its additional cost), it enhances the efficiency of the aged-care sector as a whole. However, it would be less obviously efficient, and more likely undesirable, were Extra Service to expand simply because it was less constrained than other types of provision — that is, if Extra Service homes could use their relative pricing freedom (in a situation where restrictions on the number of places limit entry and competition) to charge prices durably above costs, while the more effectively price-regulated sector shrank as a result of unduly onerous price controls.

The expansion in Extra Service places cannot, in other words, make up for the lack of competition on the merits between providers and forms of care.

A better arrangement would have three elements.

First, it would reduce, and ultimately remove, controls over the number of places, which would provide more scope for competition and choice.

Second, it would alter the structure of the assistance provided so as to make it more neutral between the venues in which care was provided — that is, so that care in the community (be it domiciliary care or care in congregated living arrangements) could compete on an equal footing with care provided in conventional residential facilities.

52 per cent of extra-service places were priced at $35 dollars or under per bed-day. However it is the 32 per cent of providers that were charging above $50 per bed-day which brings up the average (unpublished data provided by the Australian Department of Health and Ageing).

[31] As noted immediately above, under current arrangements, the Commonwealth subsidy payable in respect of a resident in extra service is reduced by 25 per cent of the extra-service fee that the resident pays. Providers are allowed to recoup this reduction from the resident. The net impact is that a resident effectively pays 125 per cent of the extra-service fee (Sections 44-18 and 58-5 of the Aged Care Act 1997).

Third, as those changes came into effect, and competition became a real factor shaping market outcomes, controls over prices could be eased and eventually eliminated, ensuring efficient providers of aged care could fully recover their costs.[32]

While a number of approaches could be adopted to make such a change, there are two reasons why a sensible place to start in terms of significantly expanding capacity (and ultimately removing any restrictions on entry) would be high-level care. This is for two reasons.

First, demand for high-level care is likely to increase over time in response to the demographic changes noted above. Liberalising the supply of high-level care places would therefore be consistent with the patterns that would be observed in an effectively competitive market and would facilitate the transition to such a market.

Second, fiscal risk and, more generally, moral hazard[33] are less of a concern in high-level care than in other forms of long-term care. High-level care residential care is not desirable for its own sake, and few individuals would choose to consume high-level care merely because it was available at a subsidised charge.[34] Moreover, to the extent to which there is a concern about fiscal risk, that risk can be managed through the ACAT assessment process (which determines eligibility for care places on the basis of health condition), noting that that process appears to be most effective at the higher levels of impairment.

That said, until significant supply expansion has occurred, localized market power is likely to persist. For this reason, it would be preferable to only gradually ease price controls, contingent upon the development of competition in the industry as other restrictions are removed. This approach is in accord with the recent thinking of the NHHRC which recently stated that:

[32] This is not to suggest that post-liberalisation prices will be fully efficient. Given product differentiation, this is unlikely (see Arnott and Igarishi 2000). However, the resulting inefficiencies are likely to be very small relative to those of enduring price controls.

[33] Moral hazard can be defined as any change in behaviour due to the fact of becoming insured. Moral hazard need not be inefficient: the mere fact that a consumer can only afford to obtain (say) high-care residential care because the costs of that care are covered in whole or in part by the Commonwealth (which therefore acts as an insurer) does not mean that that care is valued at less than its cost (see generally Nyman 2003). However, the term 'moral hazard' is often used to spotlight the prospect of socially costly choices, on account of an insured individual not suffering the full (or any) consequences of decisions they make (and may actually benefit).

[34] Put in more technical terms, there are non-pecuniary costs to consuming high care that are not compensated for by the subsidised payments. Note that this does not mean that demand for high care is necessarily completely inelastic to price. It may be that prices charged for high care have an effect on the timing of entry or on the duration of stay, including by affecting the allocation of use as between high-care facilities and alternatives such as hospitals. However, it seems likely that demand would be inelastic at efficient prices (including for the alternative treatment options), so that there is little risk of inefficient moral hazard.

> Removing restrictions on the number of aged care places ... should result in increased competition in the provision of aged care, which may extend to price competition. This may enable some cautious relaxation of current constraints on charges for residential care accommodation. There may need to be continued regulation of charges in areas (for example, rural areas) where there are too few providers for there to be a competitive market for provision. (NHHRC 2009: 174).

Ultimately, reform should not be limited to high-level care, at least over the longer term. In particular, community care is the area where the growth in demand is likely to be greatest and it is also an area where there are substantial opportunities to increase efficiency. Moreover, increased availability of community care would, albeit indirectly, place increased competitive pressure on residential-care providers.

Relaxing controls over the number of community-care places is, however, more complicated, as the risks of moral hazard are greater for community care than for other forms of assistance. Experience in the United States and Europe points to a 'woodwork' effect in community care, whereby increased availability of financial support brings carers 'out of the woodwork', increasing budgetary costs without a corresponding increase in the volume of services provided.[35] Further policy development, aimed at better managing fiscal risk, is therefore needed before a substantial liberalisation of community care can be undertaken across the board.[36]

That risk, however, need not prevent an expansion in the number of community-care places at the upper end of the care spectrum; that is, at the levels of disability corresponding to the current Extended Aged Care at Home (EACH) packages, which provide high-level care nursing services in the home. In effect, the danger of an expansion in the number of places merely displacing care in the home that would have been provided in any event is significantly lower at these high levels of disability.

Such an expansion in EACH packages (and ultimately in community care more generally) would have wider implications for residential-care providers. Specifically, increases in community care create a need for additional access to respite care; that is, for short-duration stays in residential care that serve either

[35] For evidence on moral hazard risks in community care in the United States, see Grabowski 2006. For Europe, see Karlsson *et al*. 2004. There is also evidence of moral hazard in the recent Scottish experience with 'free' (effectively, less-restricted) access to community care — see the increases in expenditure reported in Bell and Bowes 2006. This can be compared with the low incidence of moral hazard in residential care reported in Grabowski and Gruber 2006.

[36] For example, given greater moral hazard, it may be efficient to means test community-care packages more stringently (which would be the equivalent of a higher deductible in an insurance contract). While there are many forms this could take, one would be to provide a matching grant which required a very low level of matching payment by the beneficiary for low levels of outlays and high levels of matching for higher levels of outlays.

to deal with periods where acute care is required or to provide a rest period to carers. Respite care tends to be costlier than longer-duration residential care (inter alia because admission and discharge costs are incurred more frequently), so provision would need to be made for these costs. Moreover, so as to meet this need, providers of residential care would need greater flexibility to use places for respite-care purposes than they currently have. Indeed, an increased emphasis on respite care is one direction current ‘low care’ providers could take in a more competitive environment.

Over the longer term, care in the community and residential care should be allowed to compete as alternative venues for care provision. For this to occur, the ‘care’ component of any subsidy provided to residents would need to be effectively separated from the ‘accommodation’ component, with each of these ultimately becoming portable (so that they can be used for distinct service providers). While reforms in recent years have taken steps in that direction, there remains a considerable distance to go before the subsidies provided come to resemble fully portable and separable vouchers.[37]

This is not to say the current distortions all favour residential care: that is not the case. For example, under current arrangements, means-testing applies to residential services, but not to domiciliary care. A move to a more neutral system would involve not merely a transferable voucher, but one that was subject to the same means-testing (and hopefully to substantially simpler and more transparent means-testing than currently applies) wherever that voucher was ultimately applied. Moreover, it is important that, in contrast to the situation as it stands, the means-testing be the same as between residential and non-residential care options.

There are precedents for use of voucher-like mechanisms in other countries.[38] Of course, the devil is in the details, and on what terms such vouchers should be made available is a matter of legitimate debate. For instance, in recommending the removal of restrictions on the quantity of aged-care places, the NHHRC has

[37] One of the central features of the amendments made to the Aged Care Act 1997 by the Aged Care Amendment (2008 Measures No. 1) Act 2008 — the first Act of the Rudd Government — is to clearly separate funding for hotel and accommodation services from funding for care. The new arrangements have also removed extraneous eligibility requirements for concessional treatment (such as pension status) and introduced means-tests that treat pensioners and self-funded retirees with the same level of income or assets equivalently.

Under the new arrangements, funding for hotel and accommodation services is principally the responsibility of residents, who pay a daily accommodation charge (based on their ability to contribute as measured by their assessable assets). Government support for accommodation costs is only paid in respect of those residents who cannot meet their own costs and only paid to the extent to which they cannot meet those costs. (Residents who enter low-level care still have the option to pay an accommodation bond rather than an accommodation charge.) Funding for care, on the other hand, remains principally the responsibility of the Commonwealth, with the resident contributing according to assessable income up to a defined cap.

[38] For examples, see Productivity Commission 2008: 116ff.

also advised that providers of aged care would still need to meet existing criteria in order for the care they provide to be eligible for government support, including being an approved provider under the Aged Care Act and having their facilities accredited (NHHRC 2009: 172). Such criteria could be made readily applicable to a voucher scheme.

In short, the current arrangements, while likely relatively effective in providing for equitable access to aged-care services, achieve that goal at what appears to be an unnecessarily high cost. There is a complex tangle of quantitative restrictions that impedes supply flexibility and limits competition. The lack of competition and the desire to limit the Commonwealth's fiscal exposure then give rise to price controls which, though extensive, are of very differing degrees of effectiveness. Consumers face restricted (and distorted) choices in terms of the range of care available, and charges that are often difficult to understand as a result of the interaction of complex prices with even more complex income and assets tests. Recent changes to policy do move broadly in the right direction in addressing these issues; but there remains a need for more comprehensive reform, which by its nature will take some years to devise and effect.

Conclusions

With or without the reforms suggested above, funding aged care will place a growing burden on the community. Currently, 1.2 per cent of Gross National Income goes on the provision of residential aged-care and community-care packages. Under current policies, public and private expenditure on aged care will more than double, to 2.9 per cent of GNI by 2046–47.[39]

The National Centre for Social and Economic Modelling has projected that there will be a 160 per cent increase in the number of older people needing care over the 30 years from 2001 to 2031 (National Centre for Social and Economic Modelling 2004). As a result, there will need to be increased investment in the construction of aged-care facilities. Currently, aged care accounts for about 5 per cent of all non-residential construction (Australian Bureau of Statistics 2008b). This share can be expected to increase over the next 40 years. There will also be an increased workforce requirement. Currently, the aged-care sector employs about 2 per cent of the workforce.[40] This share can be expected to double over the next 40 years. Indeed, by 2050, one in 25 workers will be employed in the provision of aged care.

But in itself, this is hardly a concern. Market economies are always restructuring. Today, the communications industry accounts for 2.7 per cent of

[39] Estimated by applying the current public/private split of funding (69 per cent/31 per cent) to estimates of public expenditure on residential aged-care and community-care packages. See Australian Government 2007. Similar estimates have been derived by Productivity Commission 2004.
[40] Estimate, based on unpublished data provided by the Department of Health and Ageing, Canberra.

Australia's Gross Domestic Product. Thirty years ago that share was 0.8 per cent. A century ago, it would have been much less than that. So, as far as the Australian economy is concerned, the adjustment required to meet the aged-care needs of the ageing population is no greater than has occurred over the last 30 years to meet the increased demand for communication services.

The issues for Government are how to ensure that the economy is able to make this adjustment efficiently, noting that under current policy settings the share of Commonwealth revenues that may need to be spent on aged care will also increase significantly. Currently, the Commonwealth spends about 3 per cent of its revenues on aged care. By 2050, absent significant policy change, this share can be expected to triple, to about 9 per cent.

At the moment, the bulk of aged-care funding is provided by the Commonwealth Government through consolidated revenue. Funding aged care in this way amounts to requiring current tax-payers, who are mainly in the labour force, to pay for the costs of caring for older Australians. The deadweight losses associated with raising this revenue make it all the more important that service provision be as efficient as possible. Moving towards a system that relied more on competitive forces, albeit within limits set by effective service-quality regulation, would help achieve that objective.

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Water and Wastewater Services in Non-Metropolitan New South Wales: A Critical Analysis of the Report of the Independent Inquiry

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Abstract

The Report of the Inquiry into water services in non-metropolitan New South Wales recommended that the state's local water utilities be 'aggregated' into 'regional groups organised either by means of a "binding alliance" model, a "council-owned regional water corporation" model, or the "status quo *for some large general purpose councils and county councils". This paper critically examines these recommendations in the light of existing theoretical and empirical literature on structural reform in Australian local government generally, and water-utility reform specifically.*

Introduction

For more than a century structural change has been the main weapon in the arsenal of Australian local government policymakers in all state and territory jurisdictions (Vince 1997). Moreover, the application of structural-change policies to Australian local government has almost always taken the form of compulsory mergers of small neighbouring local councils into larger organisational entities, invariably on the rationale that not only is 'bigger better' in terms of the range and quality of local service provision, but also that 'bigger is cheaper', thus yielding operational cost savings (Dollery, Byrnes and Crase 2008a).

While the great majority of structural-reform programs in local government have focused on the forced amalgamation of local councils (Dollery, Crase and Johnson 2006), not all policy has been directed at local authorities as discrete entities. On various occasions, the legislators for local government have sought to reconfigure specific aspects of local government service provision through structural change. For example, in 1994, the Victorian state government compulsorily removed water and wastewater provision from local government; this process involved the consolidation of around 140 non-metropolitan water providers into just 15 state-owned urban water authorities in country Victoria, with no compensation paid to local councils (Victorian Auditor-General's Office

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2000). In 2005, further rationalisation occurred, reducing the number of non-metropolitan utilities to 13 entities.

Apparently inspired by the Victorian experience, in late 2007 the New South Wales government set in motion a policy process under the auspices of an inquiry aimed at 'reforming' water and wastewater provision in non-metropolitan NSW. In its *Report of the Independent Inquiry into the Secure and Sustainable Urban Water Supply and Sewerage Services for Non-Metropolitan NSW,* presented in December 2008, the Inquiry (2008: 6) proposed numerous recommendations for the reform of water and wastewater services, including the structural 'reconfiguration' of the industry through the 'aggregation' of the existing local water utilities into 'regional groups'. Further, the Inquiry argued that its proposed regional groups should adopt one of three possible institutional vehicles. This paper seeks to assess the wisdom of these two structural-reform recommendations presented by the Inquiry in the light of contemporary theoretical and empirical knowledge in the area.

The New South Wales Water Inquiry Recommendations

On 15 August 2007, the (then) NSW Minister for Water Utilities, Nathan Rees, announced an Inquiry into the Secure and Sustainable Urban Water Supply and Sewerage Services for Non-Metropolitan NSW. The ambit of the Inquiry lay in the 104 water utilities which provide urban water supply and sewerage in rural and regional NSW, with Sydney Water, Hunter Water, the Gosford City Council water supply authority and the Wyong Shire Council water supply authority deliberately excluded from the Inquiry.

In December 2008 the Inquiry's Final Report argued that the 104 local water utilities presently operating in non-metropolitan NSW should be 'aggregated' into '32 regional groups'. Moreover, it recommended that 'three organisational structure options should be considered' for the proposed regional groups; the 'binding alliance' model 'for planning and technical functions', the 'council-owned regional water corporation' model, and the '*status quo* for some large general purpose councils and county councils'.

The Inquiry observed that both 'the "binding alliance" and "*status quo*" options allow councils to retain ownership and management of water supply and sewerage assets and to continue providing customer services'. However, it noted that the 'council-owned regional water corporation' model involved 'the transfer of water supply and sewerage assets, related staff and service delivery responsibilities from councils to the corporation' and added the stipulation that those 'councils that are the beneficiaries of the corporation's services would be the only shareholders of the corporation'.

The two main recommendations in the Final Report followed from its analysis of the 'challenges facing the non-metropolitan urban water supply and sewerage

industry'. From this analysis, the Final Report drew the following general conclusions: Observed performance levels measured against indicators listed in the 2006/07 NSW Water Supply and Sewerage Performance Monitoring Report, for both the water and sewerage services, showed that 'levels of performance are variable and that, in particular, small water utilities do not perform well compared to large water utilities in the implementation of the Best Practice Management of Water Supply and Sewerage Guidelines'. Moreover, 'the adoption of these guidelines is fundamental to long-term business sustainability'. The Final Report then identified 'business sophistication' and 'operating scale' as the 'two major attributes for future sustainability' for the industry.

The Final Report (2008: 29) explicitly acknowledged that 'economies of scale are not evident in water and wastewater services'. It observed further that 'in regard to operating scale there are conflicting views regarding the desirability of increasing the size of water supply and sewerage service providers'. On the one hand, 'those not supportive of "regionalising" or increasing the size of individual utilities are of the view that regionalisation and larger utilities will impact detrimentally on local council viability, employment and small communities'. On the other hand, 'there are elements of local water-utility performance that are related to utilities' size' which derive from 'the fact that many smaller utilities do not have the resources or expertise to perform at a level of competence displayed by some of the larger water utilities'. While sympathetic to the latter view, the Inquiry (2008: 29) nonetheless recognised that if the presumption that utility size was indeed related to superior observed performance, then this could be addressed through either 'resource sharing among councils' or 'organisational restructuring' as 'some of the options that need to be examined'.

These conclusions led the Final Report to examine in detail the various policy options for 'aggregating' or 'regionalising' existing council operations, as well as 'business structure options' that would 'drive efficiency improvements while ensuring that the impacts on local council viability, employment and local communities are minimal'. We will consider critically its deliberations on these two questions separately below.

The 'Aggregation' Recommendation

Against the background of submissions to the Inquiry and the spatial dispersion of local water utilities in non-metropolitan NSW, the Final Report considered only two aggregation options in Chapter 4: 'Regional Aggregation' and 'Catchment Aggregation'. Since the 'Regional Aggregation' approach represented the preferred option of the Inquiry, we consider only this option in detail.[2]

[2] The second-best 'aggregation' proposal put forward in the Final Report (2008: 36–7) consists of the 'Catchment Aggregation' option, which yields 15 aggregations or groupings of local water utilities.

'Six criteria' formed the basis for 'determining the size and composition' (pp.33–4) of the 'Regional Aggregation' option:

- Each aggregation of local water utilities should exceed 'at least 10 000 connected properties', with this minimum size stipulated because (a) 'non-metropolitan local water utilities above this size in NSW generally demonstrate superior performance'; and (b) it represents the 'minimum size for inclusion in reporting under the National Water Initiative's National Performance Framework'.
- Each aggregation should have an 'annual revenue of at least $10 million' on grounds that 'properly managed local water utilities with such revenues are financially resilient, readily able to raise capital and service debt and attract skilled staff'; a criterion which 'generally' overlaps with the 10 000 connected properties stipulation.
- Each aggregation should be 'sensitive to catchment boundaries' since 'environmental catchments create natural boundaries around water sources and receiving bodies'.
- Each aggregation should build on 'existing alliances between local water utilities' to the maximum extent possible, such as a 'Regional Organisation of Council grouping', of which in non-metropolitan NSW there are 12 groupings.
- Each aggregation should contain 'a major regional centre' since these centres have the 'size/scale'.
- Each aggregation should be consistent with 'submissions made to the Inquiry in order to ensure that 'as far as possible the aggregations reflect the suggestions provided in submissions and presentations to the Inquiry'.

The 'Regional Aggregation' option contains 32 groupings of local water utilities, which are set out in Appendix 1 of the Final Report and illustrated in Map 5 (p.36).

The results of this aggregation exercise were as follows: 14/15 binding alliances, two sewerage alliances, one/three 'council-owned regional water corporations, eight 'stand-alone water supply and sewerage utilities', two/three county councils, and three 'stand-alone water supply authorities'. In cases where a range of entities is recommended, the Final Report proposes alternative structures for some groupings.

In addition to these proposals, the Final Report (2008: 115) made recommendations regarding the 'special cases' of existing County Councils under its preferred structural-reform option of regional aggregation, which included the Goldenfields Water County Council, Riverina Water County Council, MidCoast Water County Council and the Rous Water and Central Tablelands Water County Councils. It also noted that if a Far Western Binding Alliance is established, comprising Broken Hill, Central Darling and Bourke and Brewarrina,

then special care should be taken due to the vast distances involved and the high incidence of socioeconomic disadvantage. Finally, the Final Report recommended that the Fish River and Cobar Water Board continue to operate as before.

‘Aggregations’ and Economies of Scale

Even compared with the scant literature on amalgamation of councils, very little research has been directed at the water and sewerage functions of local councils, with the notable exceptions of the Allan Report (2006), Byrnes (2008), Byrnes, Dollery, Crase and Villano (2008a; 2008b) and Dollery (2008). Serendipitously, almost all of the very limited work that has been done in this area has focused mainly on an empirical evaluation of the efficiency of water and wastewater provision in the non-metropolitan regions of NSW and Victoria as a case study of a ‘natural experiment’. As we noted earlier, while Victoria has ‘regionalised’ water and wastewater services through forced amalgamation, NSW has yet to embark on this course of action, which has afforded researchers an excellent opportunity to compare the relative efficiency of these two approaches.

With respect to wastewater, in addition to the seminal earlier work in the Allan Report (2006), Byrnes, Dollery, Crase and Villano (2008a) considered the efficiency characteristics of local wastewater services in non-metropolitan NSW and Victoria by examining 14 Victorian and 42 NSW water utilities over the period July 2000 to June 2004. Two major conclusions can be drawn from this analysis. Firstly, scale economies do not exist in wastewater services and other factors predominant in determining relative efficiency, especially the proportion of residential users compared with industrial users and the composition of governance boards. The main policy implication flowing from this analysis was that ‘bigger is not better’ and thus ‘regionalization’ could not hope to gain any economic benefits from scale economies in wastewater. Secondly, the Allan Report (2006) recommended cooperation between councils on the acquisition and sharing of scarce skilled employees, while Byrnes, Dollery, Crase and Villano (2008b) showed that the composition of water-utility governing boards should be changed to include more people with specialized expertise. In policy terms, it follows that wastewater-utility reform in NSW should concentrate on enhancing council cooperation in skills sharing and the composition of governing boards rather than on structural change.

With respect to water services, very similar conclusions emerge. In an interstate efficiency study, Byrnes, Dollery, Crase and Villano (2008b) examined 52 water utilities from regional NSW and Victoria in order to measure the relative productive efficiency of these water utilities over the four year period 2000 to 2004. The policy implications of this work are as follows: there are no significant scale economies in water services and other factors determine relative efficiency, such as groundwater availability, conservation measures, the proportion of

industrial users, and especially the composition of governance boards. It follows that in local water services 'bigger is not better' and thus 'regionalization' could not hope to reap any economic benefits from scale economies. In addition, as in the case of wastewater services, the Allan Report (2006) recommended that adjacent councils share skilled employees and Byrnes, Dollery, Crase and Villano (2008b) argued that the composition of water-utility governing boards should reflect more people with specialised expertise. In common with wastewater, it would thus seem that water-utility reform in NSW should concentrate on enhancing council cooperation in skills sharing and modifying the composition of governing boards.

In a pre-emptive defence of the Regional Aggregations proposed under preferred option 1, the authors of the Final Report made special reference to a lengthy submission to the Inquiry by Dollery (2008), in the form of an independent report produced for the United Services Union, which considered the problem of the empirical magnitude of scale economies in water and wastewater services. Dollery (2008) drew heavily on the Allan Report (2006), Byrnes (2008), and Byrnes, Dollery, Crase and Villano (2008a; 2008b) in order to argue that not only did no scale economies exist in water and wastewater services, but that existing work, which compared the Victoria and NSW industries, showed that diseconomies of scale were apparent in Victoria in the aftermath of that state's radical restructuring program.

In an effort to rebut this line of criticism, the authors of the Final Report (2008: 35) observed that 'the United Services Union's [Dollery 2008] submission suggests that diseconomies of scale may be generated by "regionalisation"' on grounds that 'research into the relative efficiency of NSW and Victorian water utilities referred to in Chapter 3 [of the Final Report] indicates that while the Victorian water utilities tend to be more technically efficient, the efficiency gap is reduced by the diseconomies of scale affecting the Victorian water utilities'. The Inquiry thus accepted that 'there are additional costs to being "too big"' in water and wastewater services. In other words, the Final Report fully endorsed the arguments on scale diseconomies advanced in Dollery (2008), which present serious problems for any proposals recommending structural change aimed at increasing the size of water utilities, such as the Regional Aggregation option supported in the Final Report.

The thrust of this empirical argument is parried in the Final Report (2008: 35) using the following line of argument: 'The 13 Victorian non-metropolitan water utilities serve an average 46 000 connected properties (range 14 000 to 127 000 properties)' whereas, by contrast, 'the size of groups proposed in Option 1 would vary between approximately 8 300 – 60 000 connected properties'. In essence, the authors of the Final Report contend that scale diseconomies will not afflict the proposed Regional Aggregation option groupings of water and

wastewater services because they are, on average, smaller than their Victorian counterparts, when size is measured in terms of connected properties, rather than some other factor, such as gross spatial area serviced.

This argument is problematical. Quite apart from the obvious point that the size of the proposed groupings for non-metropolitan NSW overlap considerably with the amalgamated Victorian utilities, with some recommended NSW groupings exceeding the size of their Victorian equivalents in terms of connected properties, it also ignores important qualifications provided by Byrnes (2008), Byrnes, Dollery, Crase and Villano (2008a; 2008b) and Dollery (2008) as well as well-known arguments in the literature on the efficiency measurement of local service provision (see, for instance, Worthington and Dollery 2000a).

In the first place, for both sewerage and wastewater services, Byrnes (2008), Byrnes, Dollery, Crase and Villano (2008a; 2008b) and Dollery (2008) were at pains to stress that factors other than the scale of operations and the composition of governance boards were at play in determining efficiency. For example, in the case of wastewater, the treatment of sewage depends (in part) on where effluent is discharged, a factor often beyond the control of local councils. Similarly, Byrnes, Dollery, Crase and Villano (2008a) argued that the proportion of residential users compared with industrial users, which councils typically cannot influence substantially, had a significant impact. In an analogous vein, for water services, Byrnes, Dollery, Crase and Villano (2008b) found that external factors, including access to groundwater, drought-induced conservation measures, and the proportion of industrial users, affected efficiency.

These observations on the comparative efficiency of water and wastewater utilities echo a much broader theme in the international empirical literature on performance monitoring (Worthington and Dollery 2008) and efficiency measurement in local government service provision (Worthington and Dollery 2000a; 2000b), which has an Australian local government strand (Worthington and Dollery 2001; 2002). It is well-known that numerous ‘non-discretionary’ factors, which cannot be controlled by local authorities, can have a decisive impact on the economic efficiency of service provision. Given the vast differences in climatic, environmental, topographical and other natural factors, as well as water endowments, between the different local government areas in non-metropolitan NSW, it is hardly surprising that differences in council performance in service delivery have emerged. However, because a substantial, and largely unknowable, proportion of differences in performance are directly attributable to non-discretionary external factors, public policy must take this into account. Structural change enacted on the assumption that councils have complete discretion over operational efficiency is thus unwise.

A further problem with the Regional Aggregation groupings proposed in the Final Report revolves around the case for a uniform minimum size for these

groupings of 10 000 connected properties. In their analysis in Chapter 3 of the Final Report, its authors argued that existing small water utilities did not perform well compared to their larger counterparts on the implementation of the Best Practice Management of Water Supply and Sewerage Guidelines, as measured in terms various specific compliance indicators. While this is certainly true at first sight, a well-known and significant problem with reporting frameworks, such as the NSW Best Practice Management of Water Supply and Sewerage Guidelines, is that they rely on partial performance indicators, expressed in absolute terms. Comparing the 'performance' of different utilities is thus of severely limited value, since a given utility may be the benchmark for one indicator, in the medium range for a second indicator, and 'bottom of the class' for a third (Worthington and Dollery 2008). Ranking thus becomes meaningless.

A final noteworthy feature of the 32 groupings proposed under the Regional Aggregation option is that not all groupings meet the six criteria for structural aggregation set out in the Final Report. In this regard, the authors of the Final Report (2008: 35–6) observe that 'a majority of the 32 proposed groups satisfy the aggregation criteria; however, not all do'. By way of illustration, the Final Report provided four examples of cases which did not fully met the criteria:

- The proposed Western Ranges water utility (Yass Valley, Gundagai, Tumut and Tumbarumba) and the Snowy Monaro Region (Cooma-Monaro, Snowy River and Bombala) both had 'slightly less than 10 000 connected properties';
- The proposed Snowy Monaro Region will have 'an annual combined revenue of about $9 million';
- Only 17 of the 32 proposed groupings had a 'major regional centre'; and
- Only 23 of the 32 proposed groupings 'have been based on, or are exactly defined by, LWU submissions to the Inquiry'.

These considerations suggest that the 32 Regional Aggregate groupings should be regarded as indicative rather than mandatory. Put differently, the problems we have identified indicate that sewerage and water-utility restructuring should depend on the particular circumstances of specific councils rather than a blanket prescription for all councils.

The Recommendations on Organisational Structure

The second major recommendation on structural change in the Final Report dealt with the optimal organisational arrangements for the entities identified under the preferred Regional Aggregation groupings.

The Report concluded that the Binding Alliance model, Council-owned Regional Water Corporations, and the *Status Quo* model ('for some large local water utilities'), all had 'the potential to meet all of the evaluation criteria' (p.61). In the light of the submissions it received, the Final Report (2008: 61) also emphasised that 'many councils favour models that can be adopted to minimise

impacts on asset ownership, revenues, employment and communities — models which negate the need for wide-ranging structural change', which 'in most cases' would suggest the formation of 'a regional binding alliance to deliver water supply and sewerage services'. It even recognised potential problems with the Binding Alliance model: 'The binding alliance model is not perfect because there is potentially tension between strategic decision making and program implementation as these functions are conducted by separate legal entities', which could be remedied by 'close cooperation between the alliance entity and the member councils, together with concise service agreements backed by legislative force'.

This analysis is in broad agreement with the Davis, Paddon and Chong (2008: 17) assessment of their conceptually identical Regional Mandatory Alliance, which they contend represents 'a minimalist' option since it 'imposes the least change' on local water utilities. Under this model, water utilities 'retain ownership of assets; conduct local operations; and make local decisions'. Moreover, 'an agreed scope of pooled activities would be set up centrally and participants simply pay pro rata for their share of the services'. The authors contend that membership of the model 'must be mandatory' otherwise 'it risks falling apart in the face of difficulties or a lack of interest'.

In comparison with the Council-Owned Regional Water Corporation model, the only other structural-change organisational model recommended in the Final Report, bearing in mind the third option is the *Status Quo* model, both Davis, Paddon and Chong (2008) and the authors of the Final Report (2008) seem to be correct that the Binding Alliance model represents a 'minimalist' option. However, the analysis of the Binding Alliance model in the Final report, as well as the Council-Owned Regional Water Corporation model, leaves many questions unanswered.

By far the most important of these neglected aspects of the Binding Alliance model, which is recommended for 14/15 of the 32 proposed Regional Aggregations, and by far the most 'restructured' of these groupings, as we can see from Appendix 1, Map 5, resides in the thorny problem of costing this model. Indeed, the authors of the Final Report (2008: 61) freely admit to ignoring this critical question by noting that 'comprehensive costing has not been conducted for the models discussed in this chapter'. Instead the Final Report has relied exclusively on a single submission for information on costing the Binding Alliance. It noted that 'RAMROC has provided indicative costs for its binding alliance model'. On the basis of these costs, the Final Report estimated that 'each new alliance would require between $375 000 and $720 000 to resource per annum', which equates to between roughly $7 million to $14 million across NSW per year. This impost is defended on grounds that 'the benefits from this model, including professional strategic planning and access to specialist technical skills,

which are essential in any future delivery arrangements are expected to more than counterbalance these costs' (p.62).

The highly unsatisfactory nature of this *ad hoc* method of costing is underlined by an analysis of the original submission by RAMROC (2008), which outlines the 'methodology' used by RAMROC in its costing procedure. RAMROC (2008: 5) arrived at its costings as follows: 'As a *straw man* for the sake of this submission, the initial format for RAMROC Water could be an office with a general manager, an engineer and an administrative officer' (original emphasis). From this, RAMROC divined that 'the cost of that service would be roughly, divided amongst 18 councils (smallest six paying $20k pa; medium ten paying $40k pa and the largest two paying $75k pa)'. In addition, in its submission, RAMROC observed that 'finding answers to the big questions will take both time and money' (pp. 5–6). Thus,

> completing a rigorous analysis of options, consulting with member councils (not all are fully committed at the time of writing) and developing a sound, flexible business plan for RAMROC Water will take at least six months, and the costs would be approximately $200k for an external consultant, plus all the member councils' investments of time and resources to support the work.

RAMROC suggested these latter funds should be provided by the NSW government.[3]

The highly arbitrary 'back-of-the-envelope' nature of this costing method cannot be over-estimated. Indeed, it is easy to illustrate that the Final Report has erred badly in using the RAMROC (2008) submission calculations as the basis for its cost estimates. In the first place, the $375 000 and $720 000 range advanced in the Final Report (2008: 62) completely ignores establishment costs.[4] Secondly, with 18 member councils, RAMROC would be by far the largest Binding Alliance in NSW, with the next largest (Central Tablelands Region) containing nine councils, and most proposed models of this kind incorporating only between five and two councils. It follows that per-capita costs for both member councils and connected properties would vary enormously. Thirdly, with the estimated $375 000 and $720 000 range, how can this provide a Binding Alliance office, a general manager, an engineer and an administrative officer in all cases? Finally, no estimates of the influence of purported economies of scope are made.

[3] These establishment costs are completely ignored in the Final Report, despite the heavy potential per-capita impost they could impose on small councils.

[4] Appendix 3 in the Final Report (2008: 121) erroneously refers to the $375 000 and $720 000 range proposed (as 'a straw man') by RAMROC (2008: 5) as 'initial set up costs'. In fact, RAMROC postulated these costs as annual ongoing costs and are used in this manner in the calculations performed in the Final Report in Appendix 3.

The *ad hoc* nature of the costing provided for the Binding Alliance in the Final Report serves to undermine many of the favourable claims made in support of this model. Perhaps the most worrying dimension of the inadequate costing is the potential for the costs of small Binding Alliances to be far higher than their larger counterparts, since almost all the costs of the Binding Alliance organisational entity are fixed costs, predominantly in the form of salaries. Thus for Binding Alliances consisting of a few members, these fixed costs will be spread across only a limited number of councils thereby raising the impost on individual municipalities. This suggests that a cautious 'case-by-case' approach should be taken to Regional Aggregation. If individual councils can demonstrate excessive costs or unusual circumstances, then provision should be made for them to be exempt from Regional Aggregation.

Concluding Remarks

What general policy implications emerge from our analysis of the two main structural change proposals developed in the Final Report? In the first place, we have seen that serious reservations exist on the specification of the Regional Aggregation groupings.

For example, we have demonstrated that the Final Report has failed to recognise the significance of 'non-discretionary' factors, beyond the control of local authorities, which have a profound influence on the economic efficiency of water and wastewater service provision. Given the drastic physical and human differences confronted by councils in different parts of NSW, this failure can have ominous consequences for some of the proposed Regional Aggregations. Similarly, we showed that the Final Report had misguidedly used only partial performance indicators drawn from the NSW Best Practice Management of Water Supply and Sewerage Guidelines to gauge performance, despite the well-known problems associated with this approach. This had led to the use of false assumptions on council size and council efficiency in the Final Report. Moreover, the rough and ready nature of many of the Regional Aggregation groupings is further underlined by the fact that many of these groupings did not even meet the six criteria for structural aggregation developed in the Final Report. These deficiencies in the Regional Aggregation groupings strongly suggest that groupings should be used only on an indicative basis and membership should accordingly be on a voluntary basis.

Secondly, the Final Report proposed three organisational models suitable for employment in the Regional Aggregation context: The Council-Owned Regional Water Corporation model, the Binding Alliance model, and the *Status Quo* model (in some limited instances). With respect to the application of these models, the Binding Alliance is by far the most important model since it is the recommended option for a great majority of council groupings. However, we have demonstrated that the Final Report unwisely relied on the 'straw man' estimates provided by

RAMROC (2008) in its submission to the Inquiry. This was unfortunate in several respects, not least the fact that the RAMROC figures were designed for the largest grouping and not for the 'median' grouping. Moreover, the Final Report completely ignored establishment costs and their potential impact on small groupings. Finally, the Final Report made no attempt to estimate scope economies in its efforts at costing. The policy consequences of these shortcomings strongly suggest that the financial characteristics of the Binding Alliance are not understood and thus the adoption of this organisational model should be contingent on individual council circumstances rather than on compulsion.

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RETROSPECT

"The power of simple theory and important facts": A Conversation with Bob Gregory

William Coleman[1]

Abstract

Bob Gregory contrasts 'the presuppositions of Royal Parade' of 1950 Melbourne with the present outlook of himself and Australia at large. He outlines the evolution of his methodological position from the University of Melbourne student to the Canberra policy advisor, and defends that position from criticism. He recalls the genesis of the Gregory Thesis, and advances his account of the decline of trade unionism, the impact of the welfare state on household formation, and Aboriginal unemployment.

Bob Gregory is Professor Emeritus at the Australian National University, and one of the most influential shapers of Australian economic policy in the last generation. He was elected Fellow of the Academy of Social Sciences in 1979, awarded the Order of Australia Medal in 1996, and made a Distinguished Fellow of the Economic Society of Australia in 2001. He was interviewed in his Canberra home in June 2007.

WC: *Let's begin with your childhood. I've read the tribute in the* Economic Record *(Chapman 2002) and I've read the interview recorded at the National Library of Australia (Moyle 2002), and there's some dissonance between the two accounts. The picture which we received of your childhood in the* Economic Record *is that you were, to use the phrase deployed, 'lower middle class'. But, in the interview at the National Library you recall of your childhood that your father 'made a reasonable sum of money, was reasonably rich at the time'. Isn't there a dissonance there?*

BG: Yes. I need to be more precise. My situation was not straightforward in that I was neither well-off nor poor. I will start with my father's background. My father left school at 14, as did all members of the family. My father's family, when he was young, was much poorer than my family when I was young. He had grown up in a wood-yard in Brunswick. The family delivered wood in the winter and ice in the summer. There were at least two horses stabled in a normal suburban backyard. You can imagine the mud, flies, horse manure and so on. With this background Dad had no access to capital when he left school.

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Within a year of leaving school Dad had started his own business with a suitcase on the front of a bicycle. It was in 1931. He brought books to people's homes, the woman paid sixpence a week, then he came back and changed the books the next week. He was a travelling library. After a while, he began to sell stockings. Stockings were expensive and housewives were looking for ways to get credit to buy them. By the time he was 21, he had made enough money that he owned a small car and his business now extended to all clothing, on credit. By the standards of the '30 he was well off, sufficiently so that he could buy a house in Pascoe Vale when he got married at 25 years of age. Pascoe Vale was the suburb where working-class people who had done reasonably well in Brunswick and North Melbourne would move to. It was the north-west frontier of Melbourne in the late '30s.

Although Dad had a prosperous business, the family had little spare money. Almost all the money went back into the business to provide capital for growth. The major asset of the business was the money people owed. Hence, a good year for business meant increased debtors and shortages of capital. Dad was asset rich but income poor. For handkerchiefs, for example, I used shirts cut up. But when Christmas came, if I wanted a football, I was given one. We had a phone; there was a time when that was the only phone among the neighbours. (We had the phone because Dad needed it for business). So, if you counted the family assets my father was doing well but we lived frugally, very much the same as everyone else in the neighbourhood. When we had lamb once a week, apart from chops, we bought 'two tooth'.

WC: *What's 'two tooth'?*

BG: Two tooth is a one-year-old lamb. It has two teeth and is rather tough. The leg of lamb lasted Sunday dinner, Monday dinner and Tuesday dinner. Sunday we ate the roast. Monday we ate the cold lamb (maybe two or three thin slices each) and Tuesday we ate the hash (the leftover lamb cut up and fried/boiled with potato and carrots). Nowadays, a household of that size might eat one leg in one sitting. We were frugal. I can still remember that the slices were too thin and there was never enough for me. One of the questions social scientists often ask of the poor in surveys is, 'Could you quickly raise a thousand dollars if you had to?' Well, we could do that. We lived frugally, but we were not poor.

WC: *Can you articulate the attitudes of the household?*

BG: I think our household attitudes were similar to all the families in the street. The prevailing attitudes of the neighbourhood were not those that you would find in a very poor area. Everybody belonged to a married-couple family with 2.3 children, there were no alcoholics to my knowledge, no one got shot, no robberies (although we were robbed once), no domestic violence. It was somewhere between a working-class and a middle-class neighbourhood. There

was no such thing as 'a tradesman's entrance' which I have seen used as a definition of middle-class housing in the eastern suburbs of Melbourne.

Everybody in my street, Royal Parade, thought that the right thing to do was to keep their children in school past 14 years of age. Everyone was very keen on education and very influenced by the Depression years. Everybody thought of themselves as upwardly mobile (through their children) but no-one thought of sending their children to university; although many thought of the schoolteacher option.

Neither parent was ambitious for me, in that I was not excessively encouraged to succeed. Dad never mentioned careers to me, and Mum only wanted me to be happy. I guess the most important thing was to get married to a nice girl, have children, keep the marriage together and remain close to the family. Family was very important. As far as I know, my parents did not have close friends outside of the family, with perhaps one or two exceptions. And, in any event, their friends never visited the house for dinner.

My mother was always home and never worked in the labour market after marriage. This was true of all the women in the street. She was always there for me. My father got drafted in '42. So I was brought up during my first three to seven years by two women; my mother and my mother's step-sister. One of my war memories from that time was that Mother used to threaten my sister and me that, if we didn't behave, she would run off with a Yank. I guess that shows how old my mother was, what people were thinking about and how much impact the Americans and their money was having in Australia. Running off with a Yank was a very common phrase. And then, one night a Yank arrived home. He gave me an American Air Force hat, and popcorn to cook, which I'd never seen before. Corn popping in a dark kitchen with a wood stove can be very exciting. The Yank ended up marrying a friend of my aunt's (she had brought him home). There were no plans for running away by my mother and I didn't really feel threatened or on the verge of abandonment.

WC: *Was it a family in which politics was important?*

BG: Oh, no, no. We never discussed politics. That was a no-go area. The only one time I can ever remember hearing politics discussed was when the Viet Nam war was on and my sister was for the war. I knew that there were two parties — Liberals and Labor (bosses and workers) — but that was about it. The other no-go area was religion. There was a big divide between Catholics and Protestants that was rarely talked about except that they should not marry each other.

WC: *Is there any reflection that you want to make on the contrast between being 10 years old in the late 1940s, and being 10 years old today?*

BG: In Royal Parade, when I was 10 years old, every family owned their own house, all men and young people were employed, every mother stayed home

and looked after the kids, the diet was identical in all households, and everyone had been born in Australia or the UK. So I sort of thought that everybody in Australia was much the same. Indeed, before 18 years of age, I thought the street represented all Australia and that the richer and poorer people in the street represented the range of Australian experiences as a whole. I had never seen a rich neighbourhood — a Toorak, for example — until I was 20 years old. I can even remember the day. I met people who were poorer, because of the wood-yard in Brunswick: but I can't remember meeting more than one or two 'non-Anglos' until I was a teenager. The person who was most different from me in the neighbourhood looked exactly like me, but was a Catholic and hence went to a different school and had to marry a Catholic. It was a remarkably homogenous neighbourhood and my belief, at the time, that the street spanned the broad fabric of Australia shows how homogenous neighbourhoods were and how children did not travel much within a city. There was a very high degree of homogeneity.

Does that mean everyone was extremely secure and not frightened of change or differences? Not at all. I believe in that society everyone tried to create and maintain homogeneity. The desire for homogeneity was very strong. I could not go to a family party and drink sherry, for example, because that would set me apart because everyone drank beer. I would be seen to be trying to 'put on airs'. Looking back, the forces for homogeneity seemed overwhelming, although I thought the situation was normal. I suppose it was part of a class system, although no-one thought of it as that.

The first time in my life I started to become aware of heterogeneity in society was when I was at university. Some of the university students I knew went to India for the summer. I could not imagine doing that. Why would they want to leave Australia? Where did they get the money? Everything you want is here: a nice garden, a car to wash, children to raise, books to read, football to go to; so why would anyone want to go anywhere else? Indeed, I did not really want to go overseas to do a PhD. I've changed completely since that time and now I am always travelling and actively seeking out heterogeneity, and there are more people like me today. Homogeneity is now more or less regarded as boring by a fairly significant number of people.

The other big difference between then and now is the position of children. When I was young the house was the adult castle and almost forbidden to children. Neighbourhood children were not allowed in your house and even the family's own children were kept out during daylight hours. I never went into anybody's house. No child came into my house. You would stand at somebody's back door and yell out, 'Can Billy come out to play?' So that's changed too, in my house today children come and go all the time. Kids sleep over. I never slept

over in my childhood and I certainly did not want to. Today, strangers go to the refrigerator for food. I could not directly access food when I was young.

WC: *Is that just 'kids' liberation', or is there something else going on?*

BG: It's partly related to income. Possessions in the house were important and kids might break things or jump on lounges or sit on chairs. We had two of the four rooms in our house where children were not allowed to go unaccompanied — the dining room and the lounge. These rooms were kept for visitors who might come perhaps once a week. They would eat in the dining room, where there would be a gas fire. Good pieces of cutlery and crockery would come out of closed drawers for entertaining. Then, after the dinner, the doors would close until the next time, perhaps Sunday week. Any special possessions the family had, like nice furniture or glass displays, were always hidden away in these rooms and never seen until guests arrived. It is weird that so much space in a small house was rarely used.

The house was also very dark and I would not want to be inside anyway. In a family of three children there would usually be two small bedrooms and the only space was in the kitchen with Mum and to be there was not a good idea. The kitchen was tiny, and the family lived in the kitchen. Mum prepared meals there and she did not want the kids under her feet. It is entirely different today. Children share all rooms at almost all times.

I guess one other difference was that the house was very regimented, again perhaps because it was small. At any hour of the day you could predict what was happening and where everybody would be. I had the same breakfast every day at the same time, went to school, ate dinner at six o'clock on the dot, was into bed at half-past seven, had a set weekly dinner menu. The only entertainment was listening to the wireless. When we were at the table at dinner time there was very little discussion at all. The radio dominated. My father would read the newspaper.

BG: *What newspaper was it?*

BG: The *Herald*. And he was quite keen on reading newspapers. I think my father was a very intelligent man, certainly a very perceptive person, but, he did not talk much and we never really had a long and serious conversation (by the way, I cannot remember my father's father ever speaking to me. Silence ran in the family). My father worked on his business at night and I cannot ever remember a serious discussion at the dinner table. Every member of the family sort of lived their own life, or that was my impression. My family was extremely happy. I cannot remember my parents fighting. Indeed, it took me a long time, even as a young adult, to distinguish between fighting and an intellectual argument. In my family a vigorous discussion was a fight, and not an intellectual argument. If you tried to start an intellectual discussion you were being difficult

and very quickly the subject was changed or people drifted off. I think of my family home as a silent place in which no-one had a conversation except to say, 'What happened at school today?' I would answer 'nothing much'.

I was a very keen reader. Dad and I would compete for the paper. The rest of the family could not get a look in. There were no books (novels) in the house, but as I said before, anything I asked for I got. The *Herald* published books each six months or so with titles such as *Animals of the World*, the *History of Australia*, *Everybody's Encyclopaedia* and so on. I would say 'I want this book advertised in the *Herald*', and Dad was happy to go to the *Herald* office in town to get the damn thing. Now, Dad was a very busy business man; he had his customers to look after. But I wanted these books so he had to go and buy them. And I would read the books over and over again. I knew a lot about animals. I read comics in great numbers. (I was heavily into swapping comics and this was thought to be unhealthy — 'you don't know where they have been'.) I started reading novels and other things when I went to High School and could access the public library. I read strange things like the *Best American Plays of the Fifties*, *The Best of American Humour*, Tennessee Williams.

WC: *One event in your sort of youth which I'd like to talk about is that at the age of 14 you contracted polio. You said in the National Library interview: 'My own view is that polio explains where I am now.' You said that, but it wasn't explained.*

BG: When I was 13 I went to a special high school. In those days the schools were graded. There were only half-a-dozen high schools in Melbourne. (When I think back, this is outrageous: only half-a-dozen high schools for all Melbourne!) I was the ideal little boy in the sense that I was captain of the school football team, house captain, played the piano, big in athletics, great on the street, and came in about twelfth in the class rankings; a true all-rounder. I was keen on school work, paid attention and competed, but I only studied at school, never at home. Never studied for exams and did not do homework.

One day, in April, I was training for football on a Tuesday and I began to feel stiff and I had to go home. The next day I had to leave school and go to bed. The doctor came and said to Mum, 'He's either got the flu or polio'. Polio was a very bad thing. People died or might be paralysed for life. It attacked lots of children. By Friday my leg wasn't better, so I went to hospital. I felt fine (apart from flu symptoms) and was optimistic. In bed you don't know you can't walk. It was only after 14 days when they got me out of bed that I discovered that I could not walk. Then I spent nine months in bed. They strap you to an iron frame, your feet are in plaster casts and then your parents take you out of the frame twice a day and exercise you for half an hour. So my father, before and after a hard day's work, had to exercise me. He could move my affected foot but I could not. It remained still. Some days I would say, 'Oh I think I can move

a toe or I think I can feel something' but I couldn't really. It must have been heartbreaking for them but not so bad for me.

My parents were trying to get me up and out of bed by Christmas. So two weeks before Christmas I got up walked 10 feet. The next day I walked 20 feet. The next day a hundred feet, and so on.

WC: *This was a breakthrough for you.*

BG: Yes. I could always walk a bit but they wouldn't let me. I was well behaved and never broke the rules. When school started I was allowed to go for half a day. I wore a calliper on one leg and I was allowed to stand at the back of the class. The doctors did not want me to sit down. I had missed one whole year of school and had gone up a class but was not worried. So, I stood at the back of the class and in came the maths teacher. I couldn't understand a word he was saying. I felt sick with the realisation that it may not be that easy to catch up the missed year. I was worried because I wanted to stay in the class with my mates.

So, I came home every afternoon and started working by myself. I couldn't play sport, couldn't do any of those things that I used to do, so I had time and I started studying seriously for the first time. Within four months, I was top of the class. I had never had this success before. But once on the work/academic treadmill, and achieving success, it was hard to get off and here I am now.

WC: *So it's a relatively simple story: polio took you away from the football field. Is that it?*

BG: I think it's a bit more than that. To be intellectually successful you must be mature, unless you're one of those really brilliant kids. You have to be able to find your way around the disciplines by yourself. I was naturally mature but the polio experience increased my rate of growth of maturity. If I hadn't got polio, my best guess is I would have gone to university, I would have done fine. But I wouldn't have done well enough to become an academic.

Before university, we were told that we will all fail because we will not do enough work, we will be diverted into bars, clubs and so. So the day I arrived at university I go to the library at nine o'clock and I sit there. It's not that easy since I have no idea what to do. I just sit there and figure out that if I wait something will happen. Every day I go at nine, leave at five-thirty, read books read lecture notes and so on. On Fridays I stay home so I could rearrange all my notes; put little red dots against things I couldn't remember. And, at the end of the first year I topped my classes, three out of four. Even today I am amazed at how I got there. I probably knew as much as the lecturer as to what would be on the exam and so on.

WC: *Let's talk a little bit more about Melbourne University. You are doing a Bachelor of Commerce.*

BG: Yes, well it turns out I only had two choices: I could do law or commerce; I couldn't do an arts degree. Nobody told me that to do arts I needed a language, and I did not have one. And law took four years, when commerce took three, so why would I do law? Also, I didn't know what you did with a law degree. I was not unhappy about doing commerce because in the back of my mind I had decided at high school that the best life was to be a teacher or, failing that, I could be an accountant (I thought accountancy was the way into top management in a big company!!). My dad thought accountancy was good insurance and I did too. At the end of the first year, it suddenly dawned on me that if I continued to do well I could be a university academic. Once I realized this I devoted all my energy to getting good grades. I thought that to be a university teacher was heaven on earth. And I still think so. I still can't understand why my best students don't take the academic option. It is so wonderful to do what you like, not be bossed around, learn things and so on.

WC: *And how did you find economics?*

BG: I loved it. Some of it was silly stuff really, except for the macro, but I loved it. I liked the logic, I liked the diagrams and I felt that I was learning about secrets of how the world really works.

WC: *The syllabus was silly?*

BG: Well, we did some silly stuff like 'what is a co-operative?' I can't believe this now. There were all sorts of silly things in the micro area but there were good things too. I didn't know maths. I used to spend weeks trying to work out why if marginal revenue is above average revenue average revenue rises. And then if marginal revenue is falling, how come that doesn't tell you that average revenue is falling? What is an elasticity? I spent so much time thinking about these little things which should have been obvious. I was very good at geometry, so I loved shading in little triangles, although I never really believed in consumer surplus. The lecturers were very competent but rather dull, with notable exceptions.

WC: *Were there some good lecturers?*

BG: There was one person that I came into a lot of contact with who was clearly an exceptional academic role model who loved economics and a great teacher. That was Max Corden. Max was clear when he explained things. Max knows what he knows and knows what he doesn't know and makes no attempt to hide it. And that impresses a young serious student. Max, at that time, was my ideal of an academic. He also generated the feeling that you could do as well as he did if you worked a little bit more. That helps a lot. If I was taught by someone who appeared to be a genius, and I could not imagine doing as well, then I would give up. What's the point? Max used no notes. He would do his economics in a way which looked as though he was discovering it for the first time. He was the

first person I met who clearly thought of economics as a whole and thought it was the most important thing in his life. He has had a tremendous influence on me. There were other impressive people — Richard Downing, Joe Isaac — but they did not affect me like Max did.

WC: *How do you end up at the LSE rather than anywhere else?*

BG: First, I did not want to go to America and do course work. And I could not see how my wife would like America. She did not want to leave Australia or travel, and only did because of me. So I thought England was the best place — that meant LSE, Oxford or Cambridge. I was the best student, number one or thereabout in Australia, so my problem was that the [Commonwealth] Scholarship people may have wanted to send me to Oxford or Cambridge. But I was not going to go to snobby places like that: I had heard that they would not let students walk on the lawn. And Melbourne had had a number of really good tutors, good people who had come back from Oxford and Cambridge without finishing their doctorate, so I was a little scared as well. I just thought they were not very good places.

WC: *To come back without a doctorate?*

BG: Yes. There were quite of lot of people who came back without finishing. And you didn't have to be too smart to figure it out. They were good honest workers, so there must be something wrong with the place they went to. Others had returned from LSE with degrees, which they often got within two years — Dick Snape and Roy Webb were two who were just in front of me. So I went to the LSE to do international trade and to get close to Lipsey, who was quite a young giant in those days.

I thought I was very well trained but when I get there I discovered that I was not. That came as a bit of a shock. I volunteered for the first seminar on demand theory (I knew Hicks's *Value and Capital* backwards and I was sure I knew it better than anyone in the class). The lecturer said: 'You have to contrast, Marshall, Hicks and Samuelson. Also discuss the Slutsky effect.' I said 'Who's Slutsky?' And what had Samuelson got to do with demand theory? (I had never heard of revealed preference). Also, I didn't realise that 'Marshall' was not actually Marshall. 'Marshall' was code for a particular specification of the utility function and demand curve. I had read Marshall and his Appendices in great detail and he seemed pretty clear to me. So I had a huge brawl with the lecturer who kept saying Marshall's demand theory was something different from what I had read in the *Principles*. I accused him of not having read Marshall. It was funny. So, the professor is saying 'That's not Marshall' and I'm saying 'Well, yes it is'. I felt a little disappointed in my background at that point and felt that Melbourne was not up to date and had let me down. I don't think that was fair of me though because some of the class, visiting LSE for a year, had done the US PhD coursework program and naturally they knew a little more of modern

mathematical economics than I did (or, given the student composition, than you could teach at Melbourne).

WC: *In the interview at the National Library, you recall:*

> Popper said to the class 'What is the data? Where is the data?' he said. 'See! You don't know, because you don't know how to use theory to guide you'. I was so angry, I wanted to jump up and say to him, 'What is a theory? Where is a theory? See, you haven't got any data to know what to theorize about.'

What was all this about?

BG: At the LSE I begin to move quickly away from the style of economics I had been taught at Melbourne and become intensely interested in trying to discover how the world works by looking at data. I came to believe quite quickly that I would rather trust data than an academic thinker who had spent their life in the ivory tower. So I went to Popper's lectures as part of trying to come to grips with what I thought economics should be. The way I like to think about economics is that it is silly to try and separate data and theory, as though one comes before the other. You need both, more or less simultaneously. So I was disappointed in some of Popper and his cheap debating tricks. I feel even stronger today that this part of Popper — 'theory first, then data, and good economics is about testing theory' — is not really that useful. It elevates theory to a level that it does not deserve. I prefer something like the following: Let's try and figure out the world by looking at data with the minimum of theory and then, after we get a good idea of what is going on out there, try and explain it. Few people work this way. In fact, hardly any.

WC: *But the data* is *in your head. It's a construct, right?*

BG: Well, it is and it isn't. If you want to have an intellectual philosophical argument about methodology with me then I am sure you will win and I will lose. But the argument should be about how to make progress in economics. I just think, especially for me, that 'theory first' and 'facts are just constructs' is not the right way to think about economics as a working discipline. I feel quite strongly that it is a very bad way to think about economics. I came from a Depression background; I never experienced it, but it had a huge impact on me. I wasn't interested in economics as a philosophy, or a set of abstract ideas. For me, the ideas had to have relevance and they have to be about something that is obviously important for people lives. I have always become angry at theories of the Depression, for example, which stress the supply side of the labour market. No looking at the facts supports that position.

For me the data sorts out what is important and what is not. I still hold this view today. I always start my research with the minimum of theory and with only the vaguest of idea of what I am looking for, except that I have to believe

that the search, when finished, will lead to important results and that practical men will see that it is important.

WC: *Hang on: surely it is the* theory *that tells you what's important and what's not important. The data tells me that Australia's current account deficit is 7 per cent of the GDP. Theory tells me whether that is important, or unimportant.*

BG: No. There are many theories of the current account, and each has been fashionable at different times, and their popularity was based on fashion and not the facts. To work out what is important in explaining the balance of payments you need to look at the data. When the fashionable theory of the current account balance was monetary, a theory economist used to argue for near-instant adjustment of the current account if the money supply was changed. Similarly, when twin deficits was popular as a theory, economists argued that to change the government budget balance would change the current account. The data reveal that this is a very silly idea.

Let me try to give you an example of what I mean. Here is the latest issue of the *New York Times Review of Books* [see Kristof 2007]. The most interesting article in this issue is on Banerjee and his co-editors. They address the question, 'How do the Poor Live?' They have 30 big cross-section data samples across countries, and they take a dollar a day as the poverty line and look at what people below a dollar a day are doing: how much is spent on food; how many children they have; what is their life expectancy; their body mass index; do they borrow money; and so on. There is no explicit sophisticated theory articulated anywhere. There is no worrying about different indices of poverty and how they may be derived from different utility functions. Of course, there is a very crude implicit theory to help them decide what to look at. I find their approach particularly appealing, because it is not driven by textbook theory and not driven by complex theory. At the end of the day, I'd much rather find out how the poor live than spend my time worrying about measuring the adequacy of a dollar a day or worrying about the theory of poverty indexes.

WC: *But what is 'the poor'?*

BG: This I regard as the wrong question. The poor is anybody living with less than a dollar a day income.

WC: *Yes, but why do you call that 'poor'?*

BG: Well, almost any low income number will do. You take an income distribution, and draw a line. We can write many, many articles about whether it is a sensible poverty line but that is not really that important. Practical experience shows that where the researchers draw the line will not make a difference to understanding the important question, 'How do the poor live?'

WC: *How do you know that?*

BG: Good judgement and common sense. I want to know how the poor are living. Worrying about the definition of the poor will lead me away from that question, so I make the call on a dollar a day. Of course, I do a little work looking at a dollar a day to check, but I do not want to get involved in measurement or theory that is not at the centre of the issue that I am looking at. I really do think that there is so much to learn about what is actually happening in society. Remember I said earlier how I grew up in a homogeneous society and thought that my street represented Australia. All the time I want to get a better idea of what the world is like. Isn't this common sense?

WC: *Common sense is treacherous isn't it? Your common sense might be very different from the next person's, don't you find?*

BG: True, but I feel that too many of us think we know what is going on in the world and we do not look hard enough at the reality. I think academic economists know too little about the world and it is getting worse. Take the latest industrial relations debate, which I feel very uneasy about: people have been ringing me constantly over the last six months or so asking me what the country should do about its industrial relations laws. I feel very inadequate because I have not been able to find a way to collect the facts so that I can make judgements as to what matters and what does not. I have always felt, and I still feel increasingly strongly, that the hardest thing to know is what is happening in society.

My son works for the mining industry. He is based in Sydney. He works 14 hours, 16 hours a day, five days a week. At the end of the five days he flies down to Melbourne, spends the weekend on his farm, and Monday he flies back to Sydney. The oil industry pays him a great deal of money. If he does not like his package he renegotiates and more or less gets what he wants. Industrial relations laws are not a part of his life. My stepdaughter works in the hotel industry. She may work 12 hours a day, no breaks, no morning tea, no lunch and no afternoon tea. The contract is for a fixed amount of money, which is worked out as minimum pay for eight hours a day. If she works more than eight hours a day, the marginal pay is zero. She cannot negotiate. She works on a take-it-or-leave basis. She has no power. So if the workplace relations changes are moving Australia towards the world of my stepdaughter then the reforms are a major step backwards. If they are moving the world towards that of my son, they are OK. If they have no effect, then who the hell cares? So, in order to make a judgement I need to figure out how many stepdaughter jobs there are and how many son jobs there are and how the proportions are affected by the reforms. To do this, I have to know the numbers and how they are changing. Theory can't tell me the answers *a priori* and theories about liberty or justice or freedom to negotiate cannot tell me what to do. Incidentally, one of the reasons I feel frustrated is that we do not seem to collect the right numbers in this area.

WC: *You mentioned earlier that you were quite dissatisfied with theory.*

BG: Yes,I am now. As time has gone by I haven't found new developments and refinements of theories to be very illuminating. I have found increasing my knowledge of data and improving my data-handling skills give me a better rate of return than worrying about new theory, with one or two exceptions. Let me give you an example. Do you know the current unemployment rate in Australia?

WC: *Four something per cent.*

BG: Suppose it's 4 per cent. Let me ask you a different question. Suppose next week 400 000 jobs are created. What do you think would happen to the unemployment rate?

WC: *It would have to fall, wouldn't it?*

BG: [Laughing] Not necessarily. Do you know why? It depends on the nature of the jobs created. If they are women's jobs, then the unemployment rate doesn't shift. If they are part-time jobs, again the unemployment rate does not shift. Only when the jobs are male full-time jobs will unemployment fall and then the fall is not one-to-one for each job created. You wouldn't know this complexity by looking at theory. First, you would not focus on male and female jobs and, second, you would not focus on full-or part-time jobs and it is only after looking at the data that you discover that these classifications matter and that they can explain some of the puzzling macro outcomes we observe with unemployment changes.

Let me give you another example. The most influential work I ever did in terms of affecting my views of the labour market and the importance of data was the work on Equal Pay for Women. When I was at the Industry Assistance Commission, we were working on the protection level of textiles. We were going to recommend a substantial reduction in protection. Everybody was worried about what would happen. I said the obvious thing to do was to look at cases where protection has been taken away and see what happens. But we couldn't find any examples. So I asked a different question: Can we find a change in an economic variable that impinges on the textile industry that is similar to taking away protection and see what impact it has? I then discovered that Australia had just increased women's wages by 30 per cent (The Equal Pay Judgments). That's exactly the same as taking away protection for a female-job-intensive industry relative to a male-job-intensive industry. So, I then started to look at what happened. Female employment did not fall very much, despite the 30 per cent wage increase. That affected my views forever on segregation, discrimination, the power of institutions, the importance of wages and the relevance of economic theory because none of the theory focused on any of the crucial issues in this example.

WC: *Hang on: you're including female* government *employment in that data.*

BG: The government/private-sector split does not make that much difference. Private-sector employment is a bit more responsive to the wage increase, but not much.

WC: *Some people say the sector split matters more.*

BG: Look at the data. It doesn't show much difference. So, the low employment response rate to such a large change in real wages shook me up a lot. It turned out, at that time, that there was hardly any substitution between women and other factors of production. As a very rough approximation to reality at that time you could think of the world as follows: women were secretaries or sewing machine operators and men were bosses or metal workers. Substitution was minimal. I had not realised, at that time, how important gender segregation was in the workplace. It was never mentioned in any of the economic courses that I took.

WC: *I wouldn't want to let this just drop here. I sometimes wonder if this 'Let the data speak' attitude is not so much 'Let the data speak' as 'Let's substitute a cruder theory for a more sophisticated theory'.*

BG: Yes, as I said earlier, there is an emphasis on simple theory but I would not want to call it crude for the purpose to which it is being put. We have to be careful what we mean by 'crude' and 'sophisticated'. So often 'sophisticated' means putting effort into aspects of theory that are not very important for the problem of interest. When empirical results depend on the nature of the utility function, for example, then you know you are being too sophisticated. I may be a bit unusual but I think first-year economics is incredibly powerful.

WC: *You say you like supply and demand and yet so many people would think of your research as putting a discount on supply and demand. I mean the whole women's thing in 1973?*

BG: It is true that you cannot look at facts without any theory, so when you approach data you need to be a little bit organised. And I do like demand and supply as organizers but that does not mean, at the end of the day, that the best approximation for some problems is that the demand curve is very steep or the supply curve very horizontal. In the women's work, the demand curve is very steep and the supply curve definition becomes very complicated.

WC: *Can I return to LSE, and ask about Max Steuer?*

BG: Max Steuer had some of the characteristics of Max Corden, but he was primarily interested in trying to put simple theory and empirical facts together. Max didn't know, and didn't care, about sophisticated economic theory. His views are very similar to mine. Whether I got these views from him, or developed them independently, I don't know. He (Reader) and I (student) were always trying to figure out what really mattered, theory and data wise, for any particular

problem. We both had a high degree of agnosticism and wanted to start research with the minimum of complex priors.

Before I went to LSE I used to think that to make progress I would have to know everything about theory and its details. I would go to a seminar and tick off the equations one by one as I figured them out and then I would get stuck between equation three to equation four, for example, and I'd spend my time trying to work it out. I would then miss the whole point of the seminar. I did that for a long time. I would even read the footnotes! But with Max, the seminar would begin and Max would suddenly say: 'I know what you're talking about but that is not the way to do it. What you should be doing … etc'. He would take us away from the detail and try to get us to focus on the big issue. I was terribly impressed. Max always seemed to know what was important, and what the issues were.

I hate seminars where everybody is into 'back in school mode' and sits there quietly or makes trivial points about things that do not matter. I try to get into the seminar discussion nice and early, so we can all be involved in what should be the big issues. Max was the first person I met that did that. Later, I found that in most of the top US schools, a least in labour economics — Chicago, MIT, Harvard, Princeton — there are people like Max. They never discuss detail, they never discuss technique; they discuss what should be done and whether what is being done is sensible. They assume that the presenter can look after the detail.

The other person at LSE that influenced me was Frank Brechling. Frank believed in working on big applied problems and trying to sort them out. He was not the sort of person who said: 'Oh, let's read all these articles on investment, summarise them and then work out how to add to the literature.' He would say: 'The UK is going through an investment boom; let's look at what we can learn.' He would try and work things out for himself. It was often said about Frank that the technical quality of the paper may be terrible but, gee, it is an interesting paper. He was on the frontier — simple theory and data — but it was his frontier. He taught me a lot. Frank moved to NorthWestern in the mid '60s and became chairman. He hired me.

WC: *Tell me a little more about NorthWestern.*

BG: NorthWestern is in Chicago. It's a university which as ranked between twentieth to thirtieth and its ranking goes up and down a lot. It's a bit in the shadow of the University of Chicago. Frank was a drinker and a sociable person and would have cocktail parties in his home for the seminar presenters. All the students would come because they were always hungry — they devoured the bread and cheese — and afterwards Frank would take the seminar speaker and me out for dinner. Nobody else wanted to go; everybody was too busy. So in my first year at Northwestern I had dinner with Klein, Kindelberger, Mundell,

Leontieff, Samuelson, all the stars. That was interesting. They all had one thing in common: they were all unbelievably committed to economics. They did nothing else for 24 hours every day. I thought that the big difference between them and me was not so much native brilliance (putting aside Samuelson, of course) but stamina. They could keep focused on a problem forever, without losing interest. I could last about an hour.

I really had a really good time at Northwestern. It was so exciting. Everyone was so professional and hard working. I wrote an article in seven or so weeks, sent it off to the AER; it was instantly accepted, subject to change. The editor loved the empirical work — it was important and simple, all those things I have been arguing for — but he wanted me to put in a theoretical section focused on the monetary theory of the balance of payments ('Ah ha!' you might say). I said, 'No. No way.' So I tried to develop a different framework that fitted the facts better — this was an original paper, not derived from current theoretical models — and Frank helped me. It was a famous paper in international trade at that time — but the first draft was better. I read the paper a decade ago and found that I couldn't follow the theory that I spent so much time putting in.

WC: *Why did you come back to Australia?*

BG: Melbourne University said 'Come back'. My visa ran out; I thought that I wouldn't make it in the US; and I promised my wife I would return. Melbourne made me a wonderful offer (a reader position with promise of a chair the following year). But I believed that if I returned to Melbourne I would become Chairman, be a professor and that would be the end of me. Bill Phillips had been hired at ANU and he had hired me at LSE and he wrote, "I'm putting together this team of wonderful young people (Turnovsky, Terrell, Byron and more): come and work in full-time research in RSSS.' So I came here but I negotiated a job; one-half research and one-half introducing coursework to the ANU at the graduate level. I would try and move graduate teaching here towards the US system. So I introduced a coursework Master's. I also wanted to get involved in government. I thought that if I came to ANU that would put me into an ideal position for involvement with the public service.

And after two years I was sitting in my room in the ANU, and I got a phone call. The guy said, 'Alf Rattigan here. I want you to come over and talk to me.' I said, 'I can't, I'm too busy.' He said, 'Oh. Well when can you come?' I said, 'After work, if you've got time.' He said, 'I'll send a car.' I thought, 'What is this — a car?' I had no idea who Rattigan was, but if he was sending a car he must be important. Rattigan offered me a job at the Tariff Board, as head of the research division, which paid about 20 grand more than a professor at ANU. I said, 'I would quite like that but I can't really leave my university. I do not have tenure.' He said, 'I'll fix it; I'll ring Jack.' Of course, I didn't know who Jack was.

WC: *Jack?*

BG: Jack Crawford [the Vice Chancellor of ANU]. Next morning, Jack Crawford rings me up, and asks me to come over and says 'Alf Rattigan wants you; you must go. Don't worry about tenure.' So I go to the Tariff Board. That was another defining moment of my academic life.

At the Tariff Board I discovered that simple economics, well explained, was even more powerful than I had thought. In general, people don't understand the analysis of policy problems well, but if you can apply simple economics clearly and explain the problem well it can have a very big effect. You can have a huge influence. My time at the Tariff Board changed my whole view about writing and who I should write for. I redirected my work to Australia and to Australian problems and I wrote as simply as possible. This does have some costs. I've written very good papers, but it is hard to publish internationally when the problem is Australian and the theory and technique is a bit simple by journal standards. Foreign-journal editors loved the equal-pay paper but in the end said it was too simple. My guess is that I would have had trouble with the first hysteresis paper too, except that I gave it at an invited conference. Summers and Blanchard took it up and developed the theory more.

WC: *Let's talk about that paper you wrote in 1976: the Gregory Thesis and all that.*

BG: This was the first 'booming sector' paper (or, at least, I developed it independently) and, like the first hysteresis paper, it was drawn from Australian experience. I got the idea from being in the public service. It was incredible luck and good timing. The big idea in my mind was not so much the booming sector but the methodology which no-one else had used. The methodology goes like this. If you want to know the effect of B on A and you can't see any variation of B, then look for a C that varies and affects A in much the same way that B would do if it varied. Then, if you can put the variations in C into variations in B equivalents, you are home. I hope that is clear. I really think this way of thinking about things was neat.

I was working on the possible effect of a 25 per cent tariff cut. But we had never seen an across-the-board tariff cut, so we did not really know how it would affect the economy. At the same time, the exchange rate was changing. Then I thought to myself, 'Well, an exchange-rate change is exactly the same as the import tariff change on an import-competing industry in the short run. So maybe I can use the exchange-rate experience to tell me about the potential tariff experience.' But the exchange-rate change can be a monetary phenomenon and that was not what I was focusing on. I needed a real exchange-rate change to give the idea more credibility. The rapid increases in mineral exports were generating a real exchange-rate change and I decided to link that to the tariff change. I worked the theory and numbers out fairly quickly, but I couldn't figure out how to sell this idea, in a simple way. I worked for a year and a half

trying to find a way to sell it. I had tradable, and non-tradable sectors and goodness knows what else in the model but I was struggling to make it clear and simple. One day I went to a seminar by Max Corden at the Treasury, and then Max suddenly said, 'If I assume that the terms of trade are fixed, I can place exports and imports along the same axis.' And as soon as he said that I could see how to present my ideas.

The paper had an enormous effect. It was talked about in universities, parliament, newspapers, everywhere. People loved the paper. I was living in Northwestern, I got phone call after phone call from the press. They wrote many articles, drew two big cartoons of me in the *Weekend Australian*, drawn from a passport photograph. I was glad I was away.

WC: *The story sold itself, do you think?*

BG: Yes, to a large extent. The timing was good, the paper was simple, but what helped in parliament and the press was a politician from South Australia, Chris Hurford, who said that the Gregory thesis was the greatest idea since Keynes. And the reason it resonated was that manufacturing was going under and no-one seemed to know what was going on; and my paper suddenly made it all clear. Everybody loved it. Everybody could use the story. At this stage I was not as confident a personality, and I was not used to being a public figure. I was glad I was away. And that experience changed my life because it built up my confidence in the public arena. The idea spread overseas and was taken up by others but renamed —'the Dutch disease' or 'the booming-export sector problem'.

WC: *In 1982 you gave a lecture in formal circumstances with the title 'The Slide into Mass Unemployment'. Reading it now, 25 years later, I'm also struck by your description of what we would call 'enterprise bargaining' as, quote, 'an extremely radical proposal … Such a proposal would be seen to be an attack on the very* raison d'être *of unions, which is to change the balance of power …'*

BG: Did I say that? '*raison d'être*'?! I'm amazed; somebody must have put that in my speech.

WC: *'… between employer and employee by bringing pressure outside.'*

BG: The purpose of that paper was to develop the idea of hysteresis in the labour market and to explain why unemployment may not impact as much on wage levels as theory might suggest. I did talk about implicit contracts between firms and their workers and the effective freezing out of outsiders. I was making a case for an Accord process to set wages so that outsiders could be brought into employment and their wage interests would be implemented by the centralized wage-fixing authority.

Between 1973 and 1975, award wages increased dramatically. So, after the wages boom and high unemployment set in, the question was: what to do? Fraser went back to reinforce a centralised wage-setting system, which I more or less

approved of. The idea was that the centralised system could hold nominal wage increases to a much lower level during an expansion because the promise of indexation by the centralized wage-fixing authority would stop unions from seeking excessive nominal wage increases. The centralized wage system was to freeze average real wages. Then within three years the average wage level would be the same that would have been predicted on the basis of past trends. That real wage level should restore full employment as productivity increased during the interim.

But, for some reason, around the world, and in Australia, productivity growth slowed up dramatically. So projecting the required full-employment real wage on the basis of past trends turned out to be incredibly wrong. Indeed, during this period the real wage–productivity nexus theory of employment turned out not to be very helpful as a guide to policy.

WC: *We don't have centralised wage setting at all, now. Is that a good thing? Or was centralised okay for its time? Or was it a mistake?*

BG: I don't think centralisation was a mistake; I don't see how it could be. We have a fairly equal wage distribution and also we have equal pay for women. Both these outcomes were delivered by the centralised wage system.

WC: *But women's pay was unequal for 60 years under a centralised system.*

BG: That's correct. Centralisation is not sufficient for particular outcomes. But it is a policy instrument that can be used if the will is there. Fraser more or less kept the centralised system, as did Hawke for most of the '80s.

My interpretation of history is that towards the end of the Accord during the late 1980s the unions began to destroy the centralised wage system. I still do not know why a sensible union movement would do this. The union leaders said that getting rid of centralisation was about creating an efficient labour market, which would be better suited by enterprise bargaining. It is certainly true that union officials had little to do under the Accord and the stronger unions had become unhappy with it. They found themselves in the situation that they could not respond to worker demands for wage increases. In the long run, therefore, the Accord process destroyed much of the power of the union movement; it destroyed the grass-root relationships between the local union official and workers. The trade union leadership knew this, but was confused. The leadership liked the power of being near the centre of government, and having a centralised wage-fixing Accord process delivered that, but it also knew that the Accord was destroying the grass roots of the union movement.

Eventually, Kelty and Keating set about destroying the centralisation system. I was quite shocked, because if you look at the union rhetoric of enterprise bargaining it is the same rhetoric used by General Motors Holden; it's the rhetoric of big companies. The rhetoric says that the unions and the bosses will get

together and sort out what goes on in the company. To anyone who works in a small retail store or a small business, the workers and the bosses do not get together. In small companies, the workers have no power. So the unions were giving away their coverage that was delivered by the centralised system.

WC: *What used to happen under the centralised system?*

BG: With a centralised system, wages are more or less delivered to all workers once a year, whether they are union members or not — the wage goes up for every one. My father used to have small shop — two employees — and everybody got their wage increases from the award.

WC: *And nowadays he would negotiate?*

BG: No, he wouldn't negotiate. He would just set the wage and only adjust when it became too out of kilter.

WC: *So the upshot is that enterprise bargaining only works for General Motors. There is no bargaining at the enterprise level for small enterprises?*

BG: Most people know that. The unions know that. If you have a child who works in a small retail store you know that. Many of these small retailers don't pay the kids for the first two weeks in the job. They claim, after the event, that this period is training; then, after two weeks, they let many of the new workers go. If anyone complains to the unions, the unions say 'Too bad, what can we do? We can go down there and sort this out on Monday but there's 400 of these complaints a week and, in any event, next week the employer is back to his old tricks.'

WC: *I want to clarify things; the Accord was bad for the unions because it destroyed their grass roots?*

BG: Yes, in the long run.

WC: *But enterprise bargaining is also bad for the unions, also because it destroys their grass roots?*

BG: Not quite. Enterprise bargaining destroys the coverage. If you are worried about a contradiction you need to realise that centralised wage fixing is not the same as an Accord. Centralised wage fixing had much more flexibility than an Accord process, which is one extreme example of how centralised wage fixing might work. Without a centralised wage system the natural state for unions is to be small and to be primarily located in large companies. Remember that under the Australian centralised system we were all *de facto* union members in that any wage agreement was delivered to us all without having to be union members. The centralised system magnified the power of the union and that is why I could not understand why the unions would want to give it up.

There's no going back now and that has worried me a little. Some of the advantages of the centralised system can be delivered by the state. It could

regulate the number of weeks holiday, the length of a standard work week, maternity leave, and so on. But historically the state has not done as well as the centralised wage system in delivering good outcomes for workers. In the US, for example, many workers receive no holidays in their first year of work and then from the second year they get two weeks. Of course, in the US they have never heard of long-service leave.

WC: *Why are you so pessimistic about the role of the state?*

BG: The state in Australia will tend to let minimum wages erode towards OECD averages in most variables. Look at what Howard tried to do. He was saying that freedom was the right to trade away holidays as if this trade-off was a) based on equal power between employer and employee and b) could easily be traded back again.

WC: *Can we talk about your relationship to the Hawke government?*

BG: I have never been closely involved in the political process. I have always thought of myself, in what I would call a sweetly naïve way, as a disinterested academic who tries to help out by explaining policy issues. So I try to explain policy options to think about, rather than play a strong advocacy role. People like my work, so I receive lots of offers to become involved. I was lucky enough to be on the outskirts of the Hawke government from the beginning. I was offered a job in the Prime Minister's department.

WC: *Did you accept the position?*

BG: Yes, but just for two days a week. It wasn't a great success because I was too slow and I do not think you can work in the PM's department part-time. I made a mess with the first budget. And this is a really fun story. The Prime Minister's department had done some work which showed that the employment and budget projections were far too optimistic. There seemed to be no way that employment could grow at the rate that the PM promised. As a result, there was no way the budget forecasts could be met. Hence, taxes might have to be increased, or at least not reduced. The Prime Minister's department had tried to explain this but the Treasury — Keating — took the opposite line and asserted that there was no problem. The PM's people said to me: 'We tried to tell the Prime Minister and he will not listen: you have to go and see him; he will listen to you.' This was a very dangerous thing for me to do but I said, 'Fine, since it doesn't matter if I lose my job.' So I arrive in the PM's office and Hawke is pulling his ear, and he's beautifully dressed. He was just like the cartoons they used to draw of him. I say: 'Prime Minister, I don't think you really understand what's going on.' He doesn't seem to be interested and then all of sudden Keating bursts in and abuses me. The public servants from the PM's department stood there in absolute silence, and yet they had sent me in to fight their battle. Anyway, I get back to the office and the head of PM's department calls me in

and says: 'The Treasurer has demanded that you be sacked, and I've been chastised for giving you access to preliminary budget papers.' So I said: 'Well, first of all I haven't done anything wrong. Second, I don't care whether I'm sacked or not.' He said: 'Well, I'm not going to be pushed around by Keating.' So I stayed. Anyway, after the event my forecasts were wrong and Keating's were right. Within a month or two I had left for the Australian Chair at Harvard.

One year later, after I returned from Harvard, I was sitting in my office, and I suddenly got a phone call from Keating. Will I come and have lunch with him at Manuka? Sure! I figure that he was going to offer me the Statisticians' job [at the ABS], which was open. I rather liked this idea but I didn't really want to leave ANU, so I spent all morning trying to figure out should I say 'Yes, for three years' or 'Could I do it part time?' or if I could parley this job into a new job of statistician's advisor, which I could do part time, and so on. So I go to lunch and Keating says to me, 'Why aren't you doing more for the Labor government?' I said, 'Nobody has asked me to do anything.' He said: 'Oh, well would you like to be on the Board of the Reserve Bank?' I instantly said 'Yes.' He said: 'Don't you want to hear anything about it?' I said: 'No; I will take it.' He'd obviously forgotten about the other episode I mentioned earlier. Or else he may have forgiven me.

WC: *Tell me about the Reserve Bank Board meetings. Is there genuine discussion and debate at these meetings?*

BG: Well there are many answers to this question; one is what the discussion was like for me, and another is how the discussions affected the outcome. As a Board member the discussions and supporting papers were just wonderful. The bank staff members were right on top of things. In academia we do not have the resource support to compete with them. They are producing papers from a department of maybe 20 research economists; three or four may have a PhD, and another four or five may be on their way to one, and the Board submissions is more or less all they do. It is great.

The Board members, however, are a mixture. The businessmen are good at understanding what is going on in their part of the economy but they know little monetary economics. And that can be a bit of a problem for the discussions. I once asked in a meeting, after I managed to get some forecasts, 'What's the inflation figure? Is that the CPI or the GDP deflator?' That generated absolute chaos and showed very bad judgement on my part. One of the Board members said, 'What's the GDP deflator?' Well, 25 minutes was spent over trying to explain the GDP deflator and, of course, it was of no importance for any decision we might make. That discussion made it very clear to me that our Bank Board is a representative board to give Australians a feeling of security because of the important people on the board. But the academics think of the board as more of a debating and analytical group and that it is not.

WC: *Tell us about the 'Recession we had to have' from the vantage point of the Bank Board.*

BG: It was pretty obvious from 1986 that we should start tightening monetary policy, and we were getting ready to. You could feel the need for a tightening, more and more, and then, in October 1987, the stock market crashed and no-one quite knew what was going to happen. So, decisions to tighten were delayed until things became clearer. When we did move, we moved sooner than other central banks. But we were still too late. Asset prices were getting completely out of hand and, strictly speaking, they were not our business; but we were increasingly worrying that the asset-price boom would spread to the labour market, wages would go up and inflation would get out of control. The information we were getting was that a large wage breakout was about to begin, and Bill Kelty felt that the accord would collapse. But wage outcomes in the current data were not that high.

WC: *So the suggestion was that in terms of inflation we were on the verge of a 1974-style breakout?*

BG: Yes, Bill Kelty kept saying that he personally was preventing wages from bursting out and it was becoming increasingly difficult.

WC: *But we ended up in this god-almighty recession. Doesn't it look too tight in retrospect?*

BG: Maybe yes and maybe no. It all depends on whether you are prepared to give the recession credit for the low-inflation regime of the last 15 years. Anyway, Chris Higgins and I thought unemployment would increase much more than everyone else — we thought unemployment would increase to about 7 per cent. Others kept saying that real wages had not increased; hence, unemployment would not increase much. This was an application of the real wage overhang model that had been so popular in the mid 1970s. They argued that all that would happen was that tight monetary policy would burst the asset bubble with little real effect on the economy. I should also add that few people knew how bad the situation was to become with the private banks. The private banks came to the Board more than once as monetary policy was being tightened and told us that they saw no problems. They were a long way out in their forecasts.

WC: *What was your position?*

BG: I supported the interest rate increases, especially at the beginning of the upswing in rates, but I wanted to ease earlier than we did. As we got into the recession I could how see deep it was going to be, but I suppose by the time I was really worried others could also begin to see problems. So when should we have eased? Bernie Fraser was very slow at easing. His view was that it was clear that the economy was going to suffer in terms of output loss but let's make sure

that it is all worth while, and we get the low inflation we want, and drive inflation out of the system.

WC: *So he's an anti-inflation hard man?*

BG: [Bernie] Fraser was an anti-inflation hard man during this period, which is interesting because he was also pro growth most of the time and very worried about unemployment. I thought we were too slow in easing up and I wanted to come down in terms of interest rates much more quickly. The others stayed with Bernie and I did not push too hard. But after the event there was a big payoff from the recession and the longer this long boom continues without inflation the better the payoff becomes. The payoff is still accumulating.

WC: *How would it be a payoff?*

BG: I'm talking about the low inflation payoff. After all, the true object of creating a recession is not to create unemployment for its own sake.

WC: *Around about the same time that you were appointed to the Bank, you were appointed to the Institute of Family Studies and you stayed there for 11 years.*

BG: Once you're on the Board of the Bank, you get offered all sorts of jobs. I was also on the Australian Science and Technology Council. You learn a great deal from these experiences and coping with problems.

WC: *What problems?*

BG: Well, one problem is being an economist on a board where no-one else is an economist. Depending on the nature of the board you can very easily become the nasty person.

WC: *Why?*

BG: Well most of the members of these boards believe in things that economists do not. The Science council was particularly hard. On ASTEC, scientists would argue 'everybody knows that unless we double exports, Australia will not grow at 50 per cent (whatever that means), and we will not lead the world (whatever that means)'. 'Everybody knows that we have to have a space program because unless we do we will only be a nation of farmers.' 'We need to double the number of scientists to promote economic growth', and so on. So the economist becomes the nasty man who argues against all these positions. This is really difficult because you don't like being thought of as a nasty, negative person, especially if you are really a nice person. You also need to choose which battles to fight and which to let go, which is also stressful.

WC: *On the Institute of Family Studies web page we read that the purpose of the Institute is to promote the understanding of factors affecting family stability in Australia. I also note in another interview you tell the interviewer that women in Australia are increasingly 'marrying the state'. So I throw that over to you: are women marrying the state? What about family stability in Australia?*

BG: I hate the phrase 'marrying the state' but it is sort of true in the sense that for one in five children, most of their income comes direct from the state and through the mother. It is quite an amazing fact. How has this come about? At one extreme, these changes may be largely coming from the fact that so many women can no longer find a suitable male partner that can provide the economic resources for them and the children: so many of the men are unemployed, so many of them have low real wages, and so on. Or it could be that these large changes are coming from the women's movement, the increase in freedom associated with more work in the labour market and the increase of freedom that comes from not having to rely on a male income provider. Large social changes are not easy to analyse in a way that establishes causal relationships.

There are a couple of policy responses. One is to make it as easy as possible for women to get out of bad family situations if they want to, and another is to make it less attractive for women to be on welfare for a long time.

WC: *How do you do that?*

BG: Well, there are two ways: push and pull. What the government has been doing recently is push. The new policy is to try and restrict access to welfare after the child turns eight and to create an environment where the mother more or less has to go to work in the market place.

WC: *Over eight?*

BG: If the children are older than eight, the mother can no longer access the sole-parent pension, and she is placed on Newstart and must seek employment. The sole-parent pension has two advantages for the mother: she gets more income per week — maybe $20 or $30 — and she keeps more income if she goes to work (the clawback is less than for Newstart).

WC: *Will they just decide to be poor?*

BG: Many will be poor. The policy balance is not quite right. It should be more positive in developing employment opportunities.

WC: *Let's talk about invalid pensions; what can we do about invalid pensions?*

BG: I suppose the first point is why has there been such a rapid growth of invalid pensions. My view was that when more focus is placed on enterprise bargaining the firm becomes more productivity conscious and the worst workers are removed. Once their link with employment is broken, they find it difficult to get back into a secure job. So, if the bargaining process is changed and moved to a firm focus, the potential arises for more workers to become disconnected from the labour market. And that, of course, describes exactly what has happened over the last few decades. That's why we have so many invalid pensioners and why the number on welfare is so large in Australia.

WC: *So this 4.2 per cent unemployment which we presently have is an illusion?*

BG: It's a complete illusion. I haven't checked the data recently but last time I checked the ratio of disability pensioners to the workforce was about 7 per cent, whereas in 1975 the proportion would have been about three-quarters of 1 per cent. So either Australians have become incredibly unhealthy, or the Disability Support Pension recipients are the types of people who would have been employed in earlier times. I believe the latter.

WC: *Why?*

BG: I tried to outline one of the reasons above. Another part of the explanation is the state of macro demand. There was a big economic shock in 1975, which created more unemployment and made it harder to get jobs. Those with some disability, who were previously doing their job well, once unemployed do not look the same. They appear to be less productive to a potential new employer, so the workers find it difficult to get work. The potential worker also adjusts their behaviour, and appears less attractive to employers. Employers become more wary of them because they have not worked for so long. The only solution is the maintenance of a strong macro economy for a long time so that the employers must choose these workers or no-one.

WC: *Don't we have a strong macro economy?*

BG: Well, we are beginning to. The labour market is starting to become quite strong [in mid-2007], but only in the last 18 months have the welfare-recipient numbers begun to come down. They had been going up for a couple of years. The downward change in welfare numbers is still a bit weak but, if the economic outcome remains stronger, things will improve. And it looks as though the strong economy is going to continue for a little while, although there is considerable uncertainty out there. Perhaps for the first time in 30 years we are going to start making significant inroads into the welfare numbers.

WC: *Let's get onto a big issue, Aborigines. And if I could start off just by kindling a conversation by a quote from a recent paper of yours (Gregory 2006) on Aborigines. Quote: 'Indigenous unemployment as measured is extremely low, but if CDEP is set aside there is no evidence that across the board employment prospects are increasing despite large amounts of public expenditure; despite the very significant improvements in indigenous education there has been very little employment growth. The policy seems to have failed spectacularly.'*

BG: There are a couple of reasons for this failure. The first reason is that, to a large extent, failure is inevitable. You cannot take adults who can hardly read and write English, who are noticeably different, who cannot be compelled to attend work, who live where there are no jobs, and then spend money on them and expect to fix the problem overnight. The solution will be slow coming and must be concentrated on the young. I, by the way, am very pessimistic about the ability to make fast progress. The changes required in culture, location and

values for good economic outcomes seem extremely large to me and probably too radical to occur quickly.

There's a qualification I should mention. Policy has been succeeding really well for the Indigenous elite, so it is not all doom and gloom. The top 10 per cent of Aborigines, in terms of education, income and exceptional physical or business skills have never had it better. You can see the elite everywhere now in our society. If you said to me: 'I want you to arrange a dinner party with well-educated and influential Aboriginals in the next week', I could find you plenty of well-educated, interesting and successful Aboriginals. I could not have done that 40 years ago.

WC: *But was the problem existing 40 years ago? I mean, agricultural employment existed.*

BG: If we go back to the '60s, Aboriginal outcomes were not better than now. Education levels were very much lower; life expectancy was low. But it was true that there was more agricultural employment. A typical remote tribal group might be on a station near a water hole where, once or twice a year, the Aboriginal men would round up the cattle. A couple of women might live in the house and work as maids and the station owner would look after the tribe, pay them in-kind. The Aboriginals worked when needed to round up the cattle and there was a sort of economic understanding. But conditions were not that good. In a remote community you cannot have a school; and even if the community was large enough for a school it was unlikely to be a good school unless it was on a mission.

Remoteness is a difficult problem. If the Aboriginals stay in remote areas, outcomes will remain poor. If they move, it will be difficult for them for quite some time. Should you move Aboriginals to a town camp in, say, Alice Springs where there are schools but no strong community values? I just think that for remote people economic and social failure is largely unavoidable for quite some time. To discuss Aboriginal policy sensibly, you have to talk about degrees of failure and partial success and what worries me a lot about the current initiatives is that they don't really go to the centre of the problem and their advocates seem to believe that the problems can be fixed relatively quickly. The cure for the Aboriginal problem is not sending doctors to provide medical checks or to move in the army or police. The centre of the solution is to develop a policy structure within which Aboriginals can be employed. But that will take a long time. It is going to be a slow process — much slower than is implied in public discussion.

I went to Darwin, two years ago, to give a talk. I had bad experiences. The first was that the only employed Aboriginals I saw in Darwin were in a craft shop, and they looked like me: not very dark. In the hotels, all the room cleaning, all the kitchen staff, all the low-paid jobs were done by immigrants and backpackers. I went to see a public servant to discuss this. I did not see one

Aboriginal in the public service offices I walked through. I really do believe that we need public-sector employment quotas in the short term — not a very popular idea though.

My second bad experience was not very long ago in an Aboriginal township in Queensland. All the pre-conditions were right. The community didn't look too bad and it was next to a fast-growing and large tourist town. Yet I was told there was only one Aboriginal employed in the town. The Aboriginal community 'owned' a very popular tourist site but they had done little to develop it. When I talked to people about how to develop the site so that they could turn it into more of an economic resource, I got even more depressed. They were talking about closing access to the tourist site on Sunday morning because the traffic was too dangerous.

WC: *Too dangerous?*

BG: Well, they said that on Saturday night there was considerable drunkenness and members of the community would wander across the road on Sunday mornings and tourists might kill them with their cars.

I visited another community; this one was very remote. You had to fly in by plane. It was on the Queensland coast. They had an offer from Americans to set up a fishing resort. I said: 'The first thing you do is accept the offer and then negotiate. Write good conditions into the contract. For example, write in that the resort has to employ a certain number of community members, and so on.' But the economic development did not ahead. When I asked what had happened, someone on the [land] Council said: 'The beach is my land; it does not belong to the council and I do not want the development.' The Council said: 'That's right, it is her land.' Then I discovered that this was not a community. The people had been moved from an old mission where different groups had been brought together and they found it hard to live together and reach decisions for the common good. It was very depressing as there didn't seem an obvious way out. Many Aboriginal communities are like that.

WC: *Thanks for giving me so much time*

BG: It was a pleasure. I enjoyed it. I love to talk. But I am aware that in conversation it is not possible to be as clear as I should, or to provide the subtlety of analysis that I should. I hope, though, you can see the spirit of the remarks.

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REVIEWS

Robert Shiller, *The Subprime Solution*

(Princeton University Press, 2008)

Declan Trott[1]

Recent events have made it difficult to speak of financial 'experts' without implied quotation marks. Robert Shiller is one of the few with a right to the title, free of any irony. And that is why *The Subprime Solution* is so disappointing. Surely the man who called both the tech wreck and the housing bubble would have penetrating insights into the intricacies of the global financial crisis and its solution. Yet *The Subprime Solution* contains little more than vague platitudes and a rehash of previously published ideas.

Events have moved so fast that his short-run prescriptions are not worth dwelling on. He concentrates on the need to aid struggling homeowners by renegotiating mortgage payments. Aside from being questionable on its own terms (how are people who have walked away from no-recourse mortgages worse off than renters on similar incomes?), this emphasis means he has no specific contributions to make to today's crucial questions of financial institution recapitalisation and fiscal policy.

It is on the origins and the long-run response to the crash that Shiller has the most to say, and what he says is the hardest to swallow. He argues that the psychology of the housing bubble itself is the ultimate cause of the current problems, while low interest rates, lax regulation, and financial innovation were consequences rather than causes.

Now, this is clearly true in some sense. If there had been a more widespread recognition that the bubble was (or might be) a bubble, no doubt regulators would have been tougher and financiers would have made fewer bad bets with less leverage. But then, if enough people knew it was a bubble, it wouldn't have been a bubble in the first place.

The trouble with looking for 'ultimate causes' is that you can keep going all the way back to the Big Bang (or Genesis 1:1 if you prefer). People should instead stop at the point where they think some kind of change is possible. But the point Shiller stops at is precisely the point that seems the least amenable to alteration, if one accepts his argument that bubbles are driven by 'contagion of ideas'. How are we supposed to stop ideas from spreading? It does not help that his psychology is almost nonexistent, consisting of an infectious disease analogy, a

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reference to information cascades (which are not 'psychological' at all in the sense of contradicting standard rationality assumptions), and a collection of stories people might have told to justify rising housing prices.

Having skewered those who thought a bubble could never happen, Shiller then surprises by showing a faith in finance surpassing even theirs. Greenspan, after all, has expressed some contrition. But Shiller pins his colours to the mast of 'financial democracy', describing mathematical finance theory as a 'magnificent development'. (One wonders how he got a dust-jacket endorsement from Nassim Taleb, who gained fame by arguing precisely the opposite in *The Black Swan*). His proposal for reform consists of a new 'information infrastructure', including independent financial planning, a new consumer authority for financial products, more disclosure, and an inflation-proof unit of account; and new forms of insurance for housing and labour markets.

At this point, some loud alarm bells start ringing. These are the same ideas that Shiller has been pushing for years, through his 2003 book *The New Financial Order,* and through the 'growth companies' and 'broker-dealers' MacroMarkets LLC and MacroFinancial LLC, of which he is co-founder, chief economist and principal. Shiller's ideas may be perfectly good, but by what stretch of the imagination are they a safeguard against financial crisis? Would the facility to sell real estate short be enough to prevent another housing bubble? The losses George Soros suffered by shorting the NASDAQ in 1998 and 1999 (rather than 2000) suggest not.

Stripped of all the padding (and there is a lot of that, including a discussion of the etymology of 'bailout'), Shiller's main argument in *Subprime Solution* is that we need more financial innovation, not less. He must be one of the few men in the world who could make this argument today and not be laughed out of court. While the bubble may have had origins independent of financial innovation, it was financial innovation that fuelled its rise and allowed it to metastasise from a problem affecting one sector of the US economy (albeit a very large one) into a cancer that threatened financial institutions worldwide. Yet while he acknowledges this surface implausibility of his stance, he provides no real arguments to counter it.

Shiller deserves kudos for his amply demonstrated prescience, and he has every right to market his financial products. I just wish he had found a better way of making good than this hastily written pastiche of a book. Like short selling, for example.[2]

[2] This is not just a cheap shot. The ability to short real estate is one of Shiller's key proposals to avoid another bubble. Yet there were many ways to short the bubble at the time, through the stocks of building or financial corporations, or one of the ABX indices.

John A. Alic, *Trillions For Military Technology: How The Pentagon Innovates And Why It Costs So Much*

(Palgrave Macmillan, 2007)

Henry Ergas[1]

Since the end of the Second World War, the United States has spent some US$2 trillion (in year 2000 dollars) on defence R&D. Some of the outcomes have been extraordinary — terrifyingly destructive nuclear weapons; ever-more lethal missiles and bombs, capable of being targeted with ever-greater precision; stealthy planes with radar signatures the size of a golf ball; extremely accurate global positioning systems; computer networking and, of course, the Internet.

But there has also been a long string of disappointments, stark failures and frequent cost overruns and delays.

Few analysts are better equipped than John Alic to assess and explain the pattern of success and failure, and draw lessons for the future. Alic cogently explains the unique difficulties that beset major innovations in weapons systems: the ever-growing complexity of those systems; the fact that they need to operate in an environment subject to destructive attack; and the difficulties that come from very infrequent use for their intended purpose, which limits the scope for learning and incremental improvement. But, Alic argues, these inherent problems are compounded by three additional sources of failure.

The first is failures in military planning and doctrine; that is, in the foresight of the military missions that will be required and of the role weapons systems will play in these missions. The overwhelming concentration in the 1950s on nuclear strategy, for example, led the US Air Force to focus development and procurement on the high-speed fighter-bomber interceptors of the so-called Century Series.[2] As a consequence, the Air Force was very poorly prepared for the air-to-air combat and (even more so) ground-support functions required in Vietnam, with the result that losses were extremely high.

A second source of failure is the refusal by the services to define rationally the requirements for the systems they seek to procure. Engineering design is about making trade-offs based on the value to users of the various features a

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[2] These included the F101 Voodoo, the first USAF aircraft to exceed 1000mph, and to be armed with nuclear air-to-air missiles.

system can provide. In the private sector, those trade-offs are forced on suppliers by the drive for profit-maximisation and by the threat of displacement. In defence, those forces are blunted by soft budget constraints. The distortions soft budget constraints create are compounded by the fact that as systems become ever costlier, fewer items are purchased, and system development times and service lives become ever longer — inducing each defence arm to try to cram into the initial design all the capabilities a system may ever need. A classic, much studied, case is the B-1B bomber (the intended successor of the B52 Stratofortress), whose design was fatally compromised from the start by the Air Force's insistence on the incompatible requirements of both high-altitude supersonic flight and terrain-hugging bombing runs at treetop level.

Third and last (but by no means least), the defence system environment is often poorly adapted to learning, both as between successive system development efforts and within the lifetime of individual systems. The acquisition process can be good at generating product variety but then does not perform as well in selection, ongoing learning and system adaptation. This reflects two features of the defence environment: the fact that there is no market-like mechanism that can weed out inefficient approaches and properly reward ongoing improvement; and the infrequency with which most systems are ever used in combat, and hence the limited scope for learning and forced selection.

Alic also notes the many difficulties in assessing the performance of defence system development efforts. In particular, it cannot be stressed too much that 'failures' are not only inevitable but also often valuable; they allow learning to occur. Few significant innovations in defence systems spring forth fully formed; rather, those innovations are typically the outcome of a complex, messy, often very prolonged process, in which dry wells abound. Research to reduce radar reflections from aircraft began in the early 1950s; but it was only when Lockheed built two stealthy planes in the mid-1970s that it became clear that such planes could be built at all; and the effectiveness of stealth was not tested and shown in a war-fighting situation until 1991, when the F-117 was used to considerable effect in Iraq. A fear of failure would have been fatal to this innovation.

This is, in my view, especially important because the difficulties of defence innovation tend to be more visible, and the memory of them more enduring, than the successes. Massive cost blow-outs have blighted many civilian R&D projects, such as IBM's landmark development of its 360 series in the early 1960s. But what is remembered today about the 360 series is that it was the key to IBM's 25-year dominance of the computer market, bringing profits many times its costs.

In defence, however, there is no market that gauges and translates into a visible indicator (as profits and losses are in the private sector) the 'military value' arising from successful innovation. As a result, while the cost blow-outs

become engraved in public consciousness, there is no offsetting accounting of the gains. Australia's acquisition of the F-111 is a case in point, a project so troubled as to almost cost Malcolm Fraser his job as Defence Minister. Yet the system itself has provided outstanding service for several decades. Any retrospective cost-benefit analysis would likely find that the cost over-runs were trivial compared to the gains.

The challenges of defence innovation will only become greater in the years ahead. Budgetary stringency in the US seems certain to reverse the enormous expansion in defence outlays of recent years. At the same time, the technological complexities involved in defence innovation are not diminishing. Software development, which accounts for an ever-higher share of defence R&D outlays, poses formidable problems of cost predictability and project management, as well as of quality assurance. The attempt to develop truly 'networked' war-fighting capabilities, involves a massive software challenge, in which only very limited progress has been made to date.

Alic believes that if these challenges, and the many others facing the defence innovation system, are to be met, major changes are needed to the way the system works. In particular, he sees great value in returning to the McNamara vision of civilian control over weapons-system development choices, control exercised through the systematic use of cost-benefit and cost-effectiveness studies. The Planning, Programming and Budgeting System (PPBS) that McNamara and his team of economists — including Charles Hitch and Alain Enthoven[3] — brought to the Pentagon, and that Sir Arthur Tange sought to introduce into the Australian defence establishment, would be given a fresh lease of life, and used to force discipline on the services in the structuring of individual projects and of choices between alternative projects.

Unfortunately, Alic's treatment of how this would be done is rather cursory. It is not clear from his discussion why PPBS failed in the first place. There is some truth in the proposition that PPBS was made into a convenient scapegoat for the failures in Vietnam, despite the fact that it worked reasonably well in that conflict, but as Enthoven himself recognised (see Enthoven and Smith 1971), that is not the whole story.

Alic's failure to thoroughly develop his proposed solution is one of the book's few weaknesses. These weaknesses notwithstanding, this is a very valuable book indeed, and I highly recommend it to all those with an interest in the economics of defence innovation. It is a pity that there is so little interest in Australia in

[3] Hitch was Assistant Secretary of Defence 1961–65 while Enthoven was Deputy Assistant Secretary of Defence over the same period. Charles Hitch is perhaps best known among economists for his exploration with Robert L. Hall of the 'kinked demand curve' theory of pricing.

the economics of defence system acquisition. Our own, often troubled, acquisition processes would be the better for it.[4]

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[4] It is probably not entirely coincidental that at university Tange had studied economics, under E. O. G. Shann.